

$\ln[*] := \text{listdim17} = \left\{ (-16+x) (-9+x)^{16} (5+x)^{32}, (-9+x)^{14} (5+x)^{32} (-1292+369x-34x^2+x^3), \right.$
 $(-9+x)^{14} (5+x)^{32} (-1280+369x-34x^2+x^3),$
 $(-11+x) (-9+x)^{14} (5+x)^{32} (116-23x+x^2),$
 $(-9+x)^{12} (5+x)^{32} (-102724+52713x-10664x^2+1062x^3-52x^4+x^5),$
 $(-9+x)^{14} (5+x)^{32} (-1264+369x-34x^2+x^3),$
 $(-11+x) (-9+x)^{13} (5+x)^{32} (-1028+323x-32x^2+x^3),$
 $(-9+x)^{12} (5+x)^{32} (-102092+52569x-10656x^2+1062x^3-52x^4+x^5),$
 $(-15+x) (-12+x) (-9+x)^{14} (-7+x) (5+x)^{32},$
 $(-15+x) (-11+x)^2 (-9+x)^{12} (-8+x) (-7+x) (5+x)^{32},$
 $(-9+x)^{12} (5+x)^{32} (-101608+52481x-10652x^2+1062x^3-52x^4+x^5),$
 $(-9+x)^{12} (-8+x) (5+x)^{32} (12737-4972x+710x^2-44x^3+x^4),$
 $(-9+x)^{12} (-8+x) (5+x)^{32} (113-22x+x^2)^2,$
 $(-9+x)^{12} (5+x)^{32} (-101140+52393x-10648x^2+1062x^3-52x^4+x^5),$
 $(-9+x)^{12} (5+x)^{32} (95-20x+x^2) (-1068+327x-32x^2+x^3),$
 $(-9+x)^{12} (5+x)^{32} (-101428+52425x-10648x^2+1062x^3-52x^4+x^5),$
 $(-9+x)^{12} (5+x)^{32} (-100832+52321x-10644x^2+1062x^3-52x^4+x^5),$
 $(-9+x)^{13} (5+x)^{32} (11200-4569x+675x^2-43x^3+x^4),$
 $(-9+x)^{12} (5+x)^{32} (109-22x+x^2) (-928+293x-30x^2+x^3),$
 $(-9+x)^{12} (5+x)^{32} (-101120+52353x-10644x^2+1062x^3-52x^4+x^5),$
 $(-13+x) (-9+x)^{14} (5+x)^{32} (96-21x+x^2),$
 $(-11+x)^2 (-9+x)^{13} (5+x)^{32} (92-21x+x^2),$
 $(-11+x) (-9+x)^{11} (-7+x) (5+x)^{32} (11756-4665x+679x^2-43x^3+x^4),$
 $(-11+x) (-9+x)^{12} (5+x)^{32} (9140-3919x+611x^2-41x^3+x^4),$
 $(-9+x)^{12} (5+x)^{32} (-100508+52249x-10640x^2+1062x^3-52x^4+x^5),$
 $(-9+x)^{13} (5+x)^{32} (11164-4565x+675x^2-43x^3+x^4),$
 $(-13+x) (-9+x)^{12} (-7+x) (5+x)^{32} (-1108+331x-32x^2+x^3),$
 $(-9+x)^{12} (5+x)^{32} (113-22x+x^2) (-892+289x-30x^2+x^3),$
 $(-11+x)^2 (-9+x)^{12} (5+x)^{32} (-824+281x-30x^2+x^3),$
 $(-11+x)^2 (-9+x)^{11} (-7+x)^2 (5+x)^{32} (152-25x+x^2),$
 $(-11+x) (-9+x)^{11} (5+x)^{32} (-81896+44331x-9414x^2+980x^3-50x^4+x^5),$
 $(-11+x) (-9+x)^{12} (5+x)^{32} (9096-3915x+611x^2-41x^3+x^4),$
 $(-9+x)^{12} (5+x)^{32} (-100024+52161x-10636x^2+1062x^3-52x^4+x^5),$
 $(-11+x) (-9+x)^{12} (-7+x) (5+x)^{32} (-1304+373x-34x^2+x^3),$
 $(-9+x)^{12} (5+x)^{32} (-100376+52193x-10636x^2+1062x^3-52x^4+x^5),$
 $(-9+x)^{12} (5+x)^{32} (113-22x+x^2) (-888+289x-30x^2+x^3),$
 $(-9+x)^{10} (-8+x) (5+x)^{32} (-1009+311x-31x^2+x^3)^2,$
 $(-9+x)^{12} (5+x)^{32} (-99556+52073x-10632x^2+1062x^3-52x^4+x^5),$
 $(-9+x)^{12} (5+x)^{32} (139-24x+x^2) (-716+251x-28x^2+x^3),$
 $(-11+x)^3 (-9+x)^{10} (-7+x)^2 (5+x)^{32} (124-23x+x^2), (-11+x) (-9+x)^{10}$
 $(5+x)^{32} (734908-480063x+128957x^2-18230x^3+1430x^4-59x^5+x^6),$
 $(-9+x)^{12} (5+x)^{32} (95-20x+x^2) (-1052+327x-32x^2+x^3),$
 $(-9+x)^{11} (5+x)^{32} (899524-568885x+147793x^2-20190x^3+1530x^4-61x^5+x^6),$

$$\begin{aligned}
& (-9+x)^{12} (5+x)^{32} (-99\,908 + 52\,105\,x - 10\,632\,x^2 + 1062\,x^3 - 52\,x^4 + x^5), \\
& (-9+x)^{12} (5+x)^{32} (87 - 20\,x + x^2) (-1148 + 335\,x - 32\,x^2 + x^3), \\
& (-11+x) (-9+x)^{10} (-7+x) (5+x)^{32} (113 - 22\,x + x^2) (-932 + 293\,x - 30\,x^2 + x^3), \\
& (-9+x)^{11} (5+x)^{32} (100 - 21\,x + x^2) (95 - 20\,x + x^2)^2, \\
& (-9+x)^{12} (5+x)^{32} (-98\,896 + 51\,969\,x - 10\,628\,x^2 + 1062\,x^3 - 52\,x^4 + x^5), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (-66\,400 + 37\,481\,x - 8304\,x^2 + 902\,x^3 - 48\,x^4 + x^5), \\
& (-9+x)^{12} (5+x)^{32} (73 - 18\,x + x^2) (-1360 + 377\,x - 34\,x^2 + x^3), \\
& (-9+x)^{11} (5+x)^{32} (893\,584 - 567\,289\,x + 147\,653\,x^2 - 20\,186\,x^3 + 1530\,x^4 - 61\,x^5 + x^6), \\
& (-9+x)^{12} (5+x)^{32} (-99\,248 + 52\,001\,x - 10\,628\,x^2 + 1062\,x^3 - 52\,x^4 + x^5), \\
& (-13+x) (-9+x)^{13} (5+x)^{32} (-848 + 285\,x - 30\,x^2 + x^3), (-11+x) (-9+x)^{10} \\
& \quad (-7+x) (5+x)^{32} (-104\,704 + 53\,509\,x - 10\,764\,x^2 + 1066\,x^3 - 52\,x^4 + x^5), \\
& (-11+x) (-9+x)^{10} (5+x)^{32} (95 - 20\,x + x^2) (7712 - 3421\,x + 555\,x^2 - 39\,x^3 + x^4), \\
& (-13+x) (-9+x)^{12} (5+x)^{32} (7664 - 3413\,x + 555\,x^2 - 39\,x^3 + x^4), \\
& (-9+x)^{10} (-7+x) (5+x)^{32} (128 - 23\,x + x^2) (95 - 20\,x + x^2)^2, \\
& (-11+x)^2 (-9+x)^{12} (5+x)^{32} (-812 + 281\,x - 30\,x^2 + x^3), \\
& (-11+x)^2 (-9+x)^{11} (5+x)^{32} (7340 - 3341\,x + 551\,x^2 - 39\,x^3 + x^4), \\
& (-11+x) (-9+x)^{11} (5+x)^{32} (-80\,708 + 44\,091\,x - 9402\,x^2 + 980\,x^3 - 50\,x^4 + x^5), \\
& (-12+x) (-11+x) (-9+x)^{13} (5+x)^{32} (83 - 20\,x + x^2), \\
& (-9+x)^{12} (5+x)^{32} (-98\,572 + 51\,897\,x - 10\,624\,x^2 + 1062\,x^3 - 52\,x^4 + x^5), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (-66\,316 + 37\,441\,x - 8300\,x^2 + 902\,x^3 - 48\,x^4 + x^5), \\
& (-12+x) (-11+x) (-9+x)^{11} (-7+x) (5+x)^{32} (-965 + 307\,x - 31\,x^2 + x^3), \\
& (-11+x) (-9+x)^{11} (5+x)^{32} (-81\,028 + 44\,123\,x - 9402\,x^2 + 980\,x^3 - 50\,x^4 + x^5), \\
& (-12+x) (-9+x)^{12} (5+x)^{32} (113 - 22\,x + x^2) (73 - 18\,x + x^2), \\
& (-11+x) (-9+x)^{11} (5+x)^{32} (-80\,996 + 44\,123\,x - 9402\,x^2 + 980\,x^3 - 50\,x^4 + x^5), \\
& (-13+x) (-11+x) (-9+x)^{12} (5+x)^{32} (-692 + 247\,x - 28\,x^2 + x^3), \\
& (-9+x)^{10} (5+x)^{32} (-811 + 271\,x - 29\,x^2 + x^3) (9908 - 4079\,x + 619\,x^2 - 41\,x^3 + x^4), \\
& (-13+x)^2 (-12+x) (-9+x)^{12} (-7+x)^2 (5+x)^{32}, \\
& (-11+x)^2 (-9+x)^{12} (5+x)^{32} (-808 + 281\,x - 30\,x^2 + x^3), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (-65\,768 + 37\,337\,x - 8296\,x^2 + 902\,x^3 - 48\,x^4 + x^5), \\
& (-11+x)^3 (-9+x)^{11} (-8+x) (5+x)^{32} (83 - 20\,x + x^2), \\
& (-11+x) (-9+x)^{11} (5+x)^{32} (-80\,312 + 44\,011\,x - 9398\,x^2 + 980\,x^3 - 50\,x^4 + x^5), \\
& (-11+x) (-9+x)^{12} (5+x)^{32} (8920 - 3899\,x + 611\,x^2 - 41\,x^3 + x^4), \\
& (-11+x)^3 (-9+x)^9 (-8+x) (-7+x) (5+x)^{32} (-965 + 307\,x - 31\,x^2 + x^3), \\
& (-11+x)^2 (-9+x)^{11} (-7+x) (5+x)^{32} (-1048 + 327\,x - 32\,x^2 + x^3), \\
& (-11+x)^2 (-9+x)^{10} (-8+x) (5+x)^{32} (113 - 22\,x + x^2) (73 - 18\,x + x^2), \\
& (-11+x) (-9+x)^{11} (5+x)^{32} (-80\,664 + 44\,043\,x - 9398\,x^2 + 980\,x^3 - 50\,x^4 + x^5), \\
& (-11+x) (-9+x)^{11} (5+x)^{32} (-80\,632 + 44\,043\,x - 9398\,x^2 + 980\,x^3 - 50\,x^4 + x^5), \\
& (-9+x)^{12} (5+x)^{32} (-98\,504 + 51\,841\,x - 10\,620\,x^2 + 1062\,x^3 - 52\,x^4 + x^5), \\
& (-13+x) (-11+x) (-9+x)^{11} (-8+x) (5+x)^{32} (-775 + 267\,x - 29\,x^2 + x^3), (-11+x) \\
& \quad (-9+x)^9 (5+x)^{32} (95 - 20\,x + x^2) (-68\,920 + 38\,373\,x - 8408\,x^2 + 906\,x^3 - 48\,x^4 + x^5), \\
& (-9+x)^{10} (5+x)^{32} (-1009 + 311\,x - 31\,x^2 + x^3) (7928 - 3481\,x + 559\,x^2 - 39\,x^3 + x^4), \\
& (-13+x)^2 (-11+x)^2 (-9+x)^{10} (-8+x) (-7+x)^2 (5+x)^{32},
\end{aligned}$$

$$\begin{aligned}
& (-9+x)^8 (-8+x) (5+x)^{32} (95-20x+x^2)^4, \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (-65284+37249x-8292x^2+902x^3-48x^4+x^5), \\
& (-9+x)^{12} (5+x)^{32} (-97620+51721x-10616x^2+1062x^3-52x^4+x^5), \\
& (-11+x)^3 (-9+x)^{10} (-7+x) (5+x)^{32} (-852+285x-30x^2+x^3), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (-65572+37281x-8292x^2+902x^3-48x^4+x^5), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (113-22x+x^2) (-580+217x-26x^2+x^3), (-11+x) \\
& \quad (-9+x)^{10} (5+x)^{32} (721004-475631x+128493x^2-18214x^3+1430x^4-59x^5+x^6), \\
& (-9+x)^{11} (5+x)^{32} (95-20x+x^2) (9292-3979x+615x^2-41x^3+x^4), \\
& (-13+x) (-9+x)^{11} (5+x)^{32} (-67876+38149x-8396x^2+906x^3-48x^4+x^5), \\
& (-11+x)^4 (-9+x)^9 (-7+x)^2 (5+x)^{32} (100-21x+x^2), \\
& (-11+x)^2 (-9+x)^9 (-7+x) (5+x)^{32} (-84668+45287x-9522x^2+984x^3-50x^4+x^5), \\
& (-11+x)^2 (-9+x)^{10} (-7+x) (5+x)^{32} (9404-3987x+615x^2-41x^3+x^4), \\
& (-13+x) (-9+x)^{10} (5+x)^{32} (95-20x+x^2)^2 (68-17x+x^2), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (59-16x+x^2) (-1104+331x-32x^2+x^3), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (-65104+37193x-8288x^2+902x^3-48x^4+x^5), \\
& (-9+x)^{11} (5+x)^{32} (876448-562217x+147157x^2-20170x^3+1530x^4-61x^5+x^6), \\
& (-13+x)^2 (-9+x)^{13} (5+x)^{32} (64-17x+x^2), (-11+x)^2 (-9+x)^9 \\
& \quad (5+x)^{32} (588752-400449x+111817x^2-16406x^3+1334x^4-57x^5+x^6), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (87-20x+x^2) (-752+255x-28x^2+x^3), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (-65392+37225x-8288x^2+902x^3-48x^4+x^5), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (95-20x+x^2) (-688+247x-28x^2+x^3), (-11+x) \\
& \quad (-9+x)^{10} (5+x)^{32} (719024-474835x+128393x^2-18210x^3+1430x^4-59x^5+x^6), \\
& (-11+x)^4 (-9+x)^8 (-7+x)^3 (5+x)^{32} (128-23x+x^2), (-11+x) (-9+x)^9 (5+x)^{32} \\
& \quad (-6487424+4997515x-1630868x^2+292299x^3-31080x^4+1961x^5-68x^6+x^7), \\
& (-11+x) (-9+x)^9 (5+x)^{32} (-811+271x-29x^2+x^3) \\
& \quad (8000-3489x+559x^2-39x^3+x^4), \\
& (-13+x) (-9+x)^{11} (5+x)^{32} (73-18x+x^2) (-928+293x-30x^2+x^3), \\
& (-13+x) (-11+x) (-9+x)^9 (-7+x) (5+x)^{32} (95-20x+x^2) (-752+255x-28x^2+x^3), \\
& (-11+x) (-9+x)^{10} (5+x)^{32} (95-20x+x^2)^2 (80-19x+x^2), \\
& (-11+x)^2 (-9+x)^{12} (5+x)^{32} (-796+281x-30x^2+x^3), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (-64796+37121x-8284x^2+902x^3-48x^4+x^5), \\
& (-11+x)^2 (-9+x)^{11} (5+x)^{32} (7196-3325x+551x^2-39x^3+x^4), \\
& (-11+x) (-9+x)^{11} (5+x)^{32} (-79124+43771x-9386x^2+980x^3-50x^4+x^5), \\
& (-13+x)^2 (-11+x) (-9+x)^{12} (5+x)^{32} (52-15x+x^2), (-11+x)^2 (-9+x)^9 \\
& \quad (5+x)^{32} (585980-399493x+111709x^2-16402x^3+1334x^4-57x^5+x^6), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (73-18x+x^2) (-892+289x-30x^2+x^3), \\
& (-11+x)^2 (-9+x)^{10} (5+x)^{32} (-65084+37153x-8284x^2+902x^3-48x^4+x^5), \\
& (-13+x) (-11+x)^2 (-9+x)^{11} (5+x)^{32} (-556+213x-26x^2+x^3), \\
& (-11+x)^3 (-9+x)^8 (-7+x) (5+x)^{32} (-68668+38309x-8404x^2+906x^3-48x^4+x^5), \\
& (-11+x) (-9+x)^9 (5+x)^{32} \\
& \quad (-6456932+4984227x-1628724x^2+292147x^3-31076x^4+1961x^5-68x^6+x^7), \\
& (-12+x) (-9+x)^{10} (5+x)^{32} (-811+271x-29x^2+x^3)^2,
\end{aligned}$$

$$\begin{aligned}
& (-12+x)(-11+x)^2(-9+x)^8(-7+x)^2(5+x)^{32}(95-20x+x^2)^2, \\
& (-11+x)^3(-9+x)^{12}(5+x)^{32}(72-19x+x^2), \\
& (-11+x)^3(-9+x)^{10}(5+x)^{32}(5864-2835x+495x^2-37x^3+x^4), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(-64472+37049x-8280x^2+902x^3-48x^4+x^5), \\
& (-11+x)^2(-9+x)^{11}(5+x)^{32}(7160-3321x+551x^2-39x^3+x^4), \\
& (-13+x)(-11+x)(-9+x)^{11}(5+x)^{32}(6056-2895x+499x^2-37x^3+x^4), \\
& (-11+x)^3(-9+x)^9(-7+x)(5+x)^{32}(7576-3405x+555x^2-39x^3+x^4), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(73-18x+x^2)(-888+289x-30x^2+x^3), (-11+x)^2 \\
& \quad (-9+x)^9(5+x)^{32}(583064-398521x+111601x^2-16398x^3+1334x^4-57x^5+x^6), \\
& (-13+x)(-11+x)^2(-9+x)^{10}(-7+x)(5+x)^{32}(-712+251x-28x^2+x^3), \\
& (-11+x)^2(-9+x)^8(-8+x)(5+x)^{32}(-811+271x-29x^2+x^3)^2, (-11+x)(-9+x)^9 \\
& \quad (5+x)^{32}(95-20x+x^2)(-67656+38085x-8392x^2+906x^3-48x^4+x^5), \\
& (-11+x)^4(-9+x)^6(-8+x)(-7+x)^2(5+x)^{32}(95-20x+x^2)^2, \\
& (-11+x)^3(-9+x)^{10}(5+x)^{32}(5820-2831x+495x^2-37x^3+x^4), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(-63988+36961x-8276x^2+902x^3-48x^4+x^5), \\
& (-11+x)^3(-9+x)^9(5+x)^{32}(68-17x+x^2)(-775+267x-29x^2+x^3), \\
& (-11+x)^4(-9+x)^{10}(-7+x)(5+x)^{32}(76-19x+x^2), \\
& (-11+x)^3(-9+x)^9(5+x)^{32}(-52636+31331x-7286x^2+828x^3-46x^4+x^5), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(-64340+36993x-8276x^2+902x^3-48x^4+x^5), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(69-18x+x^2)(-932+293x-30x^2+x^3), \\
& (-11+x)^2(-9+x)^8(5+x)^{32} \\
& \quad (-5225156+4158953x-1401034x^2+259039x^3-28400x^4+1847x^5-66x^6+x^7), \\
& (-13+x)(-11+x)^4(-9+x)^8(-7+x)^2(5+x)^{32}(68-17x+x^2), \\
& (-11+x)^3(-9+x)^8(-7+x)(5+x)^{32}(73-18x+x^2)(-932+293x-30x^2+x^3), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(-63520+36873x-8272x^2+902x^3-48x^4+x^5), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(-63872+36905x-8272x^2+902x^3-48x^4+x^5), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(95-20x+x^2)(-672+247x-28x^2+x^3), \\
& (-11+x)^4(-9+x)^8(-7+x)(5+x)^{32}(6128-2903x+499x^2-37x^3+x^4), \\
& (-11+x)^2(-9+x)^8(5+x)^{32}(95-20x+x^2)(59-16x+x^2)(-928+293x-30x^2+x^3), \\
& (-11+x)^2(-9+x)^9(5+x)^{32}(95-20x+x^2)^2(64-17x+x^2), \\
& (-11+x)^5(-9+x)^8(-7+x)^2(5+x)^{32}(80-19x+x^2), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(-63212+36801x-8268x^2+902x^3-48x^4+x^5), \\
& (-13+x)(-12+x)(-11+x)^2(-9+x)^{12}(-5+x)(5+x)^{32}, (-11+x)^2(-9+x)^9 \\
& \quad (5+x)^{32}(572428-395093x+111245x^2-16386x^3+1334x^4-57x^5+x^6), \\
& (-12+x)(-11+x)^2(-9+x)^{10}(5+x)^{32}(5297-2628x+470x^2-36x^3+x^4), \\
& (-11+x)^4(-9+x)^8(5+x)^{32}(59-16x+x^2)(-724+251x-28x^2+x^3), \\
& (-11+x)^3(-9+x)^8(-7+x)(5+x)^{32}(-67084+37989x-8388x^2+906x^3-48x^4+x^5), \\
& (-11+x)^3(-9+x)^8(5+x)^{32}(95-20x+x^2)^2(52-15x+x^2), (-11+x)^3 \\
& \quad (-9+x)^7(5+x)^{32}(-811+271x-29x^2+x^3)(5228-2533x+451x^2-35x^3+x^4), \\
& (-12+x)(-11+x)^2(-9+x)^{10}(5+x)^{32}(73-18x+x^2)^2, \\
& (-12+x)(-11+x)^6(-9+x)^6(-7+x)^4(5+x)^{32}, \\
& (-11+x)^3(-9+x)^{11}(5+x)^{32}(-632+243x-28x^2+x^3),
\end{aligned}$$

$$\begin{aligned}
& (-13+x)(-11+x)^4(-9+x)^{10}(-8+x)(-5+x)(5+x)^{32}, \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(-62888+36729x-8264x^2+902x^3-48x^4+x^5), \\
& (-11+x)^4(-9+x)^9(5+x)^{32}(4712-2401x+443x^2-35x^3+x^4), \\
& (-11+x)^4(-9+x)^8(-8+x)(5+x)^{32}(5297-2628x+470x^2-36x^3+x^4), \\
& (-11+x)^3(-9+x)^9(-7+x)(5+x)^{32}(7400-3389x+555x^2-39x^3+x^4), \\
& (-11+x)^4(-9+x)^8(-8+x)(5+x)^{32}(73-18x+x^2)^2, \\
& (-11+x)^8(-9+x)^4(-8+x)(-7+x)^4(5+x)^{32}, \\
& (-11+x)^4(-9+x)^{10}(5+x)^{32}(-516+209x-26x^2+x^3), \\
& (-11+x)^4(-9+x)^9(-7+x)(5+x)^{32}(-668+247x-28x^2+x^3), \\
& (-11+x)^3(-9+x)^9(5+x)^{32}(-51404+31043x-7270x^2+828x^3-46x^4+x^5), \\
& (-11+x)^5(-9+x)^7(-7+x)(5+x)^{32}(4948-2465x+447x^2-35x^3+x^4), \\
& (-11+x)^4(-9+x)^8(5+x)^{32}(73-18x+x^2)(-580+217x-26x^2+x^3), \\
& (-11+x)^2(-9+x)^{10}(5+x)^{32}(-61936+36553x-8256x^2+902x^3-48x^4+x^5), \\
& (-11+x)^4(-9+x)^8(5+x)^{32}(-41920+26193x-6380x^2+758x^3-44x^4+x^5), \\
& (-11+x)^5(-9+x)^8(-7+x)(5+x)^{32}(-544+213x-26x^2+x^3), \\
& (-11+x)^6(-9+x)^7(-7+x)^2(5+x)^{32}(64-17x+x^2), \\
& (-11+x)^4(-9+x)^8(5+x)^{32}(95-20x+x^2)(-436+183x-24x^2+x^3), \\
& (-12+x)(-11+x)^4(-9+x)^8(5+x)^{32}(59-16x+x^2)^2, \\
& (-11+x)^7(-9+x)^6(-7+x)^2(5+x)^{32}(52-15x+x^2), \\
& (-11+x)^4(-9+x)^{11}(5+x)^{32}(56-17x+x^2), \\
& (-11+x)^4(-9+x)^9(5+x)^{32}(4568-2385x+443x^2-35x^3+x^4), \\
& (-11+x)^6(-9+x)^6(-8+x)(5+x)^{32}(59-16x+x^2)^2, \\
& (-11+x)^4(-9+x)^{10}(5+x)^{32}(-500+209x-26x^2+x^3), \\
& (-11+x)^5(-9+x)^9(5+x)^{32}(-412+179x-24x^2+x^3), \\
& (-11+x)^6(-9+x)^8(-5+x)(5+x)^{32}(68-17x+x^2), \\
& (-11+x)^6(-9+x)^8(-7+x)(5+x)^{32}(48-15x+x^2), \\
& (-11+x)^4(-9+x)^{10}(5+x)^{32}(-488+209x-26x^2+x^3), \\
& (-11+x)^6(-9+x)^{10}(-4+x)(5+x)^{32}\};
\end{aligned}$$

In[*]:= Length[listdim17]

Out[*]= 194

listdim17[[{13, 86}]]

$\{(-9+x)^{12}(-8+x)(5+x)^{32}(113-22x+x^2)^2, (-9+x)^8(-8+x)(5+x)^{32}(95-20x+x^2)^4\}$

feasibleinterlacingpolylist $\left[(-9+x)^{12}(-8+x)(5+x)^{32}(113-22x+x^2)^2\right]$

{}

feasibleinterlacingpolylist $\left[(-9+x)^8(-8+x)(5+x)^{32}(95-20x+x^2)^4\right]$

{}

```
chi = listdim17[[1]]
```

```
(-16 + x) (-9 + x)16 (5 + x)32
```

```
A = {67, -20, 1};
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{3283, -980, 49}
```

```
Array[c, 3].A
```

```
67 c[1] - 20 c[2] + c[3]
```

```
Array[c, 3].g
```

```
3283 c[1] - 980 c[2] + 49 c[3]
```

```
cert = Flatten[Array[c, 3] /. FindInstance[3283 c[1] - 980 c[2] + 49 c[3] < 0 &&  
67 c[1] - 20 c[2] + c[3] ≥ 0, Array[c, 3], Integers]]
```

```
{c[1], c[2], c[3]}
```

```
GCD[]
```

```
Reverse[cert]
```

```
cert.g
```

```
cert.Transpose[A]
```

```
chi = listdim17[[2]]
```

```
(-9 + x)14 (5 + x)32 (-1292 + 369 x - 34 x2 + x3)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{5499, -2834, 508, -38, 1}, {5427, -2826, 508, -38, 1},
```

```
{5355, -2818, 508, -38, 1}, {5283, -2810, 508, -38, 1}, {5211, -2802, 508, -38, 1}}
```

```
A = {{5499, -2834, 508, -38, 1},
```

```
{5427, -2826, 508, -38, 1}, {5355, -2818, 508, -38, 1},
```

```
{5283, -2810, 508, -38, 1}, {5211, -2802, 508, -38, 1}};
```

A // MatrixForm

$$\begin{pmatrix} 5499 & -2834 & 508 & -38 & 1 \\ 5427 & -2826 & 508 & -38 & 1 \\ 5355 & -2818 & 508 & -38 & 1 \\ 5283 & -2810 & 508 & -38 & 1 \\ 5211 & -2802 & 508 & -38 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{265 051, -138 290, 24 892, -1862, 49}

Array[c, 5].Transpose[A]

{5499 c[1] - 2834 c[2] + 508 c[3] - 38 c[4] + c[5],
5427 c[1] - 2826 c[2] + 508 c[3] - 38 c[4] + c[5],
5355 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5],
5283 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
5211 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5]}

Array[c, 5].g

265 051 c[1] - 138 290 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5]

cert = Flatten[Array[c, 5] /.

FindInstance[265 051 c[1] - 138 290 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5] < 0 &&
5499 c[1] - 2834 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
5427 c[1] - 2826 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
5355 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
5283 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
5211 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]

{-548, -4938, 0, 0, -10 976 864}

GCD[-548, -4938, 0, 0, -10 976 864]

2

cert = cert / 2

{-274, -2469, 0, 0, -5 488 432}

Reverse[cert]

{-5 488 432, 0, 0, -2469, -274}

cert.g

-119 132

cert.Transpose[A]

{1988, 1964, 1940, 1916, 1892}

```
chi = listdim17[[3]]
```

$$(-9 + x)^{14} (5 + x)^{32} (-1280 + 369 x - 34 x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{5371, -2818, 508, -38, 1}, {5387, -2818, 508, -38, 1},
 {5403, -2818, 508, -38, 1}, {5283, -2810, 508, -38, 1},
 {5299, -2810, 508, -38, 1}, {5315, -2810, 508, -38, 1}, {5331, -2810, 508, -38, 1},
 {5347, -2810, 508, -38, 1}, {5211, -2802, 508, -38, 1}, {5227, -2802, 508, -38, 1},
 {5243, -2802, 508, -38, 1}, {5259, -2802, 508, -38, 1}, {5139, -2794, 508, -38, 1},
 {5155, -2794, 508, -38, 1}, {5171, -2794, 508, -38, 1}, {5067, -2786, 508, -38, 1},
 {5083, -2786, 508, -38, 1}, {4995, -2778, 508, -38, 1}, {4923, -2770, 508, -38, 1}}
```

```
A = {{5371, -2818, 508, -38, 1}, {5387, -2818, 508, -38, 1},
 {5403, -2818, 508, -38, 1}, {5283, -2810, 508, -38, 1},
 {5299, -2810, 508, -38, 1}, {5315, -2810, 508, -38, 1},
 {5331, -2810, 508, -38, 1}, {5347, -2810, 508, -38, 1},
 {5211, -2802, 508, -38, 1}, {5227, -2802, 508, -38, 1},
 {5243, -2802, 508, -38, 1}, {5259, -2802, 508, -38, 1},
 {5139, -2794, 508, -38, 1}, {5155, -2794, 508, -38, 1},
 {5171, -2794, 508, -38, 1}, {5067, -2786, 508, -38, 1}, {5083, -2786,
 508, -38, 1}, {4995, -2778, 508, -38, 1}, {4923, -2770, 508, -38, 1}};
```

```
A // MatrixForm
```

```
( 5371 -2818 508 -38 1 )
( 5387 -2818 508 -38 1 )
( 5403 -2818 508 -38 1 )
( 5283 -2810 508 -38 1 )
( 5299 -2810 508 -38 1 )
( 5315 -2810 508 -38 1 )
( 5331 -2810 508 -38 1 )
( 5347 -2810 508 -38 1 )
( 5211 -2802 508 -38 1 )
( 5227 -2802 508 -38 1 )
( 5243 -2802 508 -38 1 )
( 5259 -2802 508 -38 1 )
( 5139 -2794 508 -38 1 )
( 5155 -2794 508 -38 1 )
( 5171 -2794 508 -38 1 )
( 5067 -2786 508 -38 1 )
( 5083 -2786 508 -38 1 )
( 4995 -2778 508 -38 1 )
( 4923 -2770 508 -38 1 )
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{262 435, -137 738, 24 892, -1862, 49}
```


Array[c, 5].Transpose[A]

```
{ 5371 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5],
  5387 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5],
  5403 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5],
  5283 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5299 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5315 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5331 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5347 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5211 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5227 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5243 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5259 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5139 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5155 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5171 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5067 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5083 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  4995 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  4923 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5]}
```

Array[c, 5].g

```
262 435 c[1] - 137 738 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5]
```

cert = Flatten[Array[c, 5] /.

```
FindInstance[262 435 c[1] - 137 738 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5] < 0 &&
```

```
5371 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5387 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5403 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5283 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5299 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5315 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5331 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5347 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5211 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5227 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5243 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5259 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5139 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5155 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5171 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5067 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
5083 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
4995 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
```

```
4923 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
```

```
{-4447, -31 134, 0, 0, -63 703 708}
```

```
GCD[-4447, -31134, 0, 0, -63703708]
```

```
1
```

```
Reverse[cert]
```

```
{-63703708, 0, 0, -31134, -4447}
```

```
cert.g
```

```
-195245
```

```
cert.Transpose[A]
```

```
{147067, 75915, 4763, 289331, 218179, 147027, 75875, 4723, 360443, 289291,  
218139, 146987, 431555, 360403, 289251, 502667, 431515, 573779, 644891}
```

```
chi = listdim17[[4]]
```

```
 $(-11 + x) (-9 + x)^{14} (5 + x)^{32} (116 - 23x + x^2)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{5419, -2818, 508, -38, 1}, {5283, -2810, 508, -38, 1},  
{5299, -2810, 508, -38, 1}, {5315, -2810, 508, -38, 1},  
{5331, -2810, 508, -38, 1}, {5347, -2810, 508, -38, 1}, {5363, -2810, 508, -38, 1},  
{5211, -2802, 508, -38, 1}, {5227, -2802, 508, -38, 1}, {5243, -2802, 508, -38, 1},  
{5259, -2802, 508, -38, 1}, {5275, -2802, 508, -38, 1}, {5291, -2802, 508, -38, 1},  
{5139, -2794, 508, -38, 1}, {5155, -2794, 508, -38, 1}, {5171, -2794, 508, -38, 1},  
{5187, -2794, 508, -38, 1}, {5203, -2794, 508, -38, 1}, {5067, -2786, 508, -38, 1},  
{5083, -2786, 508, -38, 1}, {5099, -2786, 508, -38, 1}, {5115, -2786, 508, -38, 1},  
{4995, -2778, 508, -38, 1}, {5011, -2778, 508, -38, 1}, {5027, -2778, 508, -38, 1},  
{4923, -2770, 508, -38, 1}, {4939, -2770, 508, -38, 1}, {4851, -2762, 508, -38, 1}}
```

```
A = {{5419, -2818, 508, -38, 1}, {5283, -2810, 508, -38, 1},  
{5299, -2810, 508, -38, 1}, {5315, -2810, 508, -38, 1},  
{5331, -2810, 508, -38, 1}, {5347, -2810, 508, -38, 1},  
{5363, -2810, 508, -38, 1}, {5211, -2802, 508, -38, 1},  
{5227, -2802, 508, -38, 1}, {5243, -2802, 508, -38, 1},  
{5259, -2802, 508, -38, 1}, {5275, -2802, 508, -38, 1},  
{5291, -2802, 508, -38, 1}, {5139, -2794, 508, -38, 1},  
{5155, -2794, 508, -38, 1}, {5171, -2794, 508, -38, 1},  
{5187, -2794, 508, -38, 1}, {5203, -2794, 508, -38, 1},  
{5067, -2786, 508, -38, 1}, {5083, -2786, 508, -38, 1},  
{5099, -2786, 508, -38, 1}, {5115, -2786, 508, -38, 1},  
{4995, -2778, 508, -38, 1}, {5011, -2778, 508, -38, 1},  
{5027, -2778, 508, -38, 1}, {4923, -2770, 508, -38, 1},  
{4939, -2770, 508, -38, 1}, {4851, -2762, 508, -38, 1}};
```

A // MatrixForm

$$\begin{pmatrix} 5419 & -2818 & 508 & -38 & 1 \\ 5283 & -2810 & 508 & -38 & 1 \\ 5299 & -2810 & 508 & -38 & 1 \\ 5315 & -2810 & 508 & -38 & 1 \\ 5331 & -2810 & 508 & -38 & 1 \\ 5347 & -2810 & 508 & -38 & 1 \\ 5363 & -2810 & 508 & -38 & 1 \\ 5211 & -2802 & 508 & -38 & 1 \\ 5227 & -2802 & 508 & -38 & 1 \\ 5243 & -2802 & 508 & -38 & 1 \\ 5259 & -2802 & 508 & -38 & 1 \\ 5275 & -2802 & 508 & -38 & 1 \\ 5291 & -2802 & 508 & -38 & 1 \\ 5139 & -2794 & 508 & -38 & 1 \\ 5155 & -2794 & 508 & -38 & 1 \\ 5171 & -2794 & 508 & -38 & 1 \\ 5187 & -2794 & 508 & -38 & 1 \\ 5203 & -2794 & 508 & -38 & 1 \\ 5067 & -2786 & 508 & -38 & 1 \\ 5083 & -2786 & 508 & -38 & 1 \\ 5099 & -2786 & 508 & -38 & 1 \\ 5115 & -2786 & 508 & -38 & 1 \\ 4995 & -2778 & 508 & -38 & 1 \\ 5011 & -2778 & 508 & -38 & 1 \\ 5027 & -2778 & 508 & -38 & 1 \\ 4923 & -2770 & 508 & -38 & 1 \\ 4939 & -2770 & 508 & -38 & 1 \\ 4851 & -2762 & 508 & -38 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{261563, -137554, 24892, -1862, 49}

Array[c, 5].Transpose[A]

```
{ 5419 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5],
  5283 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5299 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5315 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5331 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5347 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5363 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5],
  5211 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5227 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5243 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5259 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5275 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5291 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5139 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5155 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5171 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5187 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5203 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5067 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5083 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5099 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5115 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  4995 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5011 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5027 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  4923 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4939 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4851 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5]}
```

Array[c, 5].g

```
261 563 c[1] - 137 554 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5]
```

```

cert = Flatten[Array[c, 5] /.
  FindInstance[261563 c[1] - 137554 c[2] + 24892 c[3] - 1862 c[4] + 49 c[5] < 0 &&
    5419 c[1] - 2818 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5283 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5299 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5315 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5331 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5347 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5363 c[1] - 2810 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5211 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5227 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5243 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5259 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5275 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5291 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5139 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5155 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5171 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5187 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5203 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5067 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5083 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5099 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5115 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4995 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5011 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5027 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4923 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4939 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4851 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{c[1], c[2], c[3], c[4], c[5]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[5]]
```

```
(-9 + x)12 (5 + x)32 (-102724 + 52713 x - 10664 x2 + 1062 x3 - 52 x4 + x5)
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {435 411, -324 400, 97 107, -15 032, 1273, -56, 1},
  {426 267, -321 656, 96 843, -15 024, 1273, -56, 1},
  {425 979, -321 624, 96 843, -15 024, 1273, -56, 1},
  {427 563, -321 944, 96 859, -15 024, 1273, -56, 1},
  {427 275, -321 912, 96 859, -15 024, 1273, -56, 1},
  {428 859, -322 232, 96 875, -15 024, 1273, -56, 1},
  {428 571, -322 200, 96 875, -15 024, 1273, -56, 1},
  {428 283, -322 168, 96 875, -15 024, 1273, -56, 1},
  {429 867, -322 488, 96 891, -15 024, 1273, -56, 1},
  {429 579, -322 456, 96 891, -15 024, 1273, -56, 1},
  {420 435, -319 712, 96 627, -15 016, 1273, -56, 1},
  {421 731, -320 000, 96 643, -15 016, 1273, -56, 1},
  {421 443, -319 968, 96 643, -15 016, 1273, -56, 1},
  {423 027, -320 288, 96 659, -15 016, 1273, -56, 1},
  {422 739, -320 256, 96 659, -15 016, 1273, -56, 1},
  {424 323, -320 576, 96 675, -15 016, 1273, -56, 1},
  {413 307, -317 480, 96 395, -15 008, 1273, -56, 1},
  {414 603, -317 768, 96 411, -15 008, 1273, -56, 1},
  {415 899, -318 056, 96 427, -15 008, 1273, -56, 1},
  {415 611, -318 024, 96 427, -15 008, 1273, -56, 1},
  {417 483, -318 376, 96 443, -15 008, 1273, -56, 1},
  {417 195, -318 344, 96 443, -15 008, 1273, -56, 1},
  {407 475, -315 536, 96 179, -15 000, 1273, -56, 1},
  {408 771, -315 824, 96 195, -15 000, 1273, -56, 1},
  {410 355, -316 144, 96 211, -15 000, 1273, -56, 1},
  {410 067, -316 112, 96 211, -15 000, 1273, -56, 1},
  {411 651, -316 432, 96 227, -15 000, 1273, -56, 1},
  {401 643, -313 592, 95 963, -14 992, 1273, -56, 1},
  {402 939, -313 880, 95 979, -14 992, 1273, -56, 1},
  {404 523, -314 200, 95 995, -14 992, 1273, -56, 1} }
```

```

A = {{435 411, -324 400, 97 107, -15 032, 1273, -56, 1},
      {426 267, -321 656, 96 843, -15 024, 1273, -56, 1},
      {425 979, -321 624, 96 843, -15 024, 1273, -56, 1},
      {427 563, -321 944, 96 859, -15 024, 1273, -56, 1},
      {427 275, -321 912, 96 859, -15 024, 1273, -56, 1},
      {428 859, -322 232, 96 875, -15 024, 1273, -56, 1},
      {428 571, -322 200, 96 875, -15 024, 1273, -56, 1},
      {428 283, -322 168, 96 875, -15 024, 1273, -56, 1},
      {429 867, -322 488, 96 891, -15 024, 1273, -56, 1},
      {429 579, -322 456, 96 891, -15 024, 1273, -56, 1},
      {420 435, -319 712, 96 627, -15 016, 1273, -56, 1},
      {421 731, -320 000, 96 643, -15 016, 1273, -56, 1},
      {421 443, -319 968, 96 643, -15 016, 1273, -56, 1},
      {423 027, -320 288, 96 659, -15 016, 1273, -56, 1},
      {422 739, -320 256, 96 659, -15 016, 1273, -56, 1},
      {424 323, -320 576, 96 675, -15 016, 1273, -56, 1},
      {413 307, -317 480, 96 395, -15 008, 1273, -56, 1},
      {414 603, -317 768, 96 411, -15 008, 1273, -56, 1},
      {415 899, -318 056, 96 427, -15 008, 1273, -56, 1},
      {415 611, -318 024, 96 427, -15 008, 1273, -56, 1},
      {417 483, -318 376, 96 443, -15 008, 1273, -56, 1},
      {417 195, -318 344, 96 443, -15 008, 1273, -56, 1},
      {407 475, -315 536, 96 179, -15 000, 1273, -56, 1},
      {408 771, -315 824, 96 195, -15 000, 1273, -56, 1},
      {410 355, -316 144, 96 211, -15 000, 1273, -56, 1},
      {410 067, -316 112, 96 211, -15 000, 1273, -56, 1},
      {411 651, -316 432, 96 227, -15 000, 1273, -56, 1},
      {401 643, -313 592, 95 963, -14 992, 1273, -56, 1},
      {402 939, -313 880, 95 979, -14 992, 1273, -56, 1},
      {404 523, -314 200, 95 995, -14 992, 1273, -56, 1}};

```

A // MatrixForm

$$\begin{pmatrix} 435411 & -324400 & 97107 & -15032 & 1273 & -56 & 1 \\ 426267 & -321656 & 96843 & -15024 & 1273 & -56 & 1 \\ 425979 & -321624 & 96843 & -15024 & 1273 & -56 & 1 \\ 427563 & -321944 & 96859 & -15024 & 1273 & -56 & 1 \\ 427275 & -321912 & 96859 & -15024 & 1273 & -56 & 1 \\ 428859 & -322232 & 96875 & -15024 & 1273 & -56 & 1 \\ 428571 & -322200 & 96875 & -15024 & 1273 & -56 & 1 \\ 428283 & -322168 & 96875 & -15024 & 1273 & -56 & 1 \\ 429867 & -322488 & 96891 & -15024 & 1273 & -56 & 1 \\ 429579 & -322456 & 96891 & -15024 & 1273 & -56 & 1 \\ 420435 & -319712 & 96627 & -15016 & 1273 & -56 & 1 \\ 421731 & -320000 & 96643 & -15016 & 1273 & -56 & 1 \\ 421443 & -319968 & 96643 & -15016 & 1273 & -56 & 1 \\ 423027 & -320288 & 96659 & -15016 & 1273 & -56 & 1 \\ 422739 & -320256 & 96659 & -15016 & 1273 & -56 & 1 \\ 424323 & -320576 & 96675 & -15016 & 1273 & -56 & 1 \\ 413307 & -317480 & 96395 & -15008 & 1273 & -56 & 1 \\ 414603 & -317768 & 96411 & -15008 & 1273 & -56 & 1 \\ 415899 & -318056 & 96427 & -15008 & 1273 & -56 & 1 \\ 415611 & -318024 & 96427 & -15008 & 1273 & -56 & 1 \\ 417483 & -318376 & 96443 & -15008 & 1273 & -56 & 1 \\ 417195 & -318344 & 96443 & -15008 & 1273 & -56 & 1 \\ 407475 & -315536 & 96179 & -15000 & 1273 & -56 & 1 \\ 408771 & -315824 & 96195 & -15000 & 1273 & -56 & 1 \\ 410355 & -316144 & 96211 & -15000 & 1273 & -56 & 1 \\ 410067 & -316112 & 96211 & -15000 & 1273 & -56 & 1 \\ 411651 & -316432 & 96227 & -15000 & 1273 & -56 & 1 \\ 401643 & -313592 & 95963 & -14992 & 1273 & -56 & 1 \\ 402939 & -313880 & 95979 & -14992 & 1273 & -56 & 1 \\ 404523 & -314200 & 95995 & -14992 & 1273 & -56 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{21048987, -15789512, 4745419, -736064, 62377, -2744, 49}

Array[c, 7].Transpose[A]

```
{ 435 411 c[1] - 324 400 c[2] + 97 107 c[3] - 15 032 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  426 267 c[1] - 321 656 c[2] + 96 843 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  425 979 c[1] - 321 624 c[2] + 96 843 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  427 563 c[1] - 321 944 c[2] + 96 859 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  427 275 c[1] - 321 912 c[2] + 96 859 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  428 859 c[1] - 322 232 c[2] + 96 875 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  428 571 c[1] - 322 200 c[2] + 96 875 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  428 283 c[1] - 322 168 c[2] + 96 875 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  429 867 c[1] - 322 488 c[2] + 96 891 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  429 579 c[1] - 322 456 c[2] + 96 891 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  420 435 c[1] - 319 712 c[2] + 96 627 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  421 731 c[1] - 320 000 c[2] + 96 643 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  421 443 c[1] - 319 968 c[2] + 96 643 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  423 027 c[1] - 320 288 c[2] + 96 659 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  422 739 c[1] - 320 256 c[2] + 96 659 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  424 323 c[1] - 320 576 c[2] + 96 675 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  413 307 c[1] - 317 480 c[2] + 96 395 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  414 603 c[1] - 317 768 c[2] + 96 411 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  415 899 c[1] - 318 056 c[2] + 96 427 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  415 611 c[1] - 318 024 c[2] + 96 427 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  417 483 c[1] - 318 376 c[2] + 96 443 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  417 195 c[1] - 318 344 c[2] + 96 443 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  407 475 c[1] - 315 536 c[2] + 96 179 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  408 771 c[1] - 315 824 c[2] + 96 195 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  410 355 c[1] - 316 144 c[2] + 96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  410 067 c[1] - 316 112 c[2] + 96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  411 651 c[1] - 316 432 c[2] + 96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  401 643 c[1] - 313 592 c[2] + 95 963 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  402 939 c[1] - 313 880 c[2] + 95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  404 523 c[1] - 314 200 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] }
```

Array[c, 7].g

```
21 048 987 c[1] - 15 789 512 c[2] + 4 745 419 c[3] -
  736 064 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]
```

cert =

```

Flatten[Array[c, 7] /. FindInstance[21 048 987 c[1] - 15 789 512 c[2] + 4 745 419 c[3] -
  736 064 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 && 435 411 c[1] -
  324 400 c[2] + 97 107 c[3] - 15 032 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
426 267 c[1] - 321 656 c[2] + 96 843 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 425 979 c[1] - 321 624 c[2] + 96 843 c[3] - 15 024 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 427 563 c[1] - 321 944 c[2] +
  96 859 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
427 275 c[1] - 321 912 c[2] + 96 859 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 428 859 c[1] - 322 232 c[2] + 96 875 c[3] - 15 024 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 428 571 c[1] - 322 200 c[2] +
  96 875 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
428 283 c[1] - 322 168 c[2] + 96 875 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 429 867 c[1] - 322 488 c[2] + 96 891 c[3] - 15 024 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 429 579 c[1] - 322 456 c[2] +
  96 891 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
420 435 c[1] - 319 712 c[2] + 96 627 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 421 731 c[1] - 320 000 c[2] + 96 643 c[3] - 15 016 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 421 443 c[1] - 319 968 c[2] +
  96 643 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
423 027 c[1] - 320 288 c[2] + 96 659 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 422 739 c[1] - 320 256 c[2] + 96 659 c[3] - 15 016 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 424 323 c[1] - 320 576 c[2] +
  96 675 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
413 307 c[1] - 317 480 c[2] + 96 395 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 414 603 c[1] - 317 768 c[2] + 96 411 c[3] - 15 008 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 899 c[1] - 318 056 c[2] +
  96 427 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
415 611 c[1] - 318 024 c[2] + 96 427 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 417 483 c[1] - 318 376 c[2] + 96 443 c[3] - 15 008 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 417 195 c[1] - 318 344 c[2] +
  96 443 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
407 475 c[1] - 315 536 c[2] + 96 179 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 408 771 c[1] - 315 824 c[2] + 96 195 c[3] - 15 000 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 410 355 c[1] - 316 144 c[2] +
  96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
410 067 c[1] - 316 112 c[2] + 96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 651 c[1] - 316 432 c[2] + 96 227 c[3] - 15 000 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 401 643 c[1] - 313 592 c[2] +
  95 963 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
402 939 c[1] - 313 880 c[2] + 95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 404 523 c[1] - 314 200 c[2] + 95 995 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-2933, -11277, -24516, 0, 0, 0, 0}

```

```
GCD[-2933, -11277, -24516, 0, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 0, -24516, -11277, -2933}
```

```
cert.g
```

```
-17044251
```

```
cert.Transpose[A]
```

```
{523125, 2870613, 3354453, 1924965, 2408805, 979317, 1463157, 1946997,
 517509, 1001349, 3348837, 2403189, 2887029, 1457541, 1941381, 511893,
 4772709, 3827061, 2881413, 3365253, 1451925, 1935765, 5250933,
 4305285, 2875797, 3359637, 1930149, 5729157, 4783509, 3354021}
```

```
chi = listdim17[[6]]
```

```
 $(-9 + x)^{14} (5 + x)^{32} (-1264 + 369x - 34x^2 + x^3)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{5307, -2802, 508, -38, 1}, {5323, -2802, 508, -38, 1},
 {5339, -2802, 508, -38, 1}, {5187, -2794, 508, -38, 1}, {5203, -2794, 508, -38, 1},
 {5219, -2794, 508, -38, 1}, {5235, -2794, 508, -38, 1}, {5251, -2794, 508, -38, 1},
 {5267, -2794, 508, -38, 1}, {5067, -2786, 508, -38, 1}, {5083, -2786, 508, -38, 1},
 {5099, -2786, 508, -38, 1}, {5115, -2786, 508, -38, 1}, {5131, -2786, 508, -38, 1},
 {5147, -2786, 508, -38, 1}, {5163, -2786, 508, -38, 1}, {5179, -2786, 508, -38, 1},
 {4995, -2778, 508, -38, 1}, {5011, -2778, 508, -38, 1}, {5027, -2778, 508, -38, 1},
 {5043, -2778, 508, -38, 1}, {5059, -2778, 508, -38, 1}, {5075, -2778, 508, -38, 1},
 {4923, -2770, 508, -38, 1}, {4939, -2770, 508, -38, 1}, {4955, -2770, 508, -38, 1},
 {4971, -2770, 508, -38, 1}, {4987, -2770, 508, -38, 1}, {4851, -2762, 508, -38, 1},
 {4867, -2762, 508, -38, 1}, {4883, -2762, 508, -38, 1}, {4899, -2762, 508, -38, 1},
 {4779, -2754, 508, -38, 1}, {4795, -2754, 508, -38, 1}, {4707, -2746, 508, -38, 1}}
```

```

A = {{5307, -2802, 508, -38, 1}, {5323, -2802, 508, -38, 1},
      {5339, -2802, 508, -38, 1}, {5187, -2794, 508, -38, 1},
      {5203, -2794, 508, -38, 1}, {5219, -2794, 508, -38, 1},
      {5235, -2794, 508, -38, 1}, {5251, -2794, 508, -38, 1},
      {5267, -2794, 508, -38, 1}, {5067, -2786, 508, -38, 1},
      {5083, -2786, 508, -38, 1}, {5099, -2786, 508, -38, 1},
      {5115, -2786, 508, -38, 1}, {5131, -2786, 508, -38, 1},
      {5147, -2786, 508, -38, 1}, {5163, -2786, 508, -38, 1},
      {5179, -2786, 508, -38, 1}, {4995, -2778, 508, -38, 1},
      {5011, -2778, 508, -38, 1}, {5027, -2778, 508, -38, 1},
      {5043, -2778, 508, -38, 1}, {5059, -2778, 508, -38, 1},
      {5075, -2778, 508, -38, 1}, {4923, -2770, 508, -38, 1},
      {4939, -2770, 508, -38, 1}, {4955, -2770, 508, -38, 1},
      {4971, -2770, 508, -38, 1}, {4987, -2770, 508, -38, 1},
      {4851, -2762, 508, -38, 1}, {4867, -2762, 508, -38, 1},
      {4883, -2762, 508, -38, 1}, {4899, -2762, 508, -38, 1}, {4779, -2754,
      508, -38, 1}, {4795, -2754, 508, -38, 1}, {4707, -2746, 508, -38, 1}};

```

A // MatrixForm

$$\begin{pmatrix} 5307 & -2802 & 508 & -38 & 1 \\ 5323 & -2802 & 508 & -38 & 1 \\ 5339 & -2802 & 508 & -38 & 1 \\ 5187 & -2794 & 508 & -38 & 1 \\ 5203 & -2794 & 508 & -38 & 1 \\ 5219 & -2794 & 508 & -38 & 1 \\ 5235 & -2794 & 508 & -38 & 1 \\ 5251 & -2794 & 508 & -38 & 1 \\ 5267 & -2794 & 508 & -38 & 1 \\ 5067 & -2786 & 508 & -38 & 1 \\ 5083 & -2786 & 508 & -38 & 1 \\ 5099 & -2786 & 508 & -38 & 1 \\ 5115 & -2786 & 508 & -38 & 1 \\ 5131 & -2786 & 508 & -38 & 1 \\ 5147 & -2786 & 508 & -38 & 1 \\ 5163 & -2786 & 508 & -38 & 1 \\ 5179 & -2786 & 508 & -38 & 1 \\ 4995 & -2778 & 508 & -38 & 1 \\ 5011 & -2778 & 508 & -38 & 1 \\ 5027 & -2778 & 508 & -38 & 1 \\ 5043 & -2778 & 508 & -38 & 1 \\ 5059 & -2778 & 508 & -38 & 1 \\ 5075 & -2778 & 508 & -38 & 1 \\ 4923 & -2770 & 508 & -38 & 1 \\ 4939 & -2770 & 508 & -38 & 1 \\ 4955 & -2770 & 508 & -38 & 1 \\ 4971 & -2770 & 508 & -38 & 1 \\ 4987 & -2770 & 508 & -38 & 1 \\ 4851 & -2762 & 508 & -38 & 1 \\ 4867 & -2762 & 508 & -38 & 1 \\ 4883 & -2762 & 508 & -38 & 1 \\ 4899 & -2762 & 508 & -38 & 1 \\ 4779 & -2754 & 508 & -38 & 1 \\ 4795 & -2754 & 508 & -38 & 1 \\ 4707 & -2746 & 508 & -38 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{258 947, -137 002, 24 892, -1862, 49}

Array[c, 5].Transpose[A]

```
{ 5307 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5323 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5339 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5187 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5203 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5219 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5235 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5251 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5267 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5067 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5083 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5099 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5115 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5131 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5147 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5163 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5179 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  4995 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5011 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5027 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5043 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5059 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5075 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  4923 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4939 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4955 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4971 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4987 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4851 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
  4867 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
  4883 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
  4899 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
  4779 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
  4795 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
  4707 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5]}
```

Array[c, 5].g

```
258 947 c[1] - 137 002 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5]
```

```

cert = Flatten[Array[c, 5] /.
  FindInstance[258 947 c[1] - 137 002 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5] < 0 &&
    5307 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5323 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5339 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5187 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5203 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5219 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5235 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5251 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5267 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5067 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5083 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5099 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5115 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5131 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5147 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5163 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5179 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4995 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5011 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5027 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5043 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5059 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5075 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4923 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4939 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4955 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4971 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4987 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4851 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4867 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4883 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4899 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4779 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4795 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4707 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{c[1], c[2], c[3], c[4], c[5]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[7]]
```

$$(-11 + x) (-9 + x)^{13} (5 + x)^{32} (-1028 + 323 x - 32 x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-47827, 30525, -7374, 850, -47, 1},
 {-47795, 30525, -7374, 850, -47, 1}, {-48003, 30541, -7374, 850, -47, 1},
 {-47971, 30541, -7374, 850, -47, 1}, {-48147, 30557, -7374, 850, -47, 1},
 {-46539, 30317, -7366, 850, -47, 1}, {-46715, 30333, -7366, 850, -47, 1},
 {-46683, 30333, -7366, 850, -47, 1}, {-46891, 30349, -7366, 850, -47, 1},
 {-46859, 30349, -7366, 850, -47, 1}, {-46827, 30349, -7366, 850, -47, 1},
 {-47035, 30365, -7366, 850, -47, 1}, {-47003, 30365, -7366, 850, -47, 1},
 {-47211, 30381, -7366, 850, -47, 1}, {-47179, 30381, -7366, 850, -47, 1},
 {-47355, 30397, -7366, 850, -47, 1}, {-47531, 30413, -7366, 850, -47, 1},
 {-45603, 30141, -7358, 850, -47, 1}, {-45747, 30157, -7358, 850, -47, 1},
 {-45923, 30173, -7358, 850, -47, 1}, {-45891, 30173, -7358, 850, -47, 1},
 {-46067, 30189, -7358, 850, -47, 1}, {-46035, 30189, -7358, 850, -47, 1},
 {-46243, 30205, -7358, 850, -47, 1}, {-46211, 30205, -7358, 850, -47, 1},
 {-46387, 30221, -7358, 850, -47, 1}, {-46563, 30237, -7358, 850, -47, 1},
 {-46739, 30253, -7358, 850, -47, 1}, {-44955, 29997, -7350, 850, -47, 1},
 {-45099, 30013, -7350, 850, -47, 1}, {-45275, 30029, -7350, 850, -47, 1},
 {-45243, 30029, -7350, 850, -47, 1}, {-45451, 30045, -7350, 850, -47, 1},
 {-45419, 30045, -7350, 850, -47, 1}, {-45595, 30061, -7350, 850, -47, 1},
 {-45771, 30077, -7350, 850, -47, 1}, {-44163, 29837, -7342, 850, -47, 1},
 {-44307, 29853, -7342, 850, -47, 1}, {-44483, 29869, -7342, 850, -47, 1},
 {-44451, 29869, -7342, 850, -47, 1}, {-44627, 29885, -7342, 850, -47, 1},
 {-44803, 29901, -7342, 850, -47, 1}, {-43515, 29693, -7334, 850, -47, 1},
 {-43691, 29709, -7334, 850, -47, 1}, {-43659, 29709, -7334, 850, -47, 1},
 {-43835, 29725, -7334, 850, -47, 1}, {-44011, 29741, -7334, 850, -47, 1},
 {-42723, 29533, -7326, 850, -47, 1}, {-42867, 29549, -7326, 850, -47, 1},
 {-43043, 29565, -7326, 850, -47, 1}, {-41931, 29373, -7318, 850, -47, 1},
 {-42075, 29389, -7318, 850, -47, 1}, {-42251, 29405, -7318, 850, -47, 1},
 {-41283, 29229, -7310, 850, -47, 1}, {-40491, 29069, -7302, 850, -47, 1}}
```



```

A = {{-47 827, 30 525, -7374, 850, -47, 1},
      {-47 795, 30 525, -7374, 850, -47, 1}, {-48 003, 30 541, -7374, 850, -47, 1},
      {-47 971, 30 541, -7374, 850, -47, 1}, {-48 147, 30 557, -7374, 850, -47, 1},
      {-46 539, 30 317, -7366, 850, -47, 1}, {-46 715, 30 333, -7366, 850, -47, 1},
      {-46 683, 30 333, -7366, 850, -47, 1}, {-46 891, 30 349, -7366, 850, -47, 1},
      {-46 859, 30 349, -7366, 850, -47, 1}, {-46 827, 30 349, -7366, 850, -47, 1},
      {-47 035, 30 365, -7366, 850, -47, 1}, {-47 003, 30 365, -7366, 850, -47, 1},
      {-47 211, 30 381, -7366, 850, -47, 1}, {-47 179, 30 381, -7366, 850, -47, 1},
      {-47 355, 30 397, -7366, 850, -47, 1}, {-47 531, 30 413, -7366, 850, -47, 1},
      {-45 603, 30 141, -7358, 850, -47, 1}, {-45 747, 30 157, -7358, 850, -47, 1},
      {-45 923, 30 173, -7358, 850, -47, 1}, {-45 891, 30 173, -7358, 850, -47, 1},
      {-46 067, 30 189, -7358, 850, -47, 1}, {-46 035, 30 189, -7358, 850, -47, 1},
      {-46 243, 30 205, -7358, 850, -47, 1}, {-46 211, 30 205, -7358, 850, -47, 1},
      {-46 387, 30 221, -7358, 850, -47, 1}, {-46 563, 30 237, -7358, 850, -47, 1},
      {-46 739, 30 253, -7358, 850, -47, 1}, {-44 955, 29 997, -7350, 850, -47, 1},
      {-45 099, 30 013, -7350, 850, -47, 1}, {-45 275, 30 029, -7350, 850, -47, 1},
      {-45 243, 30 029, -7350, 850, -47, 1}, {-45 451, 30 045, -7350, 850, -47, 1},
      {-45 419, 30 045, -7350, 850, -47, 1}, {-45 595, 30 061, -7350, 850, -47, 1},
      {-45 771, 30 077, -7350, 850, -47, 1}, {-44 163, 29 837, -7342, 850, -47, 1},
      {-44 307, 29 853, -7342, 850, -47, 1}, {-44 483, 29 869, -7342, 850, -47, 1},
      {-44 451, 29 869, -7342, 850, -47, 1}, {-44 627, 29 885, -7342, 850, -47, 1},
      {-44 803, 29 901, -7342, 850, -47, 1}, {-43 515, 29 693, -7334, 850, -47, 1},
      {-43 691, 29 709, -7334, 850, -47, 1}, {-43 659, 29 709, -7334, 850, -47, 1},
      {-43 835, 29 725, -7334, 850, -47, 1}, {-44 011, 29 741, -7334, 850, -47, 1},
      {-42 723, 29 533, -7326, 850, -47, 1}, {-42 867, 29 549, -7326, 850, -47, 1},
      {-43 043, 29 565, -7326, 850, -47, 1}, {-41 931, 29 373, -7318, 850, -47, 1},
      {-42 075, 29 389, -7318, 850, -47, 1}, {-42 251, 29 405, -7318, 850, -47, 1},
      {-41 283, 29 229, -7310, 850, -47, 1}, {-40 491, 29 069, -7302, 850, -47, 1}};

```

```
A // MatrixForm
```

```

( -47 827 30 525 -7374 850 -47 1
  -47 795 30 525 -7374 850 -47 1
  -48 003 30 541 -7374 850 -47 1
  -47 971 30 541 -7374 850 -47 1
  -48 147 30 557 -7374 850 -47 1
  -46 539 30 317 -7366 850 -47 1
  -46 715 30 333 -7366 850 -47 1
  -46 683 30 333 -7366 850 -47 1
  -46 891 30 349 -7366 850 -47 1
  -46 859 30 349 -7366 850 -47 1
  -46 827 30 349 -7366 850 -47 1
  -47 035 30 365 -7366 850 -47 1
  -47 003 30 365 -7366 850 -47 1
  -47 211 30 381 -7366 850 -47 1
  -47 179 30 381 -7366 850 -47 1
  -47 355 30 397 -7366 850 -47 1
  -47 531 30 413 -7366 850 -47 1
  -45 603 30 141 -7358 850 -47 1
  -45 747 30 157 -7358 850 -47 1
  -45 923 30 173 -7358 850 -47 1
  -45 891 30 173 -7358 850 -47 1
  -46 067 30 189 -7358 850 -47 1
  -46 035 30 189 -7358 850 -47 1
  -46 243 30 205 -7358 850 -47 1
  -46 211 30 205 -7358 850 -47 1
  -46 387 30 221 -7358 850 -47 1
  -46 563 30 237 -7358 850 -47 1
  -46 739 30 253 -7358 850 -47 1
  -44 955 29 997 -7350 850 -47 1
  -45 099 30 013 -7350 850 -47 1
  -45 275 30 029 -7350 850 -47 1
  -45 243 30 029 -7350 850 -47 1
  -45 451 30 045 -7350 850 -47 1
  -45 419 30 045 -7350 850 -47 1
  -45 595 30 061 -7350 850 -47 1
  -45 771 30 077 -7350 850 -47 1
  -44 163 29 837 -7342 850 -47 1
  -44 307 29 853 -7342 850 -47 1
  -44 483 29 869 -7342 850 -47 1
  -44 451 29 869 -7342 850 -47 1
  -44 627 29 885 -7342 850 -47 1
  -44 803 29 901 -7342 850 -47 1
  -43 515 29 693 -7334 850 -47 1
  -43 691 29 709 -7334 850 -47 1
  -43 659 29 709 -7334 850 -47 1
  -43 835 29 725 -7334 850 -47 1
  -44 011 29 741 -7334 850 -47 1
  -42 723 29 533 -7326 850 -47 1
  -42 867 29 549 -7326 850 -47 1
  -43 043 29 565 -7326 850 -47 1
  -41 931 29 373 -7318 850 -47 1
  -42 075 29 389 -7318 850 -47 1
  -42 251 29 405 -7318 850 -47 1
  -41 283 29 229 -7310 850 -47 1
  -40 491 29 069 -7302 850 -47 1
)

```

```

-45 891 30 173 -7358 850 -47 1
-46 067 30 189 -7358 850 -47 1
-46 035 30 189 -7358 850 -47 1
-46 243 30 205 -7358 850 -47 1
-46 211 30 205 -7358 850 -47 1
-46 387 30 221 -7358 850 -47 1
-46 563 30 237 -7358 850 -47 1
-46 739 30 253 -7358 850 -47 1
-44 955 29 997 -7350 850 -47 1
-45 099 30 013 -7350 850 -47 1
-45 275 30 029 -7350 850 -47 1
-45 243 30 029 -7350 850 -47 1
-45 451 30 045 -7350 850 -47 1
-45 419 30 045 -7350 850 -47 1
-45 595 30 061 -7350 850 -47 1
-45 771 30 077 -7350 850 -47 1
-44 163 29 837 -7342 850 -47 1
-44 307 29 853 -7342 850 -47 1
-44 483 29 869 -7342 850 -47 1
-44 451 29 869 -7342 850 -47 1
-44 627 29 885 -7342 850 -47 1
-44 803 29 901 -7342 850 -47 1
-43 515 29 693 -7334 850 -47 1
-43 691 29 709 -7334 850 -47 1
-43 659 29 709 -7334 850 -47 1
-43 835 29 725 -7334 850 -47 1
-44 011 29 741 -7334 850 -47 1
-42 723 29 533 -7326 850 -47 1
-42 867 29 549 -7326 850 -47 1
-43 043 29 565 -7326 850 -47 1
-41 931 29 373 -7318 850 -47 1
-42 075 29 389 -7318 850 -47 1
-42 251 29 405 -7318 850 -47 1
-41 283 29 229 -7310 850 -47 1
-40 491 29 069 -7302 850 -47 1

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-2 315 539, 1 487 997, -360 846, 41 650, -2303, 49}
```

```
Array[c, 6].Transpose[A]
```

```

{-47 827 c[1] + 30 525 c[2] - 7374 c[3] + 850 c[4] - 47 c[5] + c[6],
 -47 795 c[1] + 30 525 c[2] - 7374 c[3] + 850 c[4] - 47 c[5] + c[6],
 -48 003 c[1] + 30 541 c[2] - 7374 c[3] + 850 c[4] - 47 c[5] + c[6],
 -47 971 c[1] + 30 541 c[2] - 7374 c[3] + 850 c[4] - 47 c[5] + c[6],
 -48 147 c[1] + 30 557 c[2] - 7374 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 539 c[1] + 30 317 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 715 c[1] + 30 333 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 683 c[1] + 30 333 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 891 c[1] + 30 349 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 859 c[1] + 30 349 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 827 c[1] + 30 349 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6],
 -47 035 c[1] + 30 365 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6],

```

```

-47 003 c[1] + 30 365 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-47 211 c[1] + 30 381 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-47 179 c[1] + 30 381 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-47 355 c[1] + 30 397 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-47 531 c[1] + 30 413 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 603 c[1] + 30 141 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 747 c[1] + 30 157 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 923 c[1] + 30 173 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 891 c[1] + 30 173 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-46 067 c[1] + 30 189 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-46 035 c[1] + 30 189 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-46 243 c[1] + 30 205 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-46 211 c[1] + 30 205 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-46 387 c[1] + 30 221 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-46 563 c[1] + 30 237 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-46 739 c[1] + 30 253 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 955 c[1] + 29 997 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 099 c[1] + 30 013 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 275 c[1] + 30 029 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 243 c[1] + 30 029 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 451 c[1] + 30 045 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 419 c[1] + 30 045 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 595 c[1] + 30 061 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-45 771 c[1] + 30 077 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 163 c[1] + 29 837 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 307 c[1] + 29 853 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 483 c[1] + 29 869 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 451 c[1] + 29 869 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 627 c[1] + 29 885 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 803 c[1] + 29 901 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 515 c[1] + 29 693 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 691 c[1] + 29 709 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 659 c[1] + 29 709 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 835 c[1] + 29 725 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 011 c[1] + 29 741 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 723 c[1] + 29 533 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 867 c[1] + 29 549 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 043 c[1] + 29 565 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 931 c[1] + 29 373 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 075 c[1] + 29 389 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 251 c[1] + 29 405 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 283 c[1] + 29 229 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 491 c[1] + 29 069 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] }

```

Array[c, 6].g

```
-2 315 539 c[1] + 1 487 997 c[2] - 360 846 c[3] + 41 650 c[4] - 2303 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```
-2 315 539 c[1] + 1 487 997 c[2] - 360 846 c[3] + 41 650 c[4] - 2303 c[5] + 49 c[6] < 0 &&
```

[illegible]

```

-42 723 c[1] + 29 533 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 867 c[1] + 29 549 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 043 c[1] + 29 565 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 931 c[1] + 29 373 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 075 c[1] + 29 389 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 251 c[1] + 29 405 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 283 c[1] + 29 229 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 491 c[1] + 29 069 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]

{131 512, 1 315 121, 13 282 715, 0, 0, 64 094 624 850}

GCD[131 512, 1 315 121, 13 282 715, 0, 0, 64 094 624 850]

1

Reverse[cert]

{64 094 624 850, 0, 0, 13 282 715, 1 315 121, 131 512}

cert.g

-3 021 571

cert.Transpose[A]

{2 128 541, 6 336 925, 24 365, 4 232 749, 2 128 573, 4 232 549, 2 128 373, 6 336 757,
24 197, 4 232 581, 8 440 965, 2 128 405, 6 336 789, 24 229, 4 232 613, 2 128 437,
24 261, 2 128 205, 4 232 413, 2 128 237, 6 336 621, 4 232 445, 8 440 829, 2 128 269,
6 336 653, 4 232 477, 2 128 301, 24 125, 4 232 277, 6 336 485, 4 232 309, 8 440 693,
2 128 133, 6 336 517, 4 232 341, 2 128 165, 4 232 141, 6 336 349, 4 232 173, 8 440 557,
6 336 381, 4 232 205, 6 336 213, 4 232 037, 8 440 421, 6 336 245, 4 232 069, 6 336 077,
8 440 285, 6 336 109, 6 335 941, 8 440 149, 6 335 973, 8 440 013, 8 439 877}

chi = listdim17[[8]]
(-9 + x)12 (5 + x)32 (-102 092 + 52 569 x - 10 656 x2 + 1062 x3 - 52 x4 + x5)

```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {431 883, -323 000, 96 923, -15 024, 1273, -56, 1},
  {433 403, -323 320, 96 939, -15 024, 1273, -56, 1},
  {424 259, -320 576, 96 675, -15 016, 1273, -56, 1},
  {424 323, -320 576, 96 675, -15 016, 1273, -56, 1},
  {424 035, -320 544, 96 675, -15 016, 1273, -56, 1},
  {425 555, -320 864, 96 691, -15 016, 1273, -56, 1},
  {425 331, -320 832, 96 691, -15 016, 1273, -56, 1},
  {425 043, -320 800, 96 691, -15 016, 1273, -56, 1},
  {426 851, -321 152, 96 707, -15 016, 1273, -56, 1},
  {426 563, -321 120, 96 707, -15 016, 1273, -56, 1},
  {416 187, -318 088, 96 427, -15 008, 1273, -56, 1},
  {415 899, -318 056, 96 427, -15 008, 1273, -56, 1},
  {417 483, -318 376, 96 443, -15 008, 1273, -56, 1},
  {417 195, -318 344, 96 443, -15 008, 1273, -56, 1},
  {416 907, -318 312, 96 443, -15 008, 1273, -56, 1},
  {418 779, -318 664, 96 459, -15 008, 1273, -56, 1},
  {418 491, -318 632, 96 459, -15 008, 1273, -56, 1},
  {418 203, -318 600, 96 459, -15 008, 1273, -56, 1},
  {419 723, -318 920, 96 475, -15 008, 1273, -56, 1},
  {419 787, -318 920, 96 475, -15 008, 1273, -56, 1},
  {419 499, -318 888, 96 475, -15 008, 1273, -56, 1},
  {421 019, -319 208, 96 491, -15 008, 1273, -56, 1},
  {409 059, -315 856, 96 195, -15 000, 1273, -56, 1},
  {410 355, -316 144, 96 211, -15 000, 1273, -56, 1},
  {410 067, -316 112, 96 211, -15 000, 1273, -56, 1},
  {411 939, -316 464, 96 227, -15 000, 1273, -56, 1},
  {411 651, -316 432, 96 227, -15 000, 1273, -56, 1},
  {411 363, -316 400, 96 227, -15 000, 1273, -56, 1},
  {413 235, -316 752, 96 243, -15 000, 1273, -56, 1},
  {412 947, -316 720, 96 243, -15 000, 1273, -56, 1},
  {412 659, -316 688, 96 243, -15 000, 1273, -56, 1},
  {414 179, -317 008, 96 259, -15 000, 1273, -56, 1},
  {414 243, -317 008, 96 259, -15 000, 1273, -56, 1},
  {413 891, -316 976, 96 259, -15 000, 1273, -56, 1},
  {403 227, -313 912, 95 979, -14 992, 1273, -56, 1},
  {404 523, -314 200, 95 995, -14 992, 1273, -56, 1},
  {406 107, -314 520, 96 011, -14 992, 1273, -56, 1},
  {405 819, -314 488, 96 011, -14 992, 1273, -56, 1},
  {405 531, -314 456, 96 011, -14 992, 1273, -56, 1},
  {407 403, -314 808, 96 027, -14 992, 1273, -56, 1},
  {398 979, -312 288, 95 779, -14 984, 1273, -56, 1},
  {398 691, -312 256, 95 779, -14 984, 1273, -56, 1},
  {400 275, -312 576, 95 795, -14 984, 1273, -56, 1} }
```

```

A = {{431 883, -323 000, 96 923, -15 024, 1273, -56, 1},
      {433 403, -323 320, 96 939, -15 024, 1273, -56, 1},
      {424 259, -320 576, 96 675, -15 016, 1273, -56, 1},
      {424 323, -320 576, 96 675, -15 016, 1273, -56, 1},
      {424 035, -320 544, 96 675, -15 016, 1273, -56, 1},
      {425 555, -320 864, 96 691, -15 016, 1273, -56, 1},
      {425 331, -320 832, 96 691, -15 016, 1273, -56, 1},
      {425 043, -320 800, 96 691, -15 016, 1273, -56, 1},
      {426 851, -321 152, 96 707, -15 016, 1273, -56, 1},
      {426 563, -321 120, 96 707, -15 016, 1273, -56, 1},
      {416 187, -318 088, 96 427, -15 008, 1273, -56, 1},
      {415 899, -318 056, 96 427, -15 008, 1273, -56, 1},
      {417 483, -318 376, 96 443, -15 008, 1273, -56, 1},
      {417 195, -318 344, 96 443, -15 008, 1273, -56, 1},
      {416 907, -318 312, 96 443, -15 008, 1273, -56, 1},
      {418 779, -318 664, 96 459, -15 008, 1273, -56, 1},
      {418 491, -318 632, 96 459, -15 008, 1273, -56, 1},
      {418 203, -318 600, 96 459, -15 008, 1273, -56, 1},
      {419 723, -318 920, 96 475, -15 008, 1273, -56, 1},
      {419 787, -318 920, 96 475, -15 008, 1273, -56, 1},
      {419 499, -318 888, 96 475, -15 008, 1273, -56, 1},
      {421 019, -319 208, 96 491, -15 008, 1273, -56, 1},
      {409 059, -315 856, 96 195, -15 000, 1273, -56, 1},
      {410 355, -316 144, 96 211, -15 000, 1273, -56, 1},
      {410 067, -316 112, 96 211, -15 000, 1273, -56, 1},
      {411 939, -316 464, 96 227, -15 000, 1273, -56, 1},
      {411 651, -316 432, 96 227, -15 000, 1273, -56, 1},
      {411 363, -316 400, 96 227, -15 000, 1273, -56, 1},
      {413 235, -316 752, 96 243, -15 000, 1273, -56, 1},
      {412 947, -316 720, 96 243, -15 000, 1273, -56, 1},
      {412 659, -316 688, 96 243, -15 000, 1273, -56, 1},
      {414 179, -317 008, 96 259, -15 000, 1273, -56, 1},
      {414 243, -317 008, 96 259, -15 000, 1273, -56, 1},
      {413 891, -316 976, 96 259, -15 000, 1273, -56, 1},
      {403 227, -313 912, 95 979, -14 992, 1273, -56, 1},
      {404 523, -314 200, 95 995, -14 992, 1273, -56, 1},
      {406 107, -314 520, 96 011, -14 992, 1273, -56, 1},
      {405 819, -314 488, 96 011, -14 992, 1273, -56, 1},
      {405 531, -314 456, 96 011, -14 992, 1273, -56, 1},
      {407 403, -314 808, 96 027, -14 992, 1273, -56, 1},
      {398 979, -312 288, 95 779, -14 984, 1273, -56, 1},
      {398 691, -312 256, 95 779, -14 984, 1273, -56, 1},
      {400 275, -312 576, 95 795, -14 984, 1273, -56, 1}};

```

A // MatrixForm

```
( 431883 -323000 96923 -15024 1273 -56 1 )
( 433403 -323320 96939 -15024 1273 -56 1 )
( 424259 -320576 96675 -15016 1273 -56 1 )
( 424323 -320576 96675 -15016 1273 -56 1 )
( 424035 -320544 96675 -15016 1273 -56 1 )
( 425555 -320864 96691 -15016 1273 -56 1 )
( 425331 -320832 96691 -15016 1273 -56 1 )
( 425043 -320800 96691 -15016 1273 -56 1 )
( 426851 -321152 96707 -15016 1273 -56 1 )
( 426563 -321120 96707 -15016 1273 -56 1 )
( 416187 -318088 96427 -15008 1273 -56 1 )
( 415899 -318056 96427 -15008 1273 -56 1 )
( 417483 -318376 96443 -15008 1273 -56 1 )
( 417195 -318344 96443 -15008 1273 -56 1 )
( 416907 -318312 96443 -15008 1273 -56 1 )
( 418779 -318664 96459 -15008 1273 -56 1 )
( 418491 -318632 96459 -15008 1273 -56 1 )
( 418203 -318600 96459 -15008 1273 -56 1 )
( 419723 -318920 96475 -15008 1273 -56 1 )
( 419787 -318920 96475 -15008 1273 -56 1 )
( 419499 -318888 96475 -15008 1273 -56 1 )
( 421019 -319208 96491 -15008 1273 -56 1 )
( 409059 -315856 96195 -15000 1273 -56 1 )
( 410355 -316144 96211 -15000 1273 -56 1 )
( 410067 -316112 96211 -15000 1273 -56 1 )
( 411939 -316464 96227 -15000 1273 -56 1 )
( 411651 -316432 96227 -15000 1273 -56 1 )
( 411363 -316400 96227 -15000 1273 -56 1 )
( 413235 -316752 96243 -15000 1273 -56 1 )
( 412947 -316720 96243 -15000 1273 -56 1 )
( 412659 -316688 96243 -15000 1273 -56 1 )
( 414179 -317008 96259 -15000 1273 -56 1 )
( 414243 -317008 96259 -15000 1273 -56 1 )
( 413891 -316976 96259 -15000 1273 -56 1 )
( 403227 -313912 95979 -14992 1273 -56 1 )
( 404523 -314200 95995 -14992 1273 -56 1 )
( 406107 -314520 96011 -14992 1273 -56 1 )
( 405819 -314488 96011 -14992 1273 -56 1 )
( 405531 -314456 96011 -14992 1273 -56 1 )
( 407403 -314808 96027 -14992 1273 -56 1 )
( 398979 -312288 95779 -14984 1273 -56 1 )
( 398691 -312256 95779 -14984 1273 -56 1 )
( 400275 -312576 95795 -14984 1273 -56 1 )
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{20911371, -15729016, 4737051, -735696, 62377, -2744, 49}
```


Array[c, 7].Transpose[A]

```
{ 431 883 c[1] - 323 000 c[2] + 96 923 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7],
  433 403 c[1] - 323 320 c[2] + 96 939 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7],
  424 259 c[1] - 320 576 c[2] + 96 675 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  424 323 c[1] - 320 576 c[2] + 96 675 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  424 035 c[1] - 320 544 c[2] + 96 675 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  425 555 c[1] - 320 864 c[2] + 96 691 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  425 331 c[1] - 320 832 c[2] + 96 691 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  425 043 c[1] - 320 800 c[2] + 96 691 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  426 851 c[1] - 321 152 c[2] + 96 707 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  426 563 c[1] - 321 120 c[2] + 96 707 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  416 187 c[1] - 318 088 c[2] + 96 427 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  415 899 c[1] - 318 056 c[2] + 96 427 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  417 483 c[1] - 318 376 c[2] + 96 443 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  417 195 c[1] - 318 344 c[2] + 96 443 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  416 907 c[1] - 318 312 c[2] + 96 443 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  418 779 c[1] - 318 664 c[2] + 96 459 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  418 491 c[1] - 318 632 c[2] + 96 459 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  418 203 c[1] - 318 600 c[2] + 96 459 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  419 723 c[1] - 318 920 c[2] + 96 475 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  419 787 c[1] - 318 920 c[2] + 96 475 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  419 499 c[1] - 318 888 c[2] + 96 475 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  421 019 c[1] - 319 208 c[2] + 96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  409 059 c[1] - 315 856 c[2] + 96 195 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  410 355 c[1] - 316 144 c[2] + 96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  410 067 c[1] - 316 112 c[2] + 96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  411 939 c[1] - 316 464 c[2] + 96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  411 651 c[1] - 316 432 c[2] + 96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  411 363 c[1] - 316 400 c[2] + 96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  413 235 c[1] - 316 752 c[2] + 96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  412 947 c[1] - 316 720 c[2] + 96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  412 659 c[1] - 316 688 c[2] + 96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  414 179 c[1] - 317 008 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  414 243 c[1] - 317 008 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  413 891 c[1] - 316 976 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  403 227 c[1] - 313 912 c[2] + 95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  404 523 c[1] - 314 200 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  406 107 c[1] - 314 520 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  405 819 c[1] - 314 488 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  405 531 c[1] - 314 456 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  407 403 c[1] - 314 808 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  398 979 c[1] - 312 288 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  398 691 c[1] - 312 256 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  400 275 c[1] - 312 576 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7]}
```

Array[c, 7].g

20 911 371 c[1] - 15 729 016 c[2] + 4 737 051 c[3] -
735 696 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

cert =

Flatten[Array[c, 7] /. FindInstance[20 911 371 c[1] - 15 729 016 c[2] + 4 737 051 c[3] -
735 696 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
431 883 c[1] - 323 000 c[2] + 96 923 c[3] - 15 024 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 433 403 c[1] - 323 320 c[2] + 96 939 c[3] - 15 024 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 424 259 c[1] - 320 576 c[2] +
96 675 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
424 323 c[1] - 320 576 c[2] + 96 675 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 424 035 c[1] - 320 544 c[2] + 96 675 c[3] - 15 016 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 425 555 c[1] - 320 864 c[2] +
96 691 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
425 331 c[1] - 320 832 c[2] + 96 691 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 425 043 c[1] - 320 800 c[2] + 96 691 c[3] - 15 016 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 426 851 c[1] - 321 152 c[2] +
96 707 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
426 563 c[1] - 321 120 c[2] + 96 707 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 416 187 c[1] - 318 088 c[2] + 96 427 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 899 c[1] - 318 056 c[2] +
96 427 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
417 483 c[1] - 318 376 c[2] + 96 443 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 417 195 c[1] - 318 344 c[2] + 96 443 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 416 907 c[1] - 318 312 c[2] +
96 443 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
418 779 c[1] - 318 664 c[2] + 96 459 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 418 491 c[1] - 318 632 c[2] + 96 459 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 418 203 c[1] - 318 600 c[2] +
96 459 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
419 723 c[1] - 318 920 c[2] + 96 475 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 419 787 c[1] - 318 920 c[2] + 96 475 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 419 499 c[1] - 318 888 c[2] +
96 475 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
421 019 c[1] - 319 208 c[2] + 96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 409 059 c[1] - 315 856 c[2] + 96 195 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 410 355 c[1] - 316 144 c[2] +
96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
410 067 c[1] - 316 112 c[2] + 96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 939 c[1] - 316 464 c[2] + 96 227 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 651 c[1] - 316 432 c[2] +
96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
411 363 c[1] - 316 400 c[2] + 96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 413 235 c[1] - 316 752 c[2] + 96 243 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 947 c[1] - 316 720 c[2] +
96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&

```

412 659 c[1] - 316 688 c[2] + 96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 414 179 c[1] - 317 008 c[2] + 96 259 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 414 243 c[1] - 317 008 c[2] +
96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
413 891 c[1] - 316 976 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 403 227 c[1] - 313 912 c[2] + 95 979 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 404 523 c[1] - 314 200 c[2] +
95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
406 107 c[1] - 314 520 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 405 819 c[1] - 314 488 c[2] + 96 011 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 405 531 c[1] - 314 456 c[2] +
96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
407 403 c[1] - 314 808 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 398 979 c[1] - 312 288 c[2] + 95 779 c[3] -
14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
398 691 c[1] - 312 256 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 400 275 c[1] - 312 576 c[2] + 95 795 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-3771, -14918, -32892, 0, 0, 0, 0}

```

```
GCD[-3771, -14918, -32892, 0, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 0, -32892, -14918, -3771}
```

```
cert.g
```

```
-22400845
```

```
cert.Transpose[A]
```

```

{1891891, 407459, 2637979, 2396635, 3005307, 1520875, 1888203, 2496875,
403771, 1012443, 4118723, 4727395, 3001619, 3610291, 4218963,
1884515, 2493187, 3101859, 1617427, 1376083, 1984755, 500323,
5332379, 4215275, 4823947, 2489499, 3098171, 3706843, 1372395,
1981067, 2589739, 1105307, 863963, 1713979, 5428931, 4311827,
2586051, 3194723, 3803395, 1468947, 3799707, 4408379, 2682603}

```

```
chi = listdim17[[9]]
```

```
(-15 + x) (-12 + x) (-9 + x)14 (-7 + x) (5 + x)32
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {5355, -2802, 508, -38, 1}, {5235, -2794, 508, -38, 1}, {5251, -2794, 508, -38, 1},
  {5267, -2794, 508, -38, 1}, {5283, -2794, 508, -38, 1}, {5299, -2794, 508, -38, 1},
  {5115, -2786, 508, -38, 1}, {5131, -2786, 508, -38, 1}, {5147, -2786, 508, -38, 1},
  {5163, -2786, 508, -38, 1}, {5179, -2786, 508, -38, 1}, {5195, -2786, 508, -38, 1},
  {4995, -2778, 508, -38, 1}, {5011, -2778, 508, -38, 1}, {5027, -2778, 508, -38, 1},
  {5043, -2778, 508, -38, 1}, {5059, -2778, 508, -38, 1}, {5075, -2778, 508, -38, 1},
  {5091, -2778, 508, -38, 1}, {5107, -2778, 508, -38, 1}, {4923, -2770, 508, -38, 1},
  {4939, -2770, 508, -38, 1}, {4955, -2770, 508, -38, 1}, {4971, -2770, 508, -38, 1},
  {4987, -2770, 508, -38, 1}, {5003, -2770, 508, -38, 1}, {4851, -2762, 508, -38, 1},
  {4867, -2762, 508, -38, 1}, {4883, -2762, 508, -38, 1}, {4899, -2762, 508, -38, 1},
  {4915, -2762, 508, -38, 1}, {4779, -2754, 508, -38, 1}, {4795, -2754, 508, -38, 1},
  {4811, -2754, 508, -38, 1}, {4707, -2746, 508, -38, 1}, {4723, -2746, 508, -38, 1} }
```

```
A = { {5355, -2802, 508, -38, 1}, {5235, -2794, 508, -38, 1},
  {5251, -2794, 508, -38, 1}, {5267, -2794, 508, -38, 1},
  {5283, -2794, 508, -38, 1}, {5299, -2794, 508, -38, 1},
  {5115, -2786, 508, -38, 1}, {5131, -2786, 508, -38, 1},
  {5147, -2786, 508, -38, 1}, {5163, -2786, 508, -38, 1},
  {5179, -2786, 508, -38, 1}, {5195, -2786, 508, -38, 1},
  {4995, -2778, 508, -38, 1}, {5011, -2778, 508, -38, 1},
  {5027, -2778, 508, -38, 1}, {5043, -2778, 508, -38, 1},
  {5059, -2778, 508, -38, 1}, {5075, -2778, 508, -38, 1},
  {5091, -2778, 508, -38, 1}, {5107, -2778, 508, -38, 1},
  {4923, -2770, 508, -38, 1}, {4939, -2770, 508, -38, 1},
  {4955, -2770, 508, -38, 1}, {4971, -2770, 508, -38, 1},
  {4987, -2770, 508, -38, 1}, {5003, -2770, 508, -38, 1},
  {4851, -2762, 508, -38, 1}, {4867, -2762, 508, -38, 1},
  {4883, -2762, 508, -38, 1}, {4899, -2762, 508, -38, 1},
  {4915, -2762, 508, -38, 1}, {4779, -2754, 508, -38, 1},
  {4795, -2754, 508, -38, 1}, {4811, -2754, 508, -38, 1},
  {4707, -2746, 508, -38, 1}, {4723, -2746, 508, -38, 1} };
```

A // MatrixForm

$$\begin{pmatrix} 5355 & -2802 & 508 & -38 & 1 \\ 5235 & -2794 & 508 & -38 & 1 \\ 5251 & -2794 & 508 & -38 & 1 \\ 5267 & -2794 & 508 & -38 & 1 \\ 5283 & -2794 & 508 & -38 & 1 \\ 5299 & -2794 & 508 & -38 & 1 \\ 5115 & -2786 & 508 & -38 & 1 \\ 5131 & -2786 & 508 & -38 & 1 \\ 5147 & -2786 & 508 & -38 & 1 \\ 5163 & -2786 & 508 & -38 & 1 \\ 5179 & -2786 & 508 & -38 & 1 \\ 5195 & -2786 & 508 & -38 & 1 \\ 4995 & -2778 & 508 & -38 & 1 \\ 5011 & -2778 & 508 & -38 & 1 \\ 5027 & -2778 & 508 & -38 & 1 \\ 5043 & -2778 & 508 & -38 & 1 \\ 5059 & -2778 & 508 & -38 & 1 \\ 5075 & -2778 & 508 & -38 & 1 \\ 5091 & -2778 & 508 & -38 & 1 \\ 5107 & -2778 & 508 & -38 & 1 \\ 4923 & -2770 & 508 & -38 & 1 \\ 4939 & -2770 & 508 & -38 & 1 \\ 4955 & -2770 & 508 & -38 & 1 \\ 4971 & -2770 & 508 & -38 & 1 \\ 4987 & -2770 & 508 & -38 & 1 \\ 5003 & -2770 & 508 & -38 & 1 \\ 4851 & -2762 & 508 & -38 & 1 \\ 4867 & -2762 & 508 & -38 & 1 \\ 4883 & -2762 & 508 & -38 & 1 \\ 4899 & -2762 & 508 & -38 & 1 \\ 4915 & -2762 & 508 & -38 & 1 \\ 4779 & -2754 & 508 & -38 & 1 \\ 4795 & -2754 & 508 & -38 & 1 \\ 4811 & -2754 & 508 & -38 & 1 \\ 4707 & -2746 & 508 & -38 & 1 \\ 4723 & -2746 & 508 & -38 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{258075, -136818, 24892, -1862, 49}

Array[c, 5].Transpose[A]

```
{ 5355 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5],
  5235 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5251 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5267 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5283 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5299 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5],
  5115 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5131 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5147 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5163 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5179 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  5195 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5],
  4995 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5011 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5027 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5043 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5059 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5075 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5091 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  5107 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
  4923 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4939 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4955 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4971 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4987 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  5003 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
  4851 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
  4867 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
  4883 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
  4899 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
  4915 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
  4779 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
  4795 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
  4811 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
  4707 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5],
  4723 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5]}
```

Array[c, 5].g

```
258 075 c[1] - 136 818 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5]
```

```

cert = Flatten[Array[c, 5] /.
  FindInstance[258 075 c[1] - 136 818 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5] < 0 &&
    5355 c[1] - 2802 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5235 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5251 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5267 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5283 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5299 c[1] - 2794 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5115 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5131 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5147 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5163 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5179 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5195 c[1] - 2786 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4995 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5011 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5027 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5043 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5059 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5075 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5091 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5107 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4923 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4939 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4955 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4971 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4987 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5003 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4851 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4867 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4883 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4899 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4915 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4779 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4795 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4811 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4707 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4723 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{c[1], c[2], c[3], c[4], c[5]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[10]]
```

$$(-15 + x) (-11 + x)^2 (-9 + x)^{12} (-8 + x) (-7 + x) (5 + x)^{32}$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{ {-38745, 25653, -6458, 778, -45, 1}, {-38713, 25653, -6458, 778, -45, 1},
  {-38857, 25669, -6458, 778, -45, 1}, {-38825, 25669, -6458, 778, -45, 1},
  {-38969, 25685, -6458, 778, -45, 1}, {-39081, 25701, -6458, 778, -45, 1},
  {-37809, 25477, -6450, 778, -45, 1}, {-37953, 25493, -6450, 778, -45, 1},
  {-38097, 25509, -6450, 778, -45, 1}, {-38065, 25509, -6450, 778, -45, 1},
  {-38241, 25525, -6450, 778, -45, 1}, {-38209, 25525, -6450, 778, -45, 1},
  {-38353, 25541, -6450, 778, -45, 1}, {-38321, 25541, -6450, 778, -45, 1},
  {-38465, 25557, -6450, 778, -45, 1}, {-38577, 25573, -6450, 778, -45, 1},
  {-37161, 25333, -6442, 778, -45, 1}, {-37305, 25349, -6442, 778, -45, 1},
  {-37449, 25365, -6442, 778, -45, 1}, {-37417, 25365, -6442, 778, -45, 1},
  {-37593, 25381, -6442, 778, -45, 1}, {-37561, 25381, -6442, 778, -45, 1},
  {-37737, 25397, -6442, 778, -45, 1}, {-37705, 25397, -6442, 778, -45, 1},
  {-37673, 25397, -6442, 778, -45, 1}, {-37849, 25413, -6442, 778, -45, 1},
  {-37817, 25413, -6442, 778, -45, 1}, {-37961, 25429, -6442, 778, -45, 1},
  {-36657, 25205, -6434, 778, -45, 1}, {-36801, 25221, -6434, 778, -45, 1},
  {-36945, 25237, -6434, 778, -45, 1}, {-36913, 25237, -6434, 778, -45, 1},
  {-37089, 25253, -6434, 778, -45, 1}, {-37057, 25253, -6434, 778, -45, 1},
  {-37233, 25269, -6434, 778, -45, 1}, {-37201, 25269, -6434, 778, -45, 1},
  {-37169, 25269, -6434, 778, -45, 1}, {-37345, 25285, -6434, 778, -45, 1},
  {-36009, 25061, -6426, 778, -45, 1}, {-36153, 25077, -6426, 778, -45, 1},
  {-36297, 25093, -6426, 778, -45, 1}, {-36265, 25093, -6426, 778, -45, 1},
  {-36441, 25109, -6426, 778, -45, 1}, {-36409, 25109, -6426, 778, -45, 1},
  {-36585, 25125, -6426, 778, -45, 1}, {-36553, 25125, -6426, 778, -45, 1},
  {-36729, 25141, -6426, 778, -45, 1}, {-35505, 24933, -6418, 778, -45, 1},
  {-35649, 24949, -6418, 778, -45, 1}, {-35793, 24965, -6418, 778, -45, 1},
  {-35761, 24965, -6418, 778, -45, 1}, {-35937, 24981, -6418, 778, -45, 1},
  {-34857, 24789, -6410, 778, -45, 1}, {-35001, 24805, -6410, 778, -45, 1},
  {-35145, 24821, -6410, 778, -45, 1}, {-34353, 24661, -6402, 778, -45, 1} }
```



```

A = {{-38 745, 25 653, -6458, 778, -45, 1}, {-38 713, 25 653, -6458, 778, -45, 1},
      {-38 857, 25 669, -6458, 778, -45, 1}, {-38 825, 25 669, -6458, 778, -45, 1},
      {-38 969, 25 685, -6458, 778, -45, 1}, {-39 081, 25 701, -6458, 778, -45, 1},
      {-37 809, 25 477, -6450, 778, -45, 1}, {-37 953, 25 493, -6450, 778, -45, 1},
      {-38 097, 25 509, -6450, 778, -45, 1}, {-38 065, 25 509, -6450, 778, -45, 1},
      {-38 241, 25 525, -6450, 778, -45, 1}, {-38 209, 25 525, -6450, 778, -45, 1},
      {-38 353, 25 541, -6450, 778, -45, 1}, {-38 321, 25 541, -6450, 778, -45, 1},
      {-38 465, 25 557, -6450, 778, -45, 1}, {-38 577, 25 573, -6450, 778, -45, 1},
      {-37 161, 25 333, -6442, 778, -45, 1}, {-37 305, 25 349, -6442, 778, -45, 1},
      {-37 449, 25 365, -6442, 778, -45, 1}, {-37 417, 25 365, -6442, 778, -45, 1},
      {-37 593, 25 381, -6442, 778, -45, 1}, {-37 561, 25 381, -6442, 778, -45, 1},
      {-37 737, 25 397, -6442, 778, -45, 1}, {-37 705, 25 397, -6442, 778, -45, 1},
      {-37 673, 25 397, -6442, 778, -45, 1}, {-37 849, 25 413, -6442, 778, -45, 1},
      {-37 817, 25 413, -6442, 778, -45, 1}, {-37 961, 25 429, -6442, 778, -45, 1},
      {-36 657, 25 205, -6434, 778, -45, 1}, {-36 801, 25 221, -6434, 778, -45, 1},
      {-36 945, 25 237, -6434, 778, -45, 1}, {-36 913, 25 237, -6434, 778, -45, 1},
      {-37 089, 25 253, -6434, 778, -45, 1}, {-37 057, 25 253, -6434, 778, -45, 1},
      {-37 233, 25 269, -6434, 778, -45, 1}, {-37 201, 25 269, -6434, 778, -45, 1},
      {-37 169, 25 269, -6434, 778, -45, 1}, {-37 345, 25 285, -6434, 778, -45, 1},
      {-36 009, 25 061, -6426, 778, -45, 1}, {-36 153, 25 077, -6426, 778, -45, 1},
      {-36 297, 25 093, -6426, 778, -45, 1}, {-36 265, 25 093, -6426, 778, -45, 1},
      {-36 441, 25 109, -6426, 778, -45, 1}, {-36 409, 25 109, -6426, 778, -45, 1},
      {-36 585, 25 125, -6426, 778, -45, 1}, {-36 553, 25 125, -6426, 778, -45, 1},
      {-36 729, 25 141, -6426, 778, -45, 1}, {-35 505, 24 933, -6418, 778, -45, 1},
      {-35 649, 24 949, -6418, 778, -45, 1}, {-35 793, 24 965, -6418, 778, -45, 1},
      {-35 761, 24 965, -6418, 778, -45, 1}, {-35 937, 24 981, -6418, 778, -45, 1},
      {-34 857, 24 789, -6410, 778, -45, 1}, {-35 001, 24 805, -6410, 778, -45, 1},
      {-35 145, 24 821, -6410, 778, -45, 1}, {-34 353, 24 661, -6402, 778, -45, 1}};

```

```
A // MatrixForm
```

```

( -38 745 25 653 -6458 778 -45 1 )
( -38 713 25 653 -6458 778 -45 1 )
( -38 857 25 669 -6458 778 -45 1 )
( -38 825 25 669 -6458 778 -45 1 )
( -38 969 25 685 -6458 778 -45 1 )
( -39 081 25 701 -6458 778 -45 1 )
( -37 809 25 477 -6450 778 -45 1 )
( -37 953 25 493 -6450 778 -45 1 )
( -38 097 25 509 -6450 778 -45 1 )
( -38 065 25 509 -6450 778 -45 1 )
( -38 241 25 525 -6450 778 -45 1 )
( -38 209 25 525 -6450 778 -45 1 )
( -38 353 25 541 -6450 778 -45 1 )
( -38 321 25 541 -6450 778 -45 1 )
( -38 465 25 557 -6450 778 -45 1 )
( -38 577 25 573 -6450 778 -45 1 )
( -37 161 25 333 -6442 778 -45 1 )
( -37 305 25 349 -6442 778 -45 1 )
( -37 449 25 365 -6442 778 -45 1 )
( -37 417 25 365 -6442 778 -45 1 )
( -37 593 25 381 -6442 778 -45 1 )
( -37 561 25 381 -6442 778 -45 1 )
( -37 737 25 397 -6442 778 -45 1 )
( -37 705 25 397 -6442 778 -45 1 )
( -37 673 25 397 -6442 778 -45 1 )
( -37 849 25 413 -6442 778 -45 1 )
( -37 817 25 413 -6442 778 -45 1 )
( -37 961 25 429 -6442 778 -45 1 )
( -36 657 25 205 -6434 778 -45 1 )
( -36 801 25 221 -6434 778 -45 1 )
( -36 945 25 237 -6434 778 -45 1 )
( -36 913 25 237 -6434 778 -45 1 )
( -37 089 25 253 -6434 778 -45 1 )
( -37 057 25 253 -6434 778 -45 1 )
( -37 233 25 269 -6434 778 -45 1 )
( -37 201 25 269 -6434 778 -45 1 )
( -37 169 25 269 -6434 778 -45 1 )
( -37 345 25 285 -6434 778 -45 1 )
( -36 009 25 061 -6426 778 -45 1 )
( -36 153 25 077 -6426 778 -45 1 )
( -36 297 25 093 -6426 778 -45 1 )
( -36 265 25 093 -6426 778 -45 1 )
( -36 441 25 109 -6426 778 -45 1 )
( -36 409 25 109 -6426 778 -45 1 )
( -36 585 25 125 -6426 778 -45 1 )
( -36 553 25 125 -6426 778 -45 1 )
( -36 729 25 141 -6426 778 -45 1 )
( -35 505 24 933 -6418 778 -45 1 )
( -35 649 24 949 -6418 778 -45 1 )
( -35 793 24 965 -6418 778 -45 1 )
( -35 761 24 965 -6418 778 -45 1 )
( -35 937 24 981 -6418 778 -45 1 )
( -34 857 24 789 -6410 778 -45 1 )
( -35 001 24 805 -6410 778 -45 1 )
( -35 145 24 821 -6410 778 -45 1 )
( -34 353 24 661 -6402 778 -45 1 )

```

```

-37 593 25 381 -6442 778 -45 1
-37 561 25 381 -6442 778 -45 1
-37 737 25 397 -6442 778 -45 1
-37 705 25 397 -6442 778 -45 1
-37 673 25 397 -6442 778 -45 1
-37 849 25 413 -6442 778 -45 1
-37 817 25 413 -6442 778 -45 1
-37 961 25 429 -6442 778 -45 1
-36 657 25 205 -6434 778 -45 1
-36 801 25 221 -6434 778 -45 1
-36 945 25 237 -6434 778 -45 1
-36 913 25 237 -6434 778 -45 1
-37 089 25 253 -6434 778 -45 1
-37 057 25 253 -6434 778 -45 1
-37 233 25 269 -6434 778 -45 1
-37 201 25 269 -6434 778 -45 1
-37 169 25 269 -6434 778 -45 1
-37 345 25 285 -6434 778 -45 1
-36 009 25 061 -6426 778 -45 1
-36 153 25 077 -6426 778 -45 1
-36 297 25 093 -6426 778 -45 1
-36 265 25 093 -6426 778 -45 1
-36 441 25 109 -6426 778 -45 1
-36 409 25 109 -6426 778 -45 1
-36 585 25 125 -6426 778 -45 1
-36 553 25 125 -6426 778 -45 1
-36 729 25 141 -6426 778 -45 1
-35 505 24 933 -6418 778 -45 1
-35 649 24 949 -6418 778 -45 1
-35 793 24 965 -6418 778 -45 1
-35 761 24 965 -6418 778 -45 1
-35 937 24 981 -6418 778 -45 1
-34 857 24 789 -6410 778 -45 1
-35 001 24 805 -6410 778 -45 1
-35 145 24 821 -6410 778 -45 1
-34 353 24 661 -6402 778 -45 1

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1 892 025, 1 254 277, -316 170, 38 122, -2205, 49}
```

```
Array[c, 6].Transpose[A]
```

```

{-38 745 c[1] + 25 653 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6],
 -38 713 c[1] + 25 653 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6],
 -38 857 c[1] + 25 669 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6],
 -38 825 c[1] + 25 669 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6],
 -38 969 c[1] + 25 685 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6],
 -39 081 c[1] + 25 701 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6],
 -37 809 c[1] + 25 477 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6],
 -37 953 c[1] + 25 493 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6],
 -38 097 c[1] + 25 509 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6],
 -38 065 c[1] + 25 509 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6],
 -38 241 c[1] + 25 525 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6],

```

```

-38 209 c[1] + 25 525 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-38 353 c[1] + 25 541 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-38 321 c[1] + 25 541 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-38 465 c[1] + 25 557 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-38 577 c[1] + 25 573 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 161 c[1] + 25 333 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 305 c[1] + 25 349 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 449 c[1] + 25 365 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 417 c[1] + 25 365 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 593 c[1] + 25 381 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 561 c[1] + 25 381 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 737 c[1] + 25 397 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 705 c[1] + 25 397 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 673 c[1] + 25 397 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 849 c[1] + 25 413 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 817 c[1] + 25 413 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 961 c[1] + 25 429 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 657 c[1] + 25 205 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 801 c[1] + 25 221 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 945 c[1] + 25 237 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 913 c[1] + 25 237 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 089 c[1] + 25 253 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 057 c[1] + 25 253 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 233 c[1] + 25 269 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 201 c[1] + 25 269 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 169 c[1] + 25 269 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-37 345 c[1] + 25 285 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 009 c[1] + 25 061 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 153 c[1] + 25 077 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 297 c[1] + 25 093 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 265 c[1] + 25 093 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 441 c[1] + 25 109 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 409 c[1] + 25 109 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 585 c[1] + 25 125 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 553 c[1] + 25 125 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-36 729 c[1] + 25 141 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 505 c[1] + 24 933 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 649 c[1] + 24 949 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 793 c[1] + 24 965 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 761 c[1] + 24 965 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 937 c[1] + 24 981 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 857 c[1] + 24 789 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 001 c[1] + 24 805 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 145 c[1] + 24 821 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 353 c[1] + 24 661 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] }

```

Array[c, 6].g

$$-1892025 c[1] + 1254277 c[2] - 316170 c[3] + 38122 c[4] - 2205 c[5] + 49 c[6]$$

cert = Flatten[Array[c, 6] /. FindInstance[

```

-1892025 c[1] + 1254277 c[2] - 316170 c[3] + 38122 c[4] - 2205 c[5] + 49 c[6] < 0 &&
-38745 c[1] + 25653 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38713 c[1] + 25653 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38857 c[1] + 25669 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38825 c[1] + 25669 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38969 c[1] + 25685 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-39081 c[1] + 25701 c[2] - 6458 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37809 c[1] + 25477 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37953 c[1] + 25493 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38097 c[1] + 25509 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38065 c[1] + 25509 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38241 c[1] + 25525 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38209 c[1] + 25525 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38353 c[1] + 25541 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38321 c[1] + 25541 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38465 c[1] + 25557 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-38577 c[1] + 25573 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37161 c[1] + 25333 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37305 c[1] + 25349 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37449 c[1] + 25365 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37417 c[1] + 25365 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37593 c[1] + 25381 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37561 c[1] + 25381 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37737 c[1] + 25397 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37705 c[1] + 25397 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37673 c[1] + 25397 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37849 c[1] + 25413 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37817 c[1] + 25413 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37961 c[1] + 25429 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36657 c[1] + 25205 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36801 c[1] + 25221 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36945 c[1] + 25237 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36913 c[1] + 25237 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37089 c[1] + 25253 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37057 c[1] + 25253 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37233 c[1] + 25269 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37201 c[1] + 25269 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37169 c[1] + 25269 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37345 c[1] + 25285 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36009 c[1] + 25061 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36153 c[1] + 25077 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36297 c[1] + 25093 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36265 c[1] + 25093 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36441 c[1] + 25109 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&

```

```

-36 409 c[1] + 25 109 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 585 c[1] + 25 125 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 553 c[1] + 25 125 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 729 c[1] + 25 141 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 505 c[1] + 24 933 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 649 c[1] + 24 949 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 793 c[1] + 24 965 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 761 c[1] + 24 965 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 937 c[1] + 24 981 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 857 c[1] + 24 789 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 001 c[1] + 24 805 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 145 c[1] + 24 821 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 353 c[1] + 24 661 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```

chi = listdim17[[11]]
(-9 + x)12 (5 + x)32 (-101 608 + 52 481 x - 10 652 x2 + 1062 x3 - 52 x4 + x5)

```

```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```

```

{{425 331, -320 832, 96 691, -15 016, 1273, -56, 1},
 {425 043, -320 800, 96 691, -15 016, 1273, -56, 1},
 {427 491, -321 216, 96 707, -15 016, 1273, -56, 1},
 {427 203, -321 184, 96 707, -15 016, 1273, -56, 1},
 {426 915, -321 152, 96 707, -15 016, 1273, -56, 1},
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A // MatrixForm

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421 947	-319 304	96 491	-15 008	1273	-56	1
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405531 c[1] - 314456 c[2] + 96011 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
407403 c[1] - 314808 c[2] + 96027 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
408987 c[1] - 315128 c[2] + 96043 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
394515 c[1] - 311360 c[2] + 95731 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
395811 c[1] - 311648 c[2] + 95747 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
397395 c[1] - 311968 c[2] + 95763 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
397107 c[1] - 311936 c[2] + 95763 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
396819 c[1] - 311904 c[2] + 95763 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
398691 c[1] - 312256 c[2] + 95779 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
400275 c[1] - 312576 c[2] + 95795 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
387387 c[1] - 309128 c[2] + 95499 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
388683 c[1] - 309416 c[2] + 95515 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
390267 c[1] - 309736 c[2] + 95531 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
389979 c[1] - 309704 c[2] + 95531 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
391563 c[1] - 310024 c[2] + 95547 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
381555 c[1] - 307184 c[2] + 95283 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7],
382851 c[1] - 307472 c[2] + 95299 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7],
374427 c[1] - 304952 c[2] + 95051 c[3] - 14960 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20804979 c[1] - 15687664 c[2] + 4732147 c[3] -
735512 c[4] + 62377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20804979 c[1] - 15687664 c[2] + 4732147 c[3] -
735512 c[4] + 62377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
425331 c[1] - 320832 c[2] + 96691 c[3] - 15016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 425043 c[1] - 320800 c[2] + 96691 c[3] - 15016 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 427491 c[1] - 321216 c[2] +
96707 c[3] - 15016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
427203 c[1] - 321184 c[2] + 96707 c[3] - 15016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 426915 c[1] - 321152 c[2] + 96707 c[3] - 15016 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 426627 c[1] - 321120 c[2] +
96707 c[3] - 15016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
428499 c[1] - 321472 c[2] + 96723 c[3] - 15016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 428211 c[1] - 321440 c[2] + 96723 c[3] - 15016 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415611 c[1] - 318024 c[2] +
96427 c[3] - 15008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&

```

$$\begin{aligned}
& 417\,483\,c[1] - 318\,376\,c[2] + 96\,443\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 417\,195\,c[1] - 318\,344\,c[2] + 96\,443\,c[3] - 15\,008\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 416\,907\,c[1] - 318\,312\,c[2] + \\
& 96\,443\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 419\,067\,c[1] - 318\,696\,c[2] + 96\,459\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 418\,779\,c[1] - 318\,664\,c[2] + 96\,459\,c[3] - 15\,008\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 418\,491\,c[1] - 318\,632\,c[2] + \\
& 96\,459\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 418\,203\,c[1] - 318\,600\,c[2] + 96\,459\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 417\,915\,c[1] - 318\,568\,c[2] + 96\,459\,c[3] - 15\,008\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 420\,363\,c[1] - 318\,984\,c[2] + \\
& 96\,475\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 420\,075\,c[1] - 318\,952\,c[2] + 96\,475\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 419\,787\,c[1] - 318\,920\,c[2] + 96\,475\,c[3] - 15\,008\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 419\,499\,c[1] - 318\,888\,c[2] + \\
& 96\,475\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 421\,947\,c[1] - 319\,304\,c[2] + 96\,491\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 421\,659\,c[1] - 319\,272\,c[2] + 96\,491\,c[3] - 15\,008\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 421\,371\,c[1] - 319\,240\,c[2] + \\
& 96\,491\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 422\,955\,c[1] - 319\,560\,c[2] + 96\,507\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 407\,475\,c[1] - 315\,536\,c[2] + 96\,179\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 407\,187\,c[1] - 315\,504\,c[2] + \\
& 96\,179\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 408\,771\,c[1] - 315\,824\,c[2] + 96\,195\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 408\,483\,c[1] - 315\,792\,c[2] + 96\,195\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 410\,355\,c[1] - 316\,144\,c[2] + \\
& 96\,211\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 410\,067\,c[1] - 316\,112\,c[2] + 96\,211\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 409\,779\,c[1] - 316\,080\,c[2] + 96\,211\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 411\,651\,c[1] - 316\,432\,c[2] + \\
& 96\,227\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 411\,363\,c[1] - 316\,400\,c[2] + 96\,227\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 411\,075\,c[1] - 316\,368\,c[2] + 96\,227\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 413\,235\,c[1] - 316\,752\,c[2] + \\
& 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 412\,947\,c[1] - 316\,720\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 412\,659\,c[1] - 316\,688\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 414\,531\,c[1] - 317\,040\,c[2] + \\
& 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 414\,243\,c[1] - 317\,008\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 416\,115\,c[1] - 317\,360\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 415\,827\,c[1] - 317\,328\,c[2] + \\
& 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 400\,347\,c[1] - 313\,304\,c[2] + 95\,947\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 401\,643\,c[1] - 313\,592\,c[2] + 95\,963\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 403\,227\,c[1] - 313\,912\,c[2] +
\end{aligned}$$

```

95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
402 939 c[1] - 313 880 c[2] + 95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 402 651 c[1] - 313 848 c[2] + 95 979 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 404 523 c[1] - 314 200 c[2] +
95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
404 235 c[1] - 314 168 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 403 947 c[1] - 314 136 c[2] + 95 995 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 406 107 c[1] - 314 520 c[2] +
96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
405 819 c[1] - 314 488 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 405 531 c[1] - 314 456 c[2] + 96 011 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 407 403 c[1] - 314 808 c[2] +
96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
408 987 c[1] - 315 128 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 394 515 c[1] - 311 360 c[2] + 95 731 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 395 811 c[1] - 311 648 c[2] +
95 747 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
397 395 c[1] - 311 968 c[2] + 95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 397 107 c[1] - 311 936 c[2] + 95 763 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 396 819 c[1] - 311 904 c[2] +
95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
398 691 c[1] - 312 256 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 400 275 c[1] - 312 576 c[2] + 95 795 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 387 387 c[1] - 309 128 c[2] +
95 499 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
388 683 c[1] - 309 416 c[2] + 95 515 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 390 267 c[1] - 309 736 c[2] + 95 531 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 389 979 c[1] - 309 704 c[2] +
95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
391 563 c[1] - 310 024 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 381 555 c[1] - 307 184 c[2] + 95 283 c[3] -
14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 374 427 c[1] - 304 952 c[2] + 95 051 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]

{12 792, 95 219, 598 246, 2 179 953, 0, 0, 0}

GCD[12 792, 95 219, 598 246, 2 179 953, 0, 0, 0]

1

Reverse[cert]

{0, 0, 0, 2 179 953, 598 246, 95 219, 12 792}

cert.g

-19 963 822

```

cert.Transpose[A]

```
{2 361 682, 1 724 594, 3 000 242, 2 363 154, 1 726 066, 1 088 978, 1 090 450, 453 362,
 4 901 074, 4 902 546, 4 265 458, 3 628 370, 4 266 930, 3 629 842, 2 992 754, 2 355 666,
 1 718 578, 2 994 226, 2 357 138, 1 720 050, 1 082 962, 2 358 610, 1 721 522, 1 084 434,
 448 818, 6 804 850, 6 167 762, 5 532 146, 4 895 058, 4 896 530, 4 259 442, 3 622 354,
 3 623 826, 2 986 738, 2 349 650, 2 988 210, 2 351 122, 1 714 034, 1 715 506, 1 078 418,
 1 079 890, 442 802, 6 798 834, 5 526 130, 4 890 514, 4 253 426, 3 616 338, 3 617 810,
 2 980 722, 2 343 634, 2 982 194, 2 345 106, 1 708 018, 1 709 490, 1 073 874, 5 520 114,
 4 247 410, 3 611 794, 2 974 706, 2 337 618, 2 339 090, 1 703 474, 5 514 098,
 4 241 394, 3 605 778, 2 968 690, 2 333 074, 4 235 378, 2 962 674, 4 229 362}
```

chi = listdim17[[12]]

$$(-9 + x)^{12} (-8 + x) (5 + x)^{32} (12\,737 - 4972\,x + 710\,x^2 - 44\,x^3 + x^4)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {428355, -321600, 96739, -15016, 1273, -56, 1},
  {429651, -321888, 96755, -15016, 1273, -56, 1},
  {420795, -319176, 96491, -15008, 1273, -56, 1},
  {420507, -319144, 96491, -15008, 1273, -56, 1},
  {421803, -319432, 96507, -15008, 1273, -56, 1},
  {421515, -319400, 96507, -15008, 1273, -56, 1},
  {423099, -319720, 96523, -15008, 1273, -56, 1},
  {422811, -319688, 96523, -15008, 1273, -56, 1},
  {412659, -316688, 96243, -15000, 1273, -56, 1},
  {412371, -316656, 96243, -15000, 1273, -56, 1},
  {413955, -316976, 96259, -15000, 1273, -56, 1},
  {413667, -316944, 96259, -15000, 1273, -56, 1},
  {413379, -316912, 96259, -15000, 1273, -56, 1},
  {415251, -317264, 96275, -15000, 1273, -56, 1},
  {414963, -317232, 96275, -15000, 1273, -56, 1},
  {414675, -317200, 96275, -15000, 1273, -56, 1},
  {416259, -317520, 96291, -15000, 1273, -56, 1},
  {415971, -317488, 96291, -15000, 1273, -56, 1},
  {404235, -314168, 95995, -14992, 1273, -56, 1},
  {405531, -314456, 96011, -14992, 1273, -56, 1},
  {406827, -314744, 96027, -14992, 1273, -56, 1},
  {406539, -314712, 96027, -14992, 1273, -56, 1},
  {408123, -315032, 96043, -14992, 1273, -56, 1},
  {407835, -315000, 96043, -14992, 1273, -56, 1},
  {409707, -315352, 96059, -14992, 1273, -56, 1},
  {409419, -315320, 96059, -14992, 1273, -56, 1},
  {409131, -315288, 96059, -14992, 1273, -56, 1},
  {398403, -312224, 95779, -14984, 1273, -56, 1},
  {399699, -312512, 95795, -14984, 1273, -56, 1},
  {400995, -312800, 95811, -14984, 1273, -56, 1},
  {400707, -312768, 95811, -14984, 1273, -56, 1},
  {402291, -313088, 95827, -14984, 1273, -56, 1},
  {393867, -310568, 95579, -14976, 1273, -56, 1} }
```

```

A = {{428 355, -321 600, 96 739, -15 016, 1273, -56, 1},
      {429 651, -321 888, 96 755, -15 016, 1273, -56, 1},
      {420 795, -319 176, 96 491, -15 008, 1273, -56, 1},
      {420 507, -319 144, 96 491, -15 008, 1273, -56, 1},
      {421 803, -319 432, 96 507, -15 008, 1273, -56, 1},
      {421 515, -319 400, 96 507, -15 008, 1273, -56, 1},
      {423 099, -319 720, 96 523, -15 008, 1273, -56, 1},
      {422 811, -319 688, 96 523, -15 008, 1273, -56, 1},
      {412 659, -316 688, 96 243, -15 000, 1273, -56, 1},
      {412 371, -316 656, 96 243, -15 000, 1273, -56, 1},
      {413 955, -316 976, 96 259, -15 000, 1273, -56, 1},
      {413 667, -316 944, 96 259, -15 000, 1273, -56, 1},
      {413 379, -316 912, 96 259, -15 000, 1273, -56, 1},
      {415 251, -317 264, 96 275, -15 000, 1273, -56, 1},
      {414 963, -317 232, 96 275, -15 000, 1273, -56, 1},
      {414 675, -317 200, 96 275, -15 000, 1273, -56, 1},
      {416 259, -317 520, 96 291, -15 000, 1273, -56, 1},
      {415 971, -317 488, 96 291, -15 000, 1273, -56, 1},
      {404 235, -314 168, 95 995, -14 992, 1273, -56, 1},
      {405 531, -314 456, 96 011, -14 992, 1273, -56, 1},
      {406 827, -314 744, 96 027, -14 992, 1273, -56, 1},
      {406 539, -314 712, 96 027, -14 992, 1273, -56, 1},
      {408 123, -315 032, 96 043, -14 992, 1273, -56, 1},
      {407 835, -315 000, 96 043, -14 992, 1273, -56, 1},
      {409 707, -315 352, 96 059, -14 992, 1273, -56, 1},
      {409 419, -315 320, 96 059, -14 992, 1273, -56, 1},
      {409 131, -315 288, 96 059, -14 992, 1273, -56, 1},
      {398 403, -312 224, 95 779, -14 984, 1273, -56, 1},
      {399 699, -312 512, 95 795, -14 984, 1273, -56, 1},
      {400 995, -312 800, 95 811, -14 984, 1273, -56, 1},
      {400 707, -312 768, 95 811, -14 984, 1273, -56, 1},
      {402 291, -313 088, 95 827, -14 984, 1273, -56, 1},
      {393 867, -310 568, 95 579, -14 976, 1273, -56, 1}};

```


A // MatrixForm

$$\begin{pmatrix} 428355 & -321600 & 96739 & -15016 & 1273 & -56 & 1 \\ 429651 & -321888 & 96755 & -15016 & 1273 & -56 & 1 \\ 420795 & -319176 & 96491 & -15008 & 1273 & -56 & 1 \\ 420507 & -319144 & 96491 & -15008 & 1273 & -56 & 1 \\ 421803 & -319432 & 96507 & -15008 & 1273 & -56 & 1 \\ 421515 & -319400 & 96507 & -15008 & 1273 & -56 & 1 \\ 423099 & -319720 & 96523 & -15008 & 1273 & -56 & 1 \\ 422811 & -319688 & 96523 & -15008 & 1273 & -56 & 1 \\ 412659 & -316688 & 96243 & -15000 & 1273 & -56 & 1 \\ 412371 & -316656 & 96243 & -15000 & 1273 & -56 & 1 \\ 413955 & -316976 & 96259 & -15000 & 1273 & -56 & 1 \\ 413667 & -316944 & 96259 & -15000 & 1273 & -56 & 1 \\ 413379 & -316912 & 96259 & -15000 & 1273 & -56 & 1 \\ 415251 & -317264 & 96275 & -15000 & 1273 & -56 & 1 \\ 414963 & -317232 & 96275 & -15000 & 1273 & -56 & 1 \\ 414675 & -317200 & 96275 & -15000 & 1273 & -56 & 1 \\ 416259 & -317520 & 96291 & -15000 & 1273 & -56 & 1 \\ 415971 & -317488 & 96291 & -15000 & 1273 & -56 & 1 \\ 404235 & -314168 & 95995 & -14992 & 1273 & -56 & 1 \\ 405531 & -314456 & 96011 & -14992 & 1273 & -56 & 1 \\ 406827 & -314744 & 96027 & -14992 & 1273 & -56 & 1 \\ 406539 & -314712 & 96027 & -14992 & 1273 & -56 & 1 \\ 408123 & -315032 & 96043 & -14992 & 1273 & -56 & 1 \\ 407835 & -315000 & 96043 & -14992 & 1273 & -56 & 1 \\ 409707 & -315352 & 96059 & -14992 & 1273 & -56 & 1 \\ 409419 & -315320 & 96059 & -14992 & 1273 & -56 & 1 \\ 409131 & -315288 & 96059 & -14992 & 1273 & -56 & 1 \\ 398403 & -312224 & 95779 & -14984 & 1273 & -56 & 1 \\ 399699 & -312512 & 95795 & -14984 & 1273 & -56 & 1 \\ 400995 & -312800 & 95811 & -14984 & 1273 & -56 & 1 \\ 400707 & -312768 & 95811 & -14984 & 1273 & -56 & 1 \\ 402291 & -313088 & 95827 & -14984 & 1273 & -56 & 1 \\ 393867 & -310568 & 95579 & -14976 & 1273 & -56 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{20869203, -15707760, 4733587, -735512, 62377, -2744, 49}

Array[c, 7].Transpose[A]

```
{ 428 355 c[1] - 321 600 c[2] + 96 739 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  429 651 c[1] - 321 888 c[2] + 96 755 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
  420 795 c[1] - 319 176 c[2] + 96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  420 507 c[1] - 319 144 c[2] + 96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  421 803 c[1] - 319 432 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  421 515 c[1] - 319 400 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  423 099 c[1] - 319 720 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  422 811 c[1] - 319 688 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
  412 659 c[1] - 316 688 c[2] + 96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  412 371 c[1] - 316 656 c[2] + 96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  413 955 c[1] - 316 976 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  413 667 c[1] - 316 944 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  413 379 c[1] - 316 912 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  415 251 c[1] - 317 264 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  414 963 c[1] - 317 232 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  414 675 c[1] - 317 200 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  416 259 c[1] - 317 520 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  415 971 c[1] - 317 488 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  404 235 c[1] - 314 168 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  405 531 c[1] - 314 456 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  406 827 c[1] - 314 744 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  406 539 c[1] - 314 712 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  408 123 c[1] - 315 032 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  407 835 c[1] - 315 000 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  409 707 c[1] - 315 352 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  409 419 c[1] - 315 320 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  409 131 c[1] - 315 288 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  398 403 c[1] - 312 224 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  399 699 c[1] - 312 512 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  400 995 c[1] - 312 800 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  400 707 c[1] - 312 768 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  402 291 c[1] - 313 088 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  393 867 c[1] - 310 568 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7]}
```

Array[c, 7].g

```
20 869 203 c[1] - 15 707 760 c[2] + 4 733 587 c[3] -
  735 512 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]
```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 869 203 c[1] - 15 707 760 c[2] + 4 733 587 c[3] -
  735 512 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 && 428 355 c[1] -
  321 600 c[2] + 96 739 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
429 651 c[1] - 321 888 c[2] + 96 755 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 420 795 c[1] - 319 176 c[2] + 96 491 c[3] - 15 008 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 420 507 c[1] - 319 144 c[2] +
  96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
421 803 c[1] - 319 432 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 421 515 c[1] - 319 400 c[2] + 96 507 c[3] - 15 008 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 423 099 c[1] - 319 720 c[2] +
  96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
422 811 c[1] - 319 688 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 412 659 c[1] - 316 688 c[2] + 96 243 c[3] - 15 000 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 371 c[1] - 316 656 c[2] +
  96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
413 955 c[1] - 316 976 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 413 667 c[1] - 316 944 c[2] + 96 259 c[3] - 15 000 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 413 379 c[1] - 316 912 c[2] +
  96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
415 251 c[1] - 317 264 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 414 963 c[1] - 317 232 c[2] + 96 275 c[3] - 15 000 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 414 675 c[1] - 317 200 c[2] +
  96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
416 259 c[1] - 317 520 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 415 971 c[1] - 317 488 c[2] + 96 291 c[3] - 15 000 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 404 235 c[1] - 314 168 c[2] +
  95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
405 531 c[1] - 314 456 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 406 827 c[1] - 314 744 c[2] + 96 027 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 406 539 c[1] - 314 712 c[2] +
  96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
408 123 c[1] - 315 032 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 407 835 c[1] - 315 000 c[2] + 96 043 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 409 707 c[1] - 315 352 c[2] +
  96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
409 419 c[1] - 315 320 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 409 131 c[1] - 315 288 c[2] + 96 059 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 398 403 c[1] - 312 224 c[2] +
  95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
399 699 c[1] - 312 512 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 400 995 c[1] - 312 800 c[2] + 95 811 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 400 707 c[1] - 312 768 c[2] +
  95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
402 291 c[1] - 313 088 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 393 867 c[1] - 310 568 c[2] + 95 579 c[3] - 14 976 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]

```

```
{-5385, -21298, -46941, 0, 0, 0, 0}
```

```
GCD[-5385, -21298, -46941, 0, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 0, -46941, -21298, -5385}
```

```
cert.g
```

```
-36093042
```

```
cert.Transpose[A]
```

```
{1719726, 123534, 2445342, 3314686, 1718494, 2587838, 122302, 991646, 4909646,
 5778990, 3313454, 4182798, 5052142, 1717262, 2586606, 3455950, 990414,
 1859758, 8243294, 6647102, 5050910, 5920254, 3454718, 4324062, 989182,
 1858526, 2727870, 8384558, 6788366, 5192174, 6061518, 3595982, 6929630}
```

```
chi = listdim17[[13]]
```

```
 $(-9 + x)^{12} (-8 + x) (5 + x)^{32} (113 - 22x + x^2)^2$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{}
```

```
A =;
```

```
A // MatrixForm
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
Array[c,].Transpose[A]
```

```
Array[c,].g
```

```
cert = Flatten[Array[c,] /. FindInstance[< 0 &&, Array[c,], Integers]]
```

```
GCD[]
```

```
Reverse[cert]
```

```
cert.g
```

```
cert.Transpose[A]
```

chi = listdim17[[14]]

$$(-9 + x)^{12} (5 + x)^{32} (-101140 + 52393x - 10648x^2 + 1062x^3 - 52x^4 + x^5)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {426915, -321152, 96707, -15016, 1273, -56, 1},
  {429075, -321536, 96723, -15016, 1273, -56, 1},
  {428787, -321504, 96723, -15016, 1273, -56, 1},
  {416907, -318312, 96443, -15008, 1273, -56, 1},
  {419067, -318696, 96459, -15008, 1273, -56, 1},
  {418779, -318664, 96459, -15008, 1273, -56, 1},
  {418491, -318632, 96459, -15008, 1273, -56, 1},
  {418203, -318600, 96459, -15008, 1273, -56, 1},
  {420651, -319016, 96475, -15008, 1273, -56, 1},
  {420363, -318984, 96475, -15008, 1273, -56, 1},
  {420075, -318952, 96475, -15008, 1273, -56, 1},
  {422235, -319336, 96491, -15008, 1273, -56, 1},
  {421947, -319304, 96491, -15008, 1273, -56, 1},
  {421659, -319272, 96491, -15008, 1273, -56, 1},
  {423531, -319624, 96507, -15008, 1273, -56, 1},
  {423243, -319592, 96507, -15008, 1273, -56, 1},
  {407187, -315504, 96179, -15000, 1273, -56, 1},
  {409059, -315856, 96195, -15000, 1273, -56, 1},
  {408771, -315824, 96195, -15000, 1273, -56, 1},
  {408483, -315792, 96195, -15000, 1273, -56, 1},
  {410355, -316144, 96211, -15000, 1273, -56, 1},
  {410067, -316112, 96211, -15000, 1273, -56, 1},
  {409779, -316080, 96211, -15000, 1273, -56, 1},
  {411939, -316464, 96227, -15000, 1273, -56, 1},
  {411651, -316432, 96227, -15000, 1273, -56, 1},
  {411363, -316400, 96227, -15000, 1273, -56, 1},
  {413523, -316784, 96243, -15000, 1273, -56, 1},
  {413235, -316752, 96243, -15000, 1273, -56, 1},
  {412947, -316720, 96243, -15000, 1273, -56, 1},
  {414819, -317072, 96259, -15000, 1273, -56, 1},
  {414531, -317040, 96259, -15000, 1273, -56, 1},
  {416403, -317392, 96275, -15000, 1273, -56, 1},
  {417987, -317712, 96291, -15000, 1273, -56, 1},
  {400347, -313304, 95947, -14992, 1273, -56, 1},
  {401643, -313592, 95963, -14992, 1273, -56, 1},
  {401355, -313560, 95963, -14992, 1273, -56, 1},
  {403227, -313912, 95979, -14992, 1273, -56, 1},
  {402939, -313880, 95979, -14992, 1273, -56, 1},
  {402651, -313848, 95979, -14992, 1273, -56, 1},
  {404811, -314232, 95995, -14992, 1273, -56, 1},
  {404523, -314200, 95995, -14992, 1273, -56, 1},
  {404235, -314168, 95995, -14992, 1273, -56, 1},
  {406107, -314520, 96011, -14992, 1273, -56, 1},
```

```

{405 819, -314 488, 96 011, -14 992, 1273, -56, 1},
{407 691, -314 840, 96 027, -14 992, 1273, -56, 1},
{409 275, -315 160, 96 043, -14 992, 1273, -56, 1},
{393 219, -311 072, 95 715, -14 984, 1273, -56, 1},
{394 515, -311 360, 95 731, -14 984, 1273, -56, 1},
{396 099, -311 680, 95 747, -14 984, 1273, -56, 1},
{395 811, -311 648, 95 747, -14 984, 1273, -56, 1},
{395 523, -311 616, 95 747, -14 984, 1273, -56, 1},
{397 683, -312 000, 95 763, -14 984, 1273, -56, 1},
{397 395, -311 968, 95 763, -14 984, 1273, -56, 1},
{397 107, -311 936, 95 763, -14 984, 1273, -56, 1},
{398 979, -312 288, 95 779, -14 984, 1273, -56, 1},
{400 563, -312 608, 95 795, -14 984, 1273, -56, 1},
{387 387, -309 128, 95 499, -14 976, 1273, -56, 1},
{388 971, -309 448, 95 515, -14 976, 1273, -56, 1},
{388 683, -309 416, 95 515, -14 976, 1273, -56, 1},
{390 267, -309 736, 95 531, -14 976, 1273, -56, 1},
{391 851, -310 056, 95 547, -14 976, 1273, -56, 1},
{393 435, -310 376, 95 563, -14 976, 1273, -56, 1},
{380 259, -306 896, 95 267, -14 968, 1273, -56, 1},
{381 555, -307 184, 95 283, -14 968, 1273, -56, 1},
{383 139, -307 504, 95 299, -14 968, 1273, -56, 1},
{384 723, -307 824, 95 315, -14 968, 1273, -56, 1},
{373 131, -304 664, 95 035, -14 960, 1273, -56, 1},
{374 427, -304 952, 95 051, -14 960, 1273, -56, 1}

```

```

A = {{426 915, -321 152, 96 707, -15 016, 1273, -56, 1},
      {429 075, -321 536, 96 723, -15 016, 1273, -56, 1},
      {428 787, -321 504, 96 723, -15 016, 1273, -56, 1},
      {416 907, -318 312, 96 443, -15 008, 1273, -56, 1},
      {419 067, -318 696, 96 459, -15 008, 1273, -56, 1},
      {418 779, -318 664, 96 459, -15 008, 1273, -56, 1},
      {418 491, -318 632, 96 459, -15 008, 1273, -56, 1},
      {418 203, -318 600, 96 459, -15 008, 1273, -56, 1},
      {420 651, -319 016, 96 475, -15 008, 1273, -56, 1},
      {420 363, -318 984, 96 475, -15 008, 1273, -56, 1},
      {420 075, -318 952, 96 475, -15 008, 1273, -56, 1},
      {422 235, -319 336, 96 491, -15 008, 1273, -56, 1},
      {421 947, -319 304, 96 491, -15 008, 1273, -56, 1},
      {421 659, -319 272, 96 491, -15 008, 1273, -56, 1},
      {423 531, -319 624, 96 507, -15 008, 1273, -56, 1},
      {423 243, -319 592, 96 507, -15 008, 1273, -56, 1},
      {407 187, -315 504, 96 179, -15 000, 1273, -56, 1},
      {409 059, -315 856, 96 195, -15 000, 1273, -56, 1},
      {408 771, -315 824, 96 195, -15 000, 1273, -56, 1},
      {408 483, -315 792, 96 195, -15 000, 1273, -56, 1},
      {410 355, -316 144, 96 211, -15 000, 1273, -56, 1},

```

```

{410 067, -316 112, 96 211, -15 000, 1273, -56, 1},
{409 779, -316 080, 96 211, -15 000, 1273, -56, 1},
{411 939, -316 464, 96 227, -15 000, 1273, -56, 1},
{411 651, -316 432, 96 227, -15 000, 1273, -56, 1},
{411 363, -316 400, 96 227, -15 000, 1273, -56, 1},
{413 523, -316 784, 96 243, -15 000, 1273, -56, 1},
{413 235, -316 752, 96 243, -15 000, 1273, -56, 1},
{412 947, -316 720, 96 243, -15 000, 1273, -56, 1},
{414 819, -317 072, 96 259, -15 000, 1273, -56, 1},
{414 531, -317 040, 96 259, -15 000, 1273, -56, 1},
{416 403, -317 392, 96 275, -15 000, 1273, -56, 1},
{417 987, -317 712, 96 291, -15 000, 1273, -56, 1},
{400 347, -313 304, 95 947, -14 992, 1273, -56, 1},
{401 643, -313 592, 95 963, -14 992, 1273, -56, 1},
{401 355, -313 560, 95 963, -14 992, 1273, -56, 1},
{403 227, -313 912, 95 979, -14 992, 1273, -56, 1},
{402 939, -313 880, 95 979, -14 992, 1273, -56, 1},
{402 651, -313 848, 95 979, -14 992, 1273, -56, 1},
{404 811, -314 232, 95 995, -14 992, 1273, -56, 1},
{404 523, -314 200, 95 995, -14 992, 1273, -56, 1},
{404 235, -314 168, 95 995, -14 992, 1273, -56, 1},
{406 107, -314 520, 96 011, -14 992, 1273, -56, 1},
{405 819, -314 488, 96 011, -14 992, 1273, -56, 1},
{407 691, -314 840, 96 027, -14 992, 1273, -56, 1},
{409 275, -315 160, 96 043, -14 992, 1273, -56, 1},
{393 219, -311 072, 95 715, -14 984, 1273, -56, 1},
{394 515, -311 360, 95 731, -14 984, 1273, -56, 1},
{396 099, -311 680, 95 747, -14 984, 1273, -56, 1},
{395 811, -311 648, 95 747, -14 984, 1273, -56, 1},
{395 523, -311 616, 95 747, -14 984, 1273, -56, 1},
{397 683, -312 000, 95 763, -14 984, 1273, -56, 1},
{397 395, -311 968, 95 763, -14 984, 1273, -56, 1},
{397 107, -311 936, 95 763, -14 984, 1273, -56, 1},
{398 979, -312 288, 95 779, -14 984, 1273, -56, 1},
{400 563, -312 608, 95 795, -14 984, 1273, -56, 1},
{387 387, -309 128, 95 499, -14 976, 1273, -56, 1},
{388 971, -309 448, 95 515, -14 976, 1273, -56, 1},
{388 683, -309 416, 95 515, -14 976, 1273, -56, 1},
{390 267, -309 736, 95 531, -14 976, 1273, -56, 1},
{391 851, -310 056, 95 547, -14 976, 1273, -56, 1},
{393 435, -310 376, 95 563, -14 976, 1273, -56, 1},
{380 259, -306 896, 95 267, -14 968, 1273, -56, 1},
{381 555, -307 184, 95 283, -14 968, 1273, -56, 1},
{383 139, -307 504, 95 299, -14 968, 1273, -56, 1},
{384 723, -307 824, 95 315, -14 968, 1273, -56, 1},
{373 131, -304 664, 95 035, -14 960, 1273, -56, 1},
{374 427, -304 952, 95 051, -14 960, 1273, -56, 1}};

```

A // MatrixForm

426 915	-321 152	96 707	-15 016	1273	-56	1
429 075	-321 536	96 723	-15 016	1273	-56	1
428 787	-321 504	96 723	-15 016	1273	-56	1
416 907	-318 312	96 443	-15 008	1273	-56	1
419 067	-318 696	96 459	-15 008	1273	-56	1
418 779	-318 664	96 459	-15 008	1273	-56	1
418 491	-318 632	96 459	-15 008	1273	-56	1
418 203	-318 600	96 459	-15 008	1273	-56	1
420 651	-319 016	96 475	-15 008	1273	-56	1
420 363	-318 984	96 475	-15 008	1273	-56	1
420 075	-318 952	96 475	-15 008	1273	-56	1
422 235	-319 336	96 491	-15 008	1273	-56	1
421 947	-319 304	96 491	-15 008	1273	-56	1
421 659	-319 272	96 491	-15 008	1273	-56	1
423 531	-319 624	96 507	-15 008	1273	-56	1
423 243	-319 592	96 507	-15 008	1273	-56	1
407 187	-315 504	96 179	-15 000	1273	-56	1
409 059	-315 856	96 195	-15 000	1273	-56	1
408 771	-315 824	96 195	-15 000	1273	-56	1
408 483	-315 792	96 195	-15 000	1273	-56	1
410 355	-316 144	96 211	-15 000	1273	-56	1
410 067	-316 112	96 211	-15 000	1273	-56	1
409 779	-316 080	96 211	-15 000	1273	-56	1
411 939	-316 464	96 227	-15 000	1273	-56	1
411 651	-316 432	96 227	-15 000	1273	-56	1
411 363	-316 400	96 227	-15 000	1273	-56	1
413 523	-316 784	96 243	-15 000	1273	-56	1
413 235	-316 752	96 243	-15 000	1273	-56	1
412 947	-316 720	96 243	-15 000	1273	-56	1
414 819	-317 072	96 259	-15 000	1273	-56	1
414 531	-317 040	96 259	-15 000	1273	-56	1
416 403	-317 392	96 275	-15 000	1273	-56	1
417 987	-317 712	96 291	-15 000	1273	-56	1
400 347	-313 304	95 947	-14 992	1273	-56	1
401 643	-313 592	95 963	-14 992	1273	-56	1
401 355	-313 560	95 963	-14 992	1273	-56	1
403 227	-313 912	95 979	-14 992	1273	-56	1
402 939	-313 880	95 979	-14 992	1273	-56	1
402 651	-313 848	95 979	-14 992	1273	-56	1
404 811	-314 232	95 995	-14 992	1273	-56	1
404 523	-314 200	95 995	-14 992	1273	-56	1
404 235	-314 168	95 995	-14 992	1273	-56	1
406 107	-314 520	96 011	-14 992	1273	-56	1
405 819	-314 488	96 011	-14 992	1273	-56	1
407 691	-314 840	96 027	-14 992	1273	-56	1
409 275	-315 160	96 043	-14 992	1273	-56	1
393 219	-311 072	95 715	-14 984	1273	-56	1
394 515	-311 360	95 731	-14 984	1273	-56	1
396 099	-311 680	95 747	-14 984	1273	-56	1
395 811	-311 648	95 747	-14 984	1273	-56	1
395 523	-311 616	95 747	-14 984	1273	-56	1
397 683	-312 000	95 763	-14 984	1273	-56	1
397 395	-311 968	95 763	-14 984	1273	-56	1

397 107	-311 936	95 763	-14 984	1273	-56	1
398 979	-312 288	95 779	-14 984	1273	-56	1
400 563	-312 608	95 795	-14 984	1273	-56	1
387 387	-309 128	95 499	-14 976	1273	-56	1
388 971	-309 448	95 515	-14 976	1273	-56	1
388 683	-309 416	95 515	-14 976	1273	-56	1
390 267	-309 736	95 531	-14 976	1273	-56	1
391 851	-310 056	95 547	-14 976	1273	-56	1
393 435	-310 376	95 563	-14 976	1273	-56	1
380 259	-306 896	95 267	-14 968	1273	-56	1
381 555	-307 184	95 283	-14 968	1273	-56	1
383 139	-307 504	95 299	-14 968	1273	-56	1
384 723	-307 824	95 315	-14 968	1273	-56	1
373 131	-304 664	95 035	-14 960	1273	-56	1
374 427	-304 952	95 051	-14 960	1273	-56	1

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 702 235, -15 647 016, 4 727 243, -735 328, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```
{426 915 c[1] - 321 152 c[2] + 96 707 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
 429 075 c[1] - 321 536 c[2] + 96 723 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
 428 787 c[1] - 321 504 c[2] + 96 723 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 907 c[1] - 318 312 c[2] + 96 443 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 419 067 c[1] - 318 696 c[2] + 96 459 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 779 c[1] - 318 664 c[2] + 96 459 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 491 c[1] - 318 632 c[2] + 96 459 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 203 c[1] - 318 600 c[2] + 96 459 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 420 651 c[1] - 319 016 c[2] + 96 475 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 420 363 c[1] - 318 984 c[2] + 96 475 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 420 075 c[1] - 318 952 c[2] + 96 475 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 422 235 c[1] - 319 336 c[2] + 96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 421 947 c[1] - 319 304 c[2] + 96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 421 659 c[1] - 319 272 c[2] + 96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 531 c[1] - 319 624 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 243 c[1] - 319 592 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 187 c[1] - 315 504 c[2] + 96 179 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 059 c[1] - 315 856 c[2] + 96 195 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 771 c[1] - 315 824 c[2] + 96 195 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 483 c[1] - 315 792 c[2] + 96 195 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 355 c[1] - 316 144 c[2] + 96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 067 c[1] - 316 112 c[2] + 96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 779 c[1] - 316 080 c[2] + 96 211 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 939 c[1] - 316 464 c[2] + 96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 651 c[1] - 316 432 c[2] + 96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 363 c[1] - 316 400 c[2] + 96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 523 c[1] - 316 784 c[2] + 96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 235 c[1] - 316 752 c[2] + 96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 947 c[1] - 316 720 c[2] + 96 243 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
```

```

414 819 c[1] - 317 072 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
414 531 c[1] - 317 040 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
416 403 c[1] - 317 392 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
417 987 c[1] - 317 712 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
400 347 c[1] - 313 304 c[2] + 95 947 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
401 643 c[1] - 313 592 c[2] + 95 963 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
401 355 c[1] - 313 560 c[2] + 95 963 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
403 227 c[1] - 313 912 c[2] + 95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
402 939 c[1] - 313 880 c[2] + 95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
402 651 c[1] - 313 848 c[2] + 95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
404 811 c[1] - 314 232 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
404 523 c[1] - 314 200 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
404 235 c[1] - 314 168 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
406 107 c[1] - 314 520 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
405 819 c[1] - 314 488 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
407 691 c[1] - 314 840 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
409 275 c[1] - 315 160 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
393 219 c[1] - 311 072 c[2] + 95 715 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 515 c[1] - 311 360 c[2] + 95 731 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
396 099 c[1] - 311 680 c[2] + 95 747 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
395 811 c[1] - 311 648 c[2] + 95 747 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
395 523 c[1] - 311 616 c[2] + 95 747 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
397 683 c[1] - 312 000 c[2] + 95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
397 395 c[1] - 311 968 c[2] + 95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
397 107 c[1] - 311 936 c[2] + 95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
398 979 c[1] - 312 288 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
400 563 c[1] - 312 608 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
387 387 c[1] - 309 128 c[2] + 95 499 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
388 971 c[1] - 309 448 c[2] + 95 515 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
388 683 c[1] - 309 416 c[2] + 95 515 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
390 267 c[1] - 309 736 c[2] + 95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
391 851 c[1] - 310 056 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
393 435 c[1] - 310 376 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
380 259 c[1] - 306 896 c[2] + 95 267 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
383 139 c[1] - 307 504 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
373 131 c[1] - 304 664 c[2] + 95 035 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
374 427 c[1] - 304 952 c[2] + 95 051 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 702 235 c[1] - 15 647 016 c[2] + 4 727 243 c[3] -
735 328 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 702 235 c[1] - 15 647 016 c[2] + 4 727 243 c[3] -
735 328 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&

```

$$\begin{aligned}
& 426\,915\,c[1] - 321\,152\,c[2] + 96\,707\,c[3] - 15\,016\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 429\,075\,c[1] - 321\,536\,c[2] + 96\,723\,c[3] - 15\,016\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 428\,787\,c[1] - 321\,504\,c[2] + \\
& 96\,723\,c[3] - 15\,016\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 416\,907\,c[1] - 318\,312\,c[2] + 96\,443\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 419\,067\,c[1] - 318\,696\,c[2] + 96\,459\,c[3] - 15\,008\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 418\,779\,c[1] - 318\,664\,c[2] + \\
& 96\,459\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 418\,491\,c[1] - 318\,632\,c[2] + 96\,459\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 418\,203\,c[1] - 318\,600\,c[2] + 96\,459\,c[3] - 15\,008\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 420\,651\,c[1] - 319\,016\,c[2] + \\
& 96\,475\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 420\,363\,c[1] - 318\,984\,c[2] + 96\,475\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 420\,075\,c[1] - 318\,952\,c[2] + 96\,475\,c[3] - 15\,008\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 422\,235\,c[1] - 319\,336\,c[2] + \\
& 96\,491\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 421\,947\,c[1] - 319\,304\,c[2] + 96\,491\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 421\,659\,c[1] - 319\,272\,c[2] + 96\,491\,c[3] - 15\,008\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 423\,531\,c[1] - 319\,624\,c[2] + \\
& 96\,507\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 423\,243\,c[1] - 319\,592\,c[2] + 96\,507\,c[3] - 15\,008\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 407\,187\,c[1] - 315\,504\,c[2] + 96\,179\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 409\,059\,c[1] - 315\,856\,c[2] + \\
& 96\,195\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 408\,771\,c[1] - 315\,824\,c[2] + 96\,195\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 408\,483\,c[1] - 315\,792\,c[2] + 96\,195\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 410\,355\,c[1] - 316\,144\,c[2] + \\
& 96\,211\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 410\,067\,c[1] - 316\,112\,c[2] + 96\,211\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 409\,779\,c[1] - 316\,080\,c[2] + 96\,211\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 411\,939\,c[1] - 316\,464\,c[2] + \\
& 96\,227\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 411\,651\,c[1] - 316\,432\,c[2] + 96\,227\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 411\,363\,c[1] - 316\,400\,c[2] + 96\,227\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 413\,523\,c[1] - 316\,784\,c[2] + \\
& 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 413\,235\,c[1] - 316\,752\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 412\,947\,c[1] - 316\,720\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 414\,819\,c[1] - 317\,072\,c[2] + \\
& 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 414\,531\,c[1] - 317\,040\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 416\,403\,c[1] - 317\,392\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 417\,987\,c[1] - 317\,712\,c[2] + \\
& 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 400\,347\,c[1] - 313\,304\,c[2] + 95\,947\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 401\,643\,c[1] - 313\,592\,c[2] + 95\,963\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 401\,355\,c[1] - 313\,560\,c[2] +
\end{aligned}$$

```

95 963 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
403 227 c[1] - 313 912 c[2] + 95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 402 939 c[1] - 313 880 c[2] + 95 979 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 402 651 c[1] - 313 848 c[2] +
95 979 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
404 811 c[1] - 314 232 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 404 523 c[1] - 314 200 c[2] + 95 995 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 404 235 c[1] - 314 168 c[2] +
95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
406 107 c[1] - 314 520 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 405 819 c[1] - 314 488 c[2] + 96 011 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 407 691 c[1] - 314 840 c[2] +
96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
409 275 c[1] - 315 160 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 393 219 c[1] - 311 072 c[2] + 95 715 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 394 515 c[1] - 311 360 c[2] +
95 731 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
396 099 c[1] - 311 680 c[2] + 95 747 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 395 811 c[1] - 311 648 c[2] + 95 747 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 395 523 c[1] - 311 616 c[2] +
95 747 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
397 683 c[1] - 312 000 c[2] + 95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 397 395 c[1] - 311 968 c[2] + 95 763 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 397 107 c[1] - 311 936 c[2] +
95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
398 979 c[1] - 312 288 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 400 563 c[1] - 312 608 c[2] + 95 795 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 387 387 c[1] - 309 128 c[2] +
95 499 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
388 971 c[1] - 309 448 c[2] + 95 515 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 388 683 c[1] - 309 416 c[2] + 95 515 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 390 267 c[1] - 309 736 c[2] +
95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
391 851 c[1] - 310 056 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 393 435 c[1] - 310 376 c[2] + 95 563 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 380 259 c[1] - 306 896 c[2] +
95 267 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 383 139 c[1] - 307 504 c[2] + 95 299 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 384 723 c[1] - 307 824 c[2] +
95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
373 131 c[1] - 304 664 c[2] + 95 035 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 374 427 c[1] - 304 952 c[2] + 95 051 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]

```

```
{8375, 75373, 527071, 2020374, 0, 0, 0}
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GCD[8375, 75 373, 527 071, 2 020 374, 0, 0, 0]

1

Reverse[cert]

{0, 0, 0, 2 020 374, 527 071, 75 373, 8375}

cert.g

-26 196 262

cert.Transpose[A]

{2 742 642, 322 546, 322 482, 10 001 210, 7 581 114, 7 581 050, 7 580 986, 7 580 922,
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17 259 842, 14 839 682, 14 839 618, 14 839 554, 12 419 394, 12 419 330, 12 419 266,
9 999 170, 9 999 106, 9 999 042, 7 578 946, 7 578 882, 7 578 818, 5 158 658, 5 158 594,
2 738 434, 318 210, 19 677 962, 17 257 674, 17 257 610, 14 837 450, 14 837 386, 14 837 322,
12 417 226, 12 417 162, 12 417 098, 9 996 938, 9 996 874, 7 576 714, 5 156 490, 22 096 018,
19 675 730, 17 255 506, 17 255 442, 17 255 378, 14 835 282, 14 835 218, 14 835 154,
12 414 994, 9 994 770, 22 093 786, 19 673 562, 19 673 498, 17 253 274, 14 833 050,
12 412 826, 24 511 842, 22 091 554, 19 671 330, 17 251 106, 26 929 898, 24 509 610}

chi = listdim17[[15]]

$(-9 + x)^{12} (5 + x)^{32} (95 - 20x + x^2) (-1068 + 327x - 32x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

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 {423 035, -319 720, 96 523, -15 008, 1273, -56, 1},
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{387 315, -308 400, 95 347, -14 968, 1273, -56, 1}};
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```
A // MatrixForm
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```
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 431 395 -322 240 96 771 -15 016 1273 -56 1
 420 507 -319 144 96 491 -15 008 1273 -56 1
 422 315 -319 496 96 507 -15 008 1273 -56 1
 422 027 -319 464 96 507 -15 008 1273 -56 1
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 421 515 -319 400 96 507 -15 008 1273 -56 1
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 423 323 -319 752 96 523 -15 008 1273 -56 1
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409 355 -315 320 96 059 -14 992 1273 -56 1
411 227 -315 672 96 075 -14 992 1273 -56 1
410 875 -315 640 96 075 -14 992 1273 -56 1
398 979 -312 288 95 779 -14 984 1273 -56 1
400 275 -312 576 95 795 -14 984 1273 -56 1
399 987 -312 544 95 795 -14 984 1273 -56 1
401 859 -312 896 95 811 -14 984 1273 -56 1
401 571 -312 864 95 811 -14 984 1273 -56 1
401 283 -312 832 95 811 -14 984 1273 -56 1
400 995 -312 800 95 811 -14 984 1273 -56 1
403 443 -313 216 95 827 -14 984 1273 -56 1
403 155 -313 184 95 827 -14 984 1273 -56 1
402 803 -313 152 95 827 -14 984 1273 -56 1
402 867 -313 152 95 827 -14 984 1273 -56 1
402 515 -313 120 95 827 -14 984 1273 -56 1
393 147 -310 344 95 563 -14 976 1273 -56 1
394 731 -310 664 95 579 -14 976 1273 -56 1
394 443 -310 632 95 579 -14 976 1273 -56 1
394 155 -310 600 95 579 -14 976 1273 -56 1
396 027 -310 952 95 595 -14 976 1273 -56 1
395 675 -310 920 95 595 -14 976 1273 -56 1
387 603 -308 432 95 347 -14 968 1273 -56 1
387 315 -308 400 95 347 -14 968 1273 -56 1

```

```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 773 755, -15 668 520, 4 728 683, -735 328, 62 377, -2744, 49}

```

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Array[c, 7].Transpose[A]

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{428 355 c[1] - 321 600 c[2] + 96 739 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
 430 163 c[1] - 321 952 c[2] + 96 755 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
 429 875 c[1] - 321 920 c[2] + 96 755 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
 431 395 c[1] - 322 240 c[2] + 96 771 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7],
 420 507 c[1] - 319 144 c[2] + 96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 422 315 c[1] - 319 496 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 422 027 c[1] - 319 464 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 422 091 c[1] - 319 464 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 421 803 c[1] - 319 432 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 421 515 c[1] - 319 400 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 835 c[1] - 319 816 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 547 c[1] - 319 784 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 323 c[1] - 319 752 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 035 c[1] - 319 720 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 424 843 c[1] - 320 072 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 424 555 c[1] - 320 040 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 426 075 c[1] - 320 360 c[2] + 96 555 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],

```

$412\,947\,c[1] - 316\,720\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $412\,659\,c[1] - 316\,688\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $414\,531\,c[1] - 317\,040\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $414\,179\,c[1] - 317\,008\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $414\,243\,c[1] - 317\,008\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $413\,955\,c[1] - 316\,976\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $413\,667\,c[1] - 316\,944\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,763\,c[1] - 317\,328\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,475\,c[1] - 317\,296\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,539\,c[1] - 317\,296\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,187\,c[1] - 317\,264\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,251\,c[1] - 317\,264\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $414\,963\,c[1] - 317\,232\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $414\,675\,c[1] - 317\,200\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $416\,707\,c[1] - 317\,584\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $416\,771\,c[1] - 317\,584\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $416\,483\,c[1] - 317\,552\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $416\,547\,c[1] - 317\,552\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $416\,195\,c[1] - 317\,520\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $418\,003\,c[1] - 317\,872\,c[2] + 96\,307\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $417\,715\,c[1] - 317\,840\,c[2] + 96\,307\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,811\,c[1] - 314\,232\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,523\,c[1] - 314\,200\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,107\,c[1] - 314\,520\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,819\,c[1] - 314\,488\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,691\,c[1] - 314\,840\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,403\,c[1] - 314\,808\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,115\,c[1] - 314\,776\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,827\,c[1] - 314\,744\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,987\,c[1] - 315\,128\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,635\,c[1] - 315\,096\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,699\,c[1] - 315\,096\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,347\,c[1] - 315\,064\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,411\,c[1] - 315\,064\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,123\,c[1] - 315\,032\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,835\,c[1] - 315\,000\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $409\,931\,c[1] - 315\,384\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $409\,995\,c[1] - 315\,384\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $409\,643\,c[1] - 315\,352\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $409\,707\,c[1] - 315\,352\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $409\,355\,c[1] - 315\,320\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $411\,227\,c[1] - 315\,672\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $410\,875\,c[1] - 315\,640\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,979\,c[1] - 312\,288\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $400\,275\,c[1] - 312\,576\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $399\,987\,c[1] - 312\,544\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $401\,859\,c[1] - 312\,896\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$

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401 571 c[1] - 312 864 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
401 283 c[1] - 312 832 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
400 995 c[1] - 312 800 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
403 443 c[1] - 313 216 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
403 155 c[1] - 313 184 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
402 803 c[1] - 313 152 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
402 867 c[1] - 313 152 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
402 515 c[1] - 313 120 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
393 147 c[1] - 310 344 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 731 c[1] - 310 664 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 443 c[1] - 310 632 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 155 c[1] - 310 600 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
396 027 c[1] - 310 952 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
395 675 c[1] - 310 920 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
387 603 c[1] - 308 432 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
387 315 c[1] - 308 400 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 773 755 c[1] - 15 668 520 c[2] + 4 728 683 c[3] -
735 328 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 773 755 c[1] - 15 668 520 c[2] + 4 728 683 c[3] -
735 328 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
428 355 c[1] - 321 600 c[2] + 96 739 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 430 163 c[1] - 321 952 c[2] + 96 755 c[3] - 15 016 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 429 875 c[1] - 321 920 c[2] +
96 755 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
431 395 c[1] - 322 240 c[2] + 96 771 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 420 507 c[1] - 319 144 c[2] + 96 491 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 422 315 c[1] - 319 496 c[2] +
96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
422 027 c[1] - 319 464 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 422 091 c[1] - 319 464 c[2] + 96 507 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 421 803 c[1] - 319 432 c[2] +
96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
421 515 c[1] - 319 400 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 423 835 c[1] - 319 816 c[2] + 96 523 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 423 547 c[1] - 319 784 c[2] +
96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
423 323 c[1] - 319 752 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 423 035 c[1] - 319 720 c[2] + 96 523 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 424 843 c[1] - 320 072 c[2] +
96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
424 555 c[1] - 320 040 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 426 075 c[1] - 320 360 c[2] + 96 555 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 947 c[1] - 316 720 c[2] +

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$$\begin{aligned}
& 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 412\,659\,c[1] - 316\,688\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 414\,531\,c[1] - 317\,040\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 414\,179\,c[1] - 317\,008\,c[2] + \\
& 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 414\,243\,c[1] - 317\,008\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 413\,955\,c[1] - 316\,976\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 413\,667\,c[1] - 316\,944\,c[2] + \\
& 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 415\,763\,c[1] - 317\,328\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 415\,475\,c[1] - 317\,296\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 415\,539\,c[1] - 317\,296\,c[2] + \\
& 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 415\,187\,c[1] - 317\,264\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 415\,251\,c[1] - 317\,264\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 414\,963\,c[1] - 317\,232\,c[2] + \\
& 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 414\,675\,c[1] - 317\,200\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 416\,707\,c[1] - 317\,584\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 416\,771\,c[1] - 317\,584\,c[2] + \\
& 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 416\,483\,c[1] - 317\,552\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 416\,547\,c[1] - 317\,552\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 416\,195\,c[1] - 317\,520\,c[2] + \\
& 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 418\,003\,c[1] - 317\,872\,c[2] + 96\,307\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 417\,715\,c[1] - 317\,840\,c[2] + 96\,307\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 404\,811\,c[1] - 314\,232\,c[2] + \\
& 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 404\,523\,c[1] - 314\,200\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 406\,107\,c[1] - 314\,520\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,819\,c[1] - 314\,488\,c[2] + \\
& 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 407\,691\,c[1] - 314\,840\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,403\,c[1] - 314\,808\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,115\,c[1] - 314\,776\,c[2] + \\
& 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 406\,827\,c[1] - 314\,744\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 408\,987\,c[1] - 315\,128\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,635\,c[1] - 315\,096\,c[2] + \\
& 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 408\,699\,c[1] - 315\,096\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 408\,347\,c[1] - 315\,064\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,411\,c[1] - 315\,064\,c[2] + \\
& 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 408\,123\,c[1] - 315\,032\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,835\,c[1] - 315\,000\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] +
\end{aligned}$$

```

1273 c[5] - 56 c[6] + c[7] ≥ 0 && 409 931 c[1] - 315 384 c[2] +
96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
409 995 c[1] - 315 384 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 409 643 c[1] - 315 352 c[2] + 96 059 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 409 707 c[1] - 315 352 c[2] +
96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
409 355 c[1] - 315 320 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 227 c[1] - 315 672 c[2] + 96 075 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 410 875 c[1] - 315 640 c[2] +
96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
398 979 c[1] - 312 288 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 400 275 c[1] - 312 576 c[2] + 95 795 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 399 987 c[1] - 312 544 c[2] +
95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
401 859 c[1] - 312 896 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 401 571 c[1] - 312 864 c[2] + 95 811 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 401 283 c[1] - 312 832 c[2] +
95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
400 995 c[1] - 312 800 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 403 443 c[1] - 313 216 c[2] + 95 827 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 403 155 c[1] - 313 184 c[2] +
95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
402 803 c[1] - 313 152 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 402 867 c[1] - 313 152 c[2] + 95 827 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 402 515 c[1] - 313 120 c[2] +
95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
393 147 c[1] - 310 344 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 394 731 c[1] - 310 664 c[2] + 95 579 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 394 443 c[1] - 310 632 c[2] +
95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
394 155 c[1] - 310 600 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 396 027 c[1] - 310 952 c[2] + 95 595 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 395 675 c[1] - 310 920 c[2] +
95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
387 603 c[1] - 308 432 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 387 315 c[1] - 308 400 c[2] + 95 347 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6], c[7]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[16]]
```

$$(-9 + x)^{12} (5 + x)^{32} (-101428 + 52425x - 10648x^2 + 1062x^3 - 52x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

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{ {429939, -321920, 96755, -15016, 1273, -56, 1},
  {431235, -322208, 96771, -15016, 1273, -56, 1},
  {422091, -319464, 96507, -15008, 1273, -56, 1},
  {421803, -319432, 96507, -15008, 1273, -56, 1},
  {421515, -319400, 96507, -15008, 1273, -56, 1},
  {423675, -319784, 96523, -15008, 1273, -56, 1},
  {423387, -319752, 96523, -15008, 1273, -56, 1},
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  {422811, -319688, 96523, -15008, 1273, -56, 1},
  {424683, -320040, 96539, -15008, 1273, -56, 1},
  {424395, -320008, 96539, -15008, 1273, -56, 1},
  {412083, -316624, 96243, -15000, 1273, -56, 1},
  {414243, -317008, 96259, -15000, 1273, -56, 1},
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  {406539, -314712, 96027, -14992, 1273, -56, 1},
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  {407835, -315000, 96043, -14992, 1273, -56, 1},
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{389 979, -309 704, 95 531, -14 976, 1273, -56, 1},
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{392 283, -310 248, 95 563, -14 976, 1273, -56, 1},
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{393 867, -310 568, 95 579, -14 976, 1273, -56, 1},
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{384 147, -307 760, 95 315, -14 968, 1273, -56, 1},
{385 443, -308 048, 95 331, -14 968, 1273, -56, 1},
{377 019, -305 528, 95 083, -14 960, 1273, -56, 1}}

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      {422 091, -319 464, 96 507, -15 008, 1273, -56, 1},
      {421 803, -319 432, 96 507, -15 008, 1273, -56, 1},
      {421 515, -319 400, 96 507, -15 008, 1273, -56, 1},
      {423 675, -319 784, 96 523, -15 008, 1273, -56, 1},
      {423 387, -319 752, 96 523, -15 008, 1273, -56, 1},
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{414 963, -317 232, 96 275, -15 000, 1273, -56, 1},
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{406 539, -314 712, 96 027, -14 992, 1273, -56, 1},
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{395 811, -311 648, 95 747, -14 984, 1273, -56, 1},
{397 107, -311 936, 95 763, -14 984, 1273, -56, 1},
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{400 707, -312 768, 95 811, -14 984, 1273, -56, 1},
{402 579, -313 120, 95 827, -14 984, 1273, -56, 1},
{404 163, -313 440, 95 843, -14 984, 1273, -56, 1},
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{391 275, -309 992, 95 547, -14 976, 1273, -56, 1},
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{392 283, -310 248, 95 563, -14 976, 1273, -56, 1},
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{393 867, -310 568, 95 579, -14 976, 1273, -56, 1},
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{384 147, -307 760, 95 315, -14 968, 1273, -56, 1},
{385 443, -308 048, 95 331, -14 968, 1273, -56, 1},
{377 019, -305 528, 95 083, -14 960, 1273, -56, 1}};

```

A // MatrixForm

429 939	-321 920	96 755	-15 016	1273	-56	1
431 235	-322 208	96 771	-15 016	1273	-56	1
422 091	-319 464	96 507	-15 008	1273	-56	1
421 803	-319 432	96 507	-15 008	1273	-56	1
421 515	-319 400	96 507	-15 008	1273	-56	1
423 675	-319 784	96 523	-15 008	1273	-56	1
423 387	-319 752	96 523	-15 008	1273	-56	1
423 099	-319 720	96 523	-15 008	1273	-56	1
422 811	-319 688	96 523	-15 008	1273	-56	1
424 683	-320 040	96 539	-15 008	1273	-56	1
424 395	-320 008	96 539	-15 008	1273	-56	1
412 083	-316 624	96 243	-15 000	1273	-56	1
414 243	-317 008	96 259	-15 000	1273	-56	1
413 955	-316 976	96 259	-15 000	1273	-56	1
413 667	-316 944	96 259	-15 000	1273	-56	1
413 379	-316 912	96 259	-15 000	1273	-56	1
415 539	-317 296	96 275	-15 000	1273	-56	1
415 251	-317 264	96 275	-15 000	1273	-56	1
414 963	-317 232	96 275	-15 000	1273	-56	1
414 675	-317 200	96 275	-15 000	1273	-56	1
417 123	-317 616	96 291	-15 000	1273	-56	1
416 835	-317 584	96 291	-15 000	1273	-56	1
416 547	-317 552	96 291	-15 000	1273	-56	1
416 259	-317 520	96 291	-15 000	1273	-56	1
415 971	-317 488	96 291	-15 000	1273	-56	1
418 131	-317 872	96 307	-15 000	1273	-56	1
417 843	-317 840	96 307	-15 000	1273	-56	1
404 235	-314 168	95 995	-14 992	1273	-56	1
403 947	-314 136	95 995	-14 992	1273	-56	1
405 531	-314 456	96 011	-14 992	1273	-56	1
405 243	-314 424	96 011	-14 992	1273	-56	1
407 115	-314 776	96 027	-14 992	1273	-56	1
406 827	-314 744	96 027	-14 992	1273	-56	1
406 539	-314 712	96 027	-14 992	1273	-56	1
408 411	-315 064	96 043	-14 992	1273	-56	1
408 123	-315 032	96 043	-14 992	1273	-56	1
407 835	-315 000	96 043	-14 992	1273	-56	1
407 547	-314 968	96 043	-14 992	1273	-56	1
409 707	-315 352	96 059	-14 992	1273	-56	1
409 419	-315 320	96 059	-14 992	1273	-56	1
409 131	-315 288	96 059	-14 992	1273	-56	1
411 291	-315 672	96 075	-14 992	1273	-56	1
411 003	-315 640	96 075	-14 992	1273	-56	1
395 811	-311 648	95 747	-14 984	1273	-56	1
397 107	-311 936	95 763	-14 984	1273	-56	1
398 403	-312 224	95 779	-14 984	1273	-56	1
398 115	-312 192	95 779	-14 984	1273	-56	1
399 987	-312 544	95 795	-14 984	1273	-56	1
399 699	-312 512	95 795	-14 984	1273	-56	1
399 411	-312 480	95 795	-14 984	1273	-56	1
401 283	-312 832	95 811	-14 984	1273	-56	1
400 995	-312 800	95 811	-14 984	1273	-56	1
400 707	-312 768	95 811	-14 984	1273	-56	1

402 579	-313 120	95 827	-14 984	1273	-56	1
404 163	-313 440	95 843	-14 984	1273	-56	1
389 979	-309 704	95 531	-14 976	1273	-56	1
391 275	-309 992	95 547	-14 976	1273	-56	1
392 571	-310 280	95 563	-14 976	1273	-56	1
392 283	-310 248	95 563	-14 976	1273	-56	1
394 155	-310 600	95 579	-14 976	1273	-56	1
393 867	-310 568	95 579	-14 976	1273	-56	1
382 851	-307 472	95 299	-14 968	1273	-56	1
384 147	-307 760	95 315	-14 968	1273	-56	1
385 443	-308 048	95 331	-14 968	1273	-56	1
377 019	-305 528	95 083	-14 960	1273	-56	1

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 766 459, -15 667 112, 4 728 683, -735 328, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```
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422 091 c[1] - 319 464 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
421 803 c[1] - 319 432 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
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424 395 c[1] - 320 008 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
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414 243 c[1] - 317 008 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
413 955 c[1] - 316 976 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
413 667 c[1] - 316 944 c[2] + 96 259 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
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415 539 c[1] - 317 296 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
415 251 c[1] - 317 264 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
414 963 c[1] - 317 232 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
414 675 c[1] - 317 200 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
417 123 c[1] - 317 616 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
416 835 c[1] - 317 584 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
416 547 c[1] - 317 552 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
416 259 c[1] - 317 520 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
415 971 c[1] - 317 488 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
418 131 c[1] - 317 872 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
417 843 c[1] - 317 840 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
404 235 c[1] - 314 168 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
403 947 c[1] - 314 136 c[2] + 95 995 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
405 531 c[1] - 314 456 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
405 243 c[1] - 314 424 c[2] + 96 011 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
407 115 c[1] - 314 776 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
```

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406 827 c[1] - 314 744 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
406 539 c[1] - 314 712 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
408 411 c[1] - 315 064 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
408 123 c[1] - 315 032 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
407 835 c[1] - 315 000 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
407 547 c[1] - 314 968 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
409 707 c[1] - 315 352 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
409 419 c[1] - 315 320 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
409 131 c[1] - 315 288 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
411 291 c[1] - 315 672 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
411 003 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
395 811 c[1] - 311 648 c[2] + 95 747 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
397 107 c[1] - 311 936 c[2] + 95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 403 c[1] - 312 224 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 115 c[1] - 312 192 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 987 c[1] - 312 544 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 699 c[1] - 312 512 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 411 c[1] - 312 480 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
401 283 c[1] - 312 832 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 995 c[1] - 312 800 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 707 c[1] - 312 768 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
402 579 c[1] - 313 120 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
404 163 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 979 c[1] - 309 704 c[2] + 95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 275 c[1] - 309 992 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 571 c[1] - 310 280 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 283 c[1] - 310 248 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
394 155 c[1] - 310 600 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
393 867 c[1] - 310 568 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 147 c[1] - 307 760 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
385 443 c[1] - 308 048 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 019 c[1] - 305 528 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 766 459 c[1] - 15 667 112 c[2] + 4 728 683 c[3] -
735 328 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 766 459 c[1] - 15 667 112 c[2] + 4 728 683 c[3] -
735 328 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
429 939 c[1] - 321 920 c[2] + 96 755 c[3] - 15 016 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 431 235 c[1] - 322 208 c[2] + 96 771 c[3] - 15 016 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 422 091 c[1] - 319 464 c[2] +
96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
421 803 c[1] - 319 432 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 421 515 c[1] - 319 400 c[2] + 96 507 c[3] - 15 008 c[4] +

```

$$\begin{aligned}
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 423\,675 c[1] - 319\,784 c[2] + \\
& 96\,523 c[3] - 15\,008 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
423\,387 c[1] - 319\,752 c[2] + 96\,523 c[3] - 15\,008 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 423\,099 c[1] - 319\,720 c[2] + 96\,523 c[3] - 15\,008 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 422\,811 c[1] - 319\,688 c[2] + \\
& 96\,523 c[3] - 15\,008 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
424\,683 c[1] - 320\,040 c[2] + 96\,539 c[3] - 15\,008 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 424\,395 c[1] - 320\,008 c[2] + 96\,539 c[3] - 15\,008 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 412\,083 c[1] - 316\,624 c[2] + \\
& 96\,243 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
414\,243 c[1] - 317\,008 c[2] + 96\,259 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 413\,955 c[1] - 316\,976 c[2] + 96\,259 c[3] - 15\,000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 413\,667 c[1] - 316\,944 c[2] + \\
& 96\,259 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
413\,379 c[1] - 316\,912 c[2] + 96\,259 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 415\,539 c[1] - 317\,296 c[2] + 96\,275 c[3] - 15\,000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 415\,251 c[1] - 317\,264 c[2] + \\
& 96\,275 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
414\,963 c[1] - 317\,232 c[2] + 96\,275 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 414\,675 c[1] - 317\,200 c[2] + 96\,275 c[3] - 15\,000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 417\,123 c[1] - 317\,616 c[2] + \\
& 96\,291 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
416\,835 c[1] - 317\,584 c[2] + 96\,291 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 416\,547 c[1] - 317\,552 c[2] + 96\,291 c[3] - 15\,000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 416\,259 c[1] - 317\,520 c[2] + \\
& 96\,291 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
415\,971 c[1] - 317\,488 c[2] + 96\,291 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 418\,131 c[1] - 317\,872 c[2] + 96\,307 c[3] - 15\,000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 417\,843 c[1] - 317\,840 c[2] + \\
& 96\,307 c[3] - 15\,000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
404\,235 c[1] - 314\,168 c[2] + 95\,995 c[3] - 14\,992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 403\,947 c[1] - 314\,136 c[2] + 95\,995 c[3] - 14\,992 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 405\,531 c[1] - 314\,456 c[2] + \\
& 96\,011 c[3] - 14\,992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
405\,243 c[1] - 314\,424 c[2] + 96\,011 c[3] - 14\,992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 407\,115 c[1] - 314\,776 c[2] + 96\,027 c[3] - 14\,992 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 406\,827 c[1] - 314\,744 c[2] + \\
& 96\,027 c[3] - 14\,992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
406\,539 c[1] - 314\,712 c[2] + 96\,027 c[3] - 14\,992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 408\,411 c[1] - 315\,064 c[2] + 96\,043 c[3] - 14\,992 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 408\,123 c[1] - 315\,032 c[2] + \\
& 96\,043 c[3] - 14\,992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
407\,835 c[1] - 315\,000 c[2] + 96\,043 c[3] - 14\,992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 407\,547 c[1] - 314\,968 c[2] + 96\,043 c[3] - 14\,992 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 409\,707 c[1] - 315\,352 c[2] + \\
& 96\,059 c[3] - 14\,992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
409\,419 c[1] - 315\,320 c[2] + 96\,059 c[3] - 14\,992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq
\end{aligned}$$

```

0 && 409 131 c[1] - 315 288 c[2] + 96 059 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 291 c[1] - 315 672 c[2] +
96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
411 003 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 395 811 c[1] - 311 648 c[2] + 95 747 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 397 107 c[1] - 311 936 c[2] +
95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
398 403 c[1] - 312 224 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 398 115 c[1] - 312 192 c[2] + 95 779 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 399 987 c[1] - 312 544 c[2] +
95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
399 699 c[1] - 312 512 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 399 411 c[1] - 312 480 c[2] + 95 795 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 401 283 c[1] - 312 832 c[2] +
95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
400 995 c[1] - 312 800 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 400 707 c[1] - 312 768 c[2] + 95 811 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 402 579 c[1] - 313 120 c[2] +
95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
404 163 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 389 979 c[1] - 309 704 c[2] + 95 531 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 391 275 c[1] - 309 992 c[2] +
95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
392 571 c[1] - 310 280 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 392 283 c[1] - 310 248 c[2] + 95 563 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 394 155 c[1] - 310 600 c[2] +
95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
393 867 c[1] - 310 568 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 384 147 c[1] - 307 760 c[2] +
95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
385 443 c[1] - 308 048 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 377 019 c[1] - 305 528 c[2] + 95 083 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]

{-64 236, -254 001, -559 464, 0, 0, 0, 0}

GCD[-64 236, -254 001, -559 464, 0, 0, 0, 0]

3

cert = cert / 3

{-21 412, -84 667, -186 488, 0, 0, 0, 0}

Reverse[cert]

{0, 0, 0, 0, -186 488, -84 667, -21 412}

cert.g

-6 683 708

```

cert.Transpose[A]

```
{6500332, 150668, 12848580, 16305892, 19763204, 3041604, 6498916, 9956228,
13413540, 149252, 3606564, 35918428, 19196828, 22654140, 26111452,
29568764, 12847164, 16304476, 19761788, 23219100, 3040188, 6497500,
9954812, 13412124, 16869436, 147836, 3605148, 42266676, 45723988, 35917012,
39374324, 26110036, 29567348, 33024660, 19760372, 23217684, 26674996,
30132308, 13410708, 16868020, 20325332, 3603732, 7061044, 55529548,
49179884, 42830220, 46287532, 33023244, 36480556, 39937868, 26673580,
30130892, 33588204, 20323916, 10516940, 56093092, 49743428, 43393764,
46851076, 33586788, 37044100, 63006300, 56656636, 50306972, 63569844}
```

chi = listdim17[[17]]

$(-9 + x)^{12} (5 + x)^{32} (-100832 + 52321x - 10644x^2 + 1062x^3 - 52x^4 + x^5)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{{421371, -319240, 96491, -15008, 1273, -56, 1},
{423179, -319592, 96507, -15008, 1273, -56, 1},
{423243, -319592, 96507, -15008, 1273, -56, 1},
{422891, -319560, 96507, -15008, 1273, -56, 1},
{422955, -319560, 96507, -15008, 1273, -56, 1},
{422603, -319528, 96507, -15008, 1273, -56, 1},
{424763, -319912, 96523, -15008, 1273, -56, 1},
{424475, -319880, 96523, -15008, 1273, -56, 1},
{424539, -319880, 96523, -15008, 1273, -56, 1},
{411363, -316400, 96227, -15000, 1273, -56, 1},
{411075, -316368, 96227, -15000, 1273, -56, 1},
{413523, -316784, 96243, -15000, 1273, -56, 1},
{413171, -316752, 96243, -15000, 1273, -56, 1},
{413235, -316752, 96243, -15000, 1273, -56, 1},
{412947, -316720, 96243, -15000, 1273, -56, 1},
{412659, -316688, 96243, -15000, 1273, -56, 1},
{415107, -317104, 96259, -15000, 1273, -56, 1},
{414819, -317072, 96259, -15000, 1273, -56, 1},
{414467, -317040, 96259, -15000, 1273, -56, 1},
{414531, -317040, 96259, -15000, 1273, -56, 1},
{414243, -317008, 96259, -15000, 1273, -56, 1},
{416403, -317392, 96275, -15000, 1273, -56, 1},
{416051, -317360, 96275, -15000, 1273, -56, 1},
{416115, -317360, 96275, -15000, 1273, -56, 1},
{415763, -317328, 96275, -15000, 1273, -56, 1},
{415827, -317328, 96275, -15000, 1273, -56, 1},
```

```

{417 987, -317 712, 96 291, -15 000, 1273, -56, 1},
{417 635, -317 680, 96 291, -15 000, 1273, -56, 1},
{417 699, -317 680, 96 291, -15 000, 1273, -56, 1},
{417 347, -317 648, 96 291, -15 000, 1273, -56, 1},
{419 219, -318 000, 96 307, -15 000, 1273, -56, 1},
{419 283, -318 000, 96 307, -15 000, 1273, -56, 1},
{418 931, -317 968, 96 307, -15 000, 1273, -56, 1},
{401 643, -313 592, 95 963, -14 992, 1273, -56, 1},
{403 227, -313 912, 95 979, -14 992, 1273, -56, 1},
{402 939, -313 880, 95 979, -14 992, 1273, -56, 1},
{402 651, -313 848, 95 979, -14 992, 1273, -56, 1},
{404 811, -314 232, 95 995, -14 992, 1273, -56, 1},
{404 523, -314 200, 95 995, -14 992, 1273, -56, 1},
{404 235, -314 168, 95 995, -14 992, 1273, -56, 1},
{403 947, -314 136, 95 995, -14 992, 1273, -56, 1},
{406 395, -314 552, 96 011, -14 992, 1273, -56, 1},
{406 107, -314 520, 96 011, -14 992, 1273, -56, 1},
{405 819, -314 488, 96 011, -14 992, 1273, -56, 1},
{405 531, -314 456, 96 011, -14 992, 1273, -56, 1},
{407 691, -314 840, 96 027, -14 992, 1273, -56, 1},
{407 339, -314 808, 96 027, -14 992, 1273, -56, 1},
{407 403, -314 808, 96 027, -14 992, 1273, -56, 1},
{409 275, -315 160, 96 043, -14 992, 1273, -56, 1},
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 $401\,643\,c[1] - 313\,592\,c[2] + 95\,963\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,227\,c[1] - 313\,912\,c[2] + 95\,979\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $402\,939\,c[1] - 313\,880\,c[2] + 95\,979\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $402\,651\,c[1] - 313\,848\,c[2] + 95\,979\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,811\,c[1] - 314\,232\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,523\,c[1] - 314\,200\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,235\,c[1] - 314\,168\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,947\,c[1] - 314\,136\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,395\,c[1] - 314\,552\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,107\,c[1] - 314\,520\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,819\,c[1] - 314\,488\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,531\,c[1] - 314\,456\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,691\,c[1] - 314\,840\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,339\,c[1] - 314\,808\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,403\,c[1] - 314\,808\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $409\,275\,c[1] - 315\,160\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,923\,c[1] - 315\,128\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,987\,c[1] - 315\,128\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,635\,c[1] - 315\,096\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $410\,859\,c[1] - 315\,480\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $410\,507\,c[1] - 315\,448\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $410\,571\,c[1] - 315\,448\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $412\,443\,c[1] - 315\,800\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $393\,219\,c[1] - 311\,072\,c[2] + 95\,715\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,515\,c[1] - 311\,360\,c[2] + 95\,731\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,099\,c[1] - 311\,680\,c[2] + 95\,747\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $395\,811\,c[1] - 311\,648\,c[2] + 95\,747\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $397\,683\,c[1] - 312\,000\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $397\,395\,c[1] - 311\,968\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $397\,107\,c[1] - 311\,936\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,819\,c[1] - 311\,904\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $399\,267\,c[1] - 312\,320\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,979\,c[1] - 312\,288\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,691\,c[1] - 312\,256\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $400\,563\,c[1] - 312\,608\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $400\,211\,c[1] - 312\,576\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $400\,275\,c[1] - 312\,576\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $402\,147\,c[1] - 312\,928\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$

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401 795 c[1] - 312 896 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
401 859 c[1] - 312 896 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
403 731 c[1] - 313 248 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
405 315 c[1] - 313 568 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 387 c[1] - 309 128 c[2] + 95 499 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 971 c[1] - 309 448 c[2] + 95 515 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 683 c[1] - 309 416 c[2] + 95 515 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 555 c[1] - 309 768 c[2] + 95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 267 c[1] - 309 736 c[2] + 95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 979 c[1] - 309 704 c[2] + 95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 851 c[1] - 310 056 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 563 c[1] - 310 024 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
393 435 c[1] - 310 376 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
395 019 c[1] - 310 696 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
394 667 c[1] - 310 664 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
396 603 c[1] - 311 016 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 843 c[1] - 307 216 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 139 c[1] - 307 504 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 307 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 891 c[1] - 308 464 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
376 011 c[1] - 305 272 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] }

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Array[c, 7].g

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20 635 251 c[1] - 15 617 120 c[2] + 4 723 059 c[3] -
735 144 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

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cert =

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Flatten[Array[c, 7] /. FindInstance[20 635 251 c[1] - 15 617 120 c[2] + 4 723 059 c[3] -
735 144 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
421 371 c[1] - 319 240 c[2] + 96 491 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 423 179 c[1] - 319 592 c[2] + 96 507 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 423 243 c[1] - 319 592 c[2] +
96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
422 891 c[1] - 319 560 c[2] + 96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 422 955 c[1] - 319 560 c[2] + 96 507 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 422 603 c[1] - 319 528 c[2] +
96 507 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
424 763 c[1] - 319 912 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 424 475 c[1] - 319 880 c[2] + 96 523 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 424 539 c[1] - 319 880 c[2] +
96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
411 363 c[1] - 316 400 c[2] + 96 227 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥

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$$\begin{aligned}
& 0 \&\& 411\,075\,c[1] - 316\,368\,c[2] + 96\,227\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 413\,523\,c[1] - 316\,784\,c[2] + \\
& 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
413\,171\,c[1] - 316\,752\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 413\,235\,c[1] - 316\,752\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 412\,947\,c[1] - 316\,720\,c[2] + \\
& 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
412\,659\,c[1] - 316\,688\,c[2] + 96\,243\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 415\,107\,c[1] - 317\,104\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 414\,819\,c[1] - 317\,072\,c[2] + \\
& 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
414\,467\,c[1] - 317\,040\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 414\,531\,c[1] - 317\,040\,c[2] + 96\,259\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 414\,243\,c[1] - 317\,008\,c[2] + \\
& 96\,259\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
416\,403\,c[1] - 317\,392\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 416\,051\,c[1] - 317\,360\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 416\,115\,c[1] - 317\,360\,c[2] + \\
& 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
415\,763\,c[1] - 317\,328\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 415\,827\,c[1] - 317\,328\,c[2] + 96\,275\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 417\,987\,c[1] - 317\,712\,c[2] + \\
& 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
417\,635\,c[1] - 317\,680\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 417\,699\,c[1] - 317\,680\,c[2] + 96\,291\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 417\,347\,c[1] - 317\,648\,c[2] + \\
& 96\,291\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
419\,219\,c[1] - 318\,000\,c[2] + 96\,307\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 419\,283\,c[1] - 318\,000\,c[2] + 96\,307\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 418\,931\,c[1] - 317\,968\,c[2] + \\
& 96\,307\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
401\,643\,c[1] - 313\,592\,c[2] + 95\,963\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,227\,c[1] - 313\,912\,c[2] + 95\,979\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,939\,c[1] - 313\,880\,c[2] + \\
& 95\,979\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
402\,651\,c[1] - 313\,848\,c[2] + 95\,979\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,811\,c[1] - 314\,232\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 404\,523\,c[1] - 314\,200\,c[2] + \\
& 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
404\,235\,c[1] - 314\,168\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,947\,c[1] - 314\,136\,c[2] + 95\,995\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 406\,395\,c[1] - 314\,552\,c[2] + \\
& 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
406\,107\,c[1] - 314\,520\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,819\,c[1] - 314\,488\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,531\,c[1] - 314\,456\,c[2] + \\
& 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& 407\,691\,c[1] - 314\,840\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,339\,c[1] - 314\,808\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,403\,c[1] - 314\,808\,c[2] + \\
& 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 409\,275\,c[1] - 315\,160\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 408\,923\,c[1] - 315\,128\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,987\,c[1] - 315\,128\,c[2] + \\
& 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 408\,635\,c[1] - 315\,096\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 410\,859\,c[1] - 315\,480\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 410\,507\,c[1] - 315\,448\,c[2] + \\
& 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 410\,571\,c[1] - 315\,448\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 412\,443\,c[1] - 315\,800\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 393\,219\,c[1] - 311\,072\,c[2] + \\
& 95\,715\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 394\,515\,c[1] - 311\,360\,c[2] + 95\,731\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 396\,099\,c[1] - 311\,680\,c[2] + 95\,747\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 395\,811\,c[1] - 311\,648\,c[2] + \\
& 95\,747\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,683\,c[1] - 312\,000\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,395\,c[1] - 311\,968\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,107\,c[1] - 311\,936\,c[2] + \\
& 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 396\,819\,c[1] - 311\,904\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,267\,c[1] - 312\,320\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 398\,979\,c[1] - 312\,288\,c[2] + \\
& 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 398\,691\,c[1] - 312\,256\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,563\,c[1] - 312\,608\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,211\,c[1] - 312\,576\,c[2] + \\
& 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 400\,275\,c[1] - 312\,576\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,147\,c[1] - 312\,928\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 401\,795\,c[1] - 312\,896\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 401\,859\,c[1] - 312\,896\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,731\,c[1] - 313\,248\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,315\,c[1] - 313\,568\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 387\,387\,c[1] - 309\,128\,c[2] + 95\,499\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 388\,971\,c[1] - 309\,448\,c[2] + 95\,515\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 388\,683\,c[1] - 309\,416\,c[2] + \\
& 95\,515\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 390\,555\,c[1] - 309\,768\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 390\,267\,c[1] - 309\,736\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 389\,979\,c[1] - 309\,704\,c[2] +
\end{aligned}$$

```

95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
391 851 c[1] - 310 056 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 391 563 c[1] - 310 024 c[2] + 95 547 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 393 435 c[1] - 310 376 c[2] +
95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
395 019 c[1] - 310 696 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 394 667 c[1] - 310 664 c[2] + 95 579 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 396 603 c[1] - 311 016 c[2] +
95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
381 843 c[1] - 307 216 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 383 139 c[1] - 307 504 c[2] +
95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 386 307 c[1] - 308 144 c[2] +
95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
387 891 c[1] - 308 464 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 376 011 c[1] - 305 272 c[2] + 95 067 c[3] -
14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{9177, 82 588, 577 512, 2 213 481, 0, 0, 0}

GCD[9177, 82 588, 577 512, 2 213 481, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 2 213 481, 577 512, 82 588, 9177}

cert.g
-21 035 189

```

cert.Transpose[A]

```
{6316091, 3077323, 3664651, 3077163, 3664491, 3077003, 425723,
 425563, 1012891, 14267275, 14267115, 11615995, 11028507, 11615835,
 11615675, 11615515, 8964395, 8964235, 8376747, 8964075, 8963915,
 6312635, 5725147, 6312475, 5724987, 6312315, 3661035, 3073547,
 3660875, 3073387, 421947, 1009275, 421787, 22218619, 19567019,
 19566859, 19566699, 16915419, 16915259, 16915099, 16914939,
 14263819, 14263659, 14263499, 14263339, 11612059, 11024571, 11611899,
 8960459, 8372971, 8960299, 8372811, 6308859, 5721371, 6308699,
 3657259, 27518203, 24866443, 22214843, 22214683, 19563243, 19563083,
 19562923, 19562763, 16911643, 16911483, 16911323, 14259883, 13672395,
 14259723, 11608283, 11020795, 11608123, 8956683, 6305083, 27514267,
 24862667, 24862507, 22211067, 22210907, 22210747, 19559307, 19559147,
 16907707, 14256107, 13668619, 11604507, 27510491, 27510331, 24858731,
 24858571, 22207131, 19555531, 16903931, 27506555, 24854955, 30154379}
```

chi = listdim17[[18]]

$(-9 + x)^{13} (5 + x)^{32} (11200 - 4569x + 675x^2 - 43x^3 + x^4)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-47835, 30461, -7366, 850, -47, 1}, {-46963, 30285, -7358, 850, -47, 1},
  {-46931, 30285, -7358, 850, -47, 1}, {-46899, 30285, -7358, 850, -47, 1},
  {-47139, 30301, -7358, 850, -47, 1}, {-47107, 30301, -7358, 850, -47, 1},
  {-47075, 30301, -7358, 850, -47, 1}, {-47315, 30317, -7358, 850, -47, 1},
  {-47283, 30317, -7358, 850, -47, 1}, {-45883, 30093, -7350, 850, -47, 1},
  {-45851, 30093, -7350, 850, -47, 1}, {-45819, 30093, -7350, 850, -47, 1},
  {-46027, 30109, -7350, 850, -47, 1}, {-45995, 30109, -7350, 850, -47, 1},
  {-45963, 30109, -7350, 850, -47, 1}, {-46203, 30125, -7350, 850, -47, 1},
  {-46171, 30125, -7350, 850, -47, 1}, {-46139, 30125, -7350, 850, -47, 1},
  {-46347, 30141, -7350, 850, -47, 1}, {-46315, 30141, -7350, 850, -47, 1},
  {-44771, 29901, -7342, 850, -47, 1}, {-44739, 29901, -7342, 850, -47, 1},
  {-44915, 29917, -7342, 850, -47, 1}, {-44883, 29917, -7342, 850, -47, 1},
  {-45091, 29933, -7342, 850, -47, 1}, {-45059, 29933, -7342, 850, -47, 1},
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  {-45203, 29949, -7342, 850, -47, 1}, {-45171, 29949, -7342, 850, -47, 1},
  {-45411, 29965, -7342, 850, -47, 1}, {-45379, 29965, -7342, 850, -47, 1},
  {-45347, 29965, -7342, 850, -47, 1}, {-45555, 29981, -7342, 850, -47, 1},
  {-43659, 29709, -7334, 850, -47, 1}, {-43835, 29725, -7334, 850, -47, 1},
  {-43803, 29725, -7334, 850, -47, 1}, {-43979, 29741, -7334, 850, -47, 1},
  {-43947, 29741, -7334, 850, -47, 1}, {-44123, 29757, -7334, 850, -47, 1},
  {-44091, 29757, -7334, 850, -47, 1}, {-44299, 29773, -7334, 850, -47, 1},
  {-44267, 29773, -7334, 850, -47, 1}, {-44235, 29773, -7334, 850, -47, 1},
  {-44443, 29789, -7334, 850, -47, 1}, {-44411, 29789, -7334, 850, -47, 1},
  {-44587, 29805, -7334, 850, -47, 1}, {-42723, 29533, -7326, 850, -47, 1},
  {-42867, 29549, -7326, 850, -47, 1}, {-43011, 29565, -7326, 850, -47, 1},
  {-43187, 29581, -7326, 850, -47, 1}, {-43155, 29581, -7326, 850, -47, 1},
  {-43331, 29597, -7326, 850, -47, 1}, {-43299, 29597, -7326, 850, -47, 1},
  {-43475, 29613, -7326, 850, -47, 1}, {-43443, 29613, -7326, 850, -47, 1},
  {-43651, 29629, -7326, 850, -47, 1}, {-42075, 29389, -7318, 850, -47, 1},
  {-42219, 29405, -7318, 850, -47, 1}, {-42363, 29421, -7318, 850, -47, 1},
  {-42539, 29437, -7318, 850, -47, 1}, {-42507, 29437, -7318, 850, -47, 1},
  {-42683, 29453, -7318, 850, -47, 1}, {-41427, 29245, -7310, 850, -47, 1},
  {-41571, 29261, -7310, 850, -47, 1}, {-41747, 29277, -7310, 850, -47, 1},
  {-41715, 29277, -7310, 850, -47, 1}, {-40635, 29085, -7302, 850, -47, 1},
  {-40779, 29101, -7302, 850, -47, 1}, {-39987, 28941, -7294, 850, -47, 1}}
```

```

A = {{-47 835, 30 461, -7366, 850, -47, 1}, {-46 963, 30 285, -7358, 850, -47, 1},
      {-46 931, 30 285, -7358, 850, -47, 1}, {-46 899, 30 285, -7358, 850, -47, 1},
      {-47 139, 30 301, -7358, 850, -47, 1}, {-47 107, 30 301, -7358, 850, -47, 1},
      {-47 075, 30 301, -7358, 850, -47, 1}, {-47 315, 30 317, -7358, 850, -47, 1},
      {-47 283, 30 317, -7358, 850, -47, 1}, {-45 883, 30 093, -7350, 850, -47, 1},
      {-45 851, 30 093, -7350, 850, -47, 1}, {-45 819, 30 093, -7350, 850, -47, 1},
      {-46 027, 30 109, -7350, 850, -47, 1}, {-45 995, 30 109, -7350, 850, -47, 1},
      {-45 963, 30 109, -7350, 850, -47, 1}, {-46 203, 30 125, -7350, 850, -47, 1},
      {-46 171, 30 125, -7350, 850, -47, 1}, {-46 139, 30 125, -7350, 850, -47, 1},
      {-46 347, 30 141, -7350, 850, -47, 1}, {-46 315, 30 141, -7350, 850, -47, 1},
      {-44 771, 29 901, -7342, 850, -47, 1}, {-44 739, 29 901, -7342, 850, -47, 1},
      {-44 915, 29 917, -7342, 850, -47, 1}, {-44 883, 29 917, -7342, 850, -47, 1},
      {-45 091, 29 933, -7342, 850, -47, 1}, {-45 059, 29 933, -7342, 850, -47, 1},
      {-45 027, 29 933, -7342, 850, -47, 1}, {-45 235, 29 949, -7342, 850, -47, 1},
      {-45 203, 29 949, -7342, 850, -47, 1}, {-45 171, 29 949, -7342, 850, -47, 1},
      {-45 411, 29 965, -7342, 850, -47, 1}, {-45 379, 29 965, -7342, 850, -47, 1},
      {-45 347, 29 965, -7342, 850, -47, 1}, {-45 555, 29 981, -7342, 850, -47, 1},
      {-43 659, 29 709, -7334, 850, -47, 1}, {-43 835, 29 725, -7334, 850, -47, 1},
      {-43 803, 29 725, -7334, 850, -47, 1}, {-43 979, 29 741, -7334, 850, -47, 1},
      {-43 947, 29 741, -7334, 850, -47, 1}, {-44 123, 29 757, -7334, 850, -47, 1},
      {-44 091, 29 757, -7334, 850, -47, 1}, {-44 299, 29 773, -7334, 850, -47, 1},
      {-44 267, 29 773, -7334, 850, -47, 1}, {-44 235, 29 773, -7334, 850, -47, 1},
      {-44 443, 29 789, -7334, 850, -47, 1}, {-44 411, 29 789, -7334, 850, -47, 1},
      {-44 587, 29 805, -7334, 850, -47, 1}, {-42 723, 29 533, -7326, 850, -47, 1},
      {-42 867, 29 549, -7326, 850, -47, 1}, {-43 011, 29 565, -7326, 850, -47, 1},
      {-43 187, 29 581, -7326, 850, -47, 1}, {-43 155, 29 581, -7326, 850, -47, 1},
      {-43 331, 29 597, -7326, 850, -47, 1}, {-43 299, 29 597, -7326, 850, -47, 1},
      {-43 475, 29 613, -7326, 850, -47, 1}, {-43 443, 29 613, -7326, 850, -47, 1},
      {-43 651, 29 629, -7326, 850, -47, 1}, {-42 075, 29 389, -7318, 850, -47, 1},
      {-42 219, 29 405, -7318, 850, -47, 1}, {-42 363, 29 421, -7318, 850, -47, 1},
      {-42 539, 29 437, -7318, 850, -47, 1}, {-42 507, 29 437, -7318, 850, -47, 1},
      {-42 683, 29 453, -7318, 850, -47, 1}, {-41 427, 29 245, -7310, 850, -47, 1},
      {-41 571, 29 261, -7310, 850, -47, 1}, {-41 747, 29 277, -7310, 850, -47, 1},
      {-41 715, 29 277, -7310, 850, -47, 1}, {-40 635, 29 085, -7302, 850, -47, 1},
      {-40 779, 29 101, -7302, 850, -47, 1}, {-39 987, 28 941, -7294, 850, -47, 1}};

```

```
A // MatrixForm
```

```

( -47 835 30 461 -7366 850 -47 1
  -46 963 30 285 -7358 850 -47 1
  -46 931 30 285 -7358 850 -47 1
  -46 899 30 285 -7358 850 -47 1
  -47 139 30 301 -7358 850 -47 1
  -47 107 30 301 -7358 850 -47 1
  -47 075 30 301 -7358 850 -47 1
  -47 315 30 317 -7358 850 -47 1
  -47 283 30 317 -7358 850 -47 1
  -45 883 30 093 -7350 850 -47 1
  -45 851 30 093 -7350 850 -47 1
  -45 819 30 093 -7350 850 -47 1

```

-46 027	30 109	-7350	850	-47	1
-45 995	30 109	-7350	850	-47	1
-45 963	30 109	-7350	850	-47	1
-46 203	30 125	-7350	850	-47	1
-46 171	30 125	-7350	850	-47	1
-46 139	30 125	-7350	850	-47	1
-46 347	30 141	-7350	850	-47	1
-46 315	30 141	-7350	850	-47	1
-44 771	29 901	-7342	850	-47	1
-44 739	29 901	-7342	850	-47	1
-44 915	29 917	-7342	850	-47	1
-44 883	29 917	-7342	850	-47	1
-45 091	29 933	-7342	850	-47	1
-45 059	29 933	-7342	850	-47	1
-45 027	29 933	-7342	850	-47	1
-45 235	29 949	-7342	850	-47	1
-45 203	29 949	-7342	850	-47	1
-45 171	29 949	-7342	850	-47	1
-45 411	29 965	-7342	850	-47	1
-45 379	29 965	-7342	850	-47	1
-45 347	29 965	-7342	850	-47	1
-45 555	29 981	-7342	850	-47	1
-43 659	29 709	-7334	850	-47	1
-43 835	29 725	-7334	850	-47	1
-43 803	29 725	-7334	850	-47	1
-43 979	29 741	-7334	850	-47	1
-43 947	29 741	-7334	850	-47	1
-44 123	29 757	-7334	850	-47	1
-44 091	29 757	-7334	850	-47	1
-44 299	29 773	-7334	850	-47	1
-44 267	29 773	-7334	850	-47	1
-44 235	29 773	-7334	850	-47	1
-44 443	29 789	-7334	850	-47	1
-44 411	29 789	-7334	850	-47	1
-44 587	29 805	-7334	850	-47	1
-42 723	29 533	-7326	850	-47	1
-42 867	29 549	-7326	850	-47	1
-43 011	29 565	-7326	850	-47	1
-43 187	29 581	-7326	850	-47	1
-43 155	29 581	-7326	850	-47	1
-43 331	29 597	-7326	850	-47	1
-43 299	29 597	-7326	850	-47	1
-43 475	29 613	-7326	850	-47	1
-43 443	29 613	-7326	850	-47	1
-43 651	29 629	-7326	850	-47	1
-42 075	29 389	-7318	850	-47	1
-42 219	29 405	-7318	850	-47	1
-42 363	29 421	-7318	850	-47	1
-42 539	29 437	-7318	850	-47	1
-42 507	29 437	-7318	850	-47	1
-42 683	29 453	-7318	850	-47	1
-41 427	29 245	-7310	850	-47	1
-41 571	29 261	-7310	850	-47	1
-41 747	29 277	-7310	850	-47	1
-41 715	29 277	-7310	850	-47	1

$$\begin{pmatrix} -40635 & 29085 & -7302 & 850 & -47 & 1 \\ -40779 & 29101 & -7302 & 850 & -47 & 1 \\ -39987 & 28941 & -7294 & 850 & -47 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-2291995, 1480413, -360294, 41650, -2303, 49}

Array[c, 6].Transpose[A]

```
{-47835 c[1] + 30461 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6],
-46963 c[1] + 30285 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
-46931 c[1] + 30285 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
-46899 c[1] + 30285 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
-47139 c[1] + 30301 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
-47107 c[1] + 30301 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
-47075 c[1] + 30301 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
-47315 c[1] + 30317 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
-47283 c[1] + 30317 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
-45883 c[1] + 30093 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
-45851 c[1] + 30093 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
-45819 c[1] + 30093 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
-46027 c[1] + 30109 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
-45995 c[1] + 30109 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
-45963 c[1] + 30109 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
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-46171 c[1] + 30125 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
-46139 c[1] + 30125 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
-46347 c[1] + 30141 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
-46315 c[1] + 30141 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
-44771 c[1] + 29901 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-44739 c[1] + 29901 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-44915 c[1] + 29917 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-44883 c[1] + 29917 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-45091 c[1] + 29933 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-45059 c[1] + 29933 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-45027 c[1] + 29933 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-45235 c[1] + 29949 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-45203 c[1] + 29949 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-45171 c[1] + 29949 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-45411 c[1] + 29965 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
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-45347 c[1] + 29965 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-45555 c[1] + 29981 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
-43659 c[1] + 29709 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
-43835 c[1] + 29725 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
-43803 c[1] + 29725 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
-43979 c[1] + 29741 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
-43947 c[1] + 29741 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
-44123 c[1] + 29757 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
```

```

-44 091 c[1] + 29 757 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 299 c[1] + 29 773 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 267 c[1] + 29 773 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 235 c[1] + 29 773 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 443 c[1] + 29 789 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 411 c[1] + 29 789 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-44 587 c[1] + 29 805 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 723 c[1] + 29 533 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 867 c[1] + 29 549 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 011 c[1] + 29 565 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 187 c[1] + 29 581 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 155 c[1] + 29 581 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 331 c[1] + 29 597 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 299 c[1] + 29 597 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 475 c[1] + 29 613 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 443 c[1] + 29 613 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 651 c[1] + 29 629 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 075 c[1] + 29 389 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 219 c[1] + 29 405 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 363 c[1] + 29 421 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 539 c[1] + 29 437 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 507 c[1] + 29 437 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 683 c[1] + 29 453 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 427 c[1] + 29 245 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 571 c[1] + 29 261 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 747 c[1] + 29 277 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 715 c[1] + 29 277 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 635 c[1] + 29 085 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 779 c[1] + 29 101 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-39 987 c[1] + 28 941 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] }

```

Array[c, 6].g

```
-2 291 995 c[1] + 1 480 413 c[2] - 360 294 c[3] + 41 650 c[4] - 2303 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```

-2 291 995 c[1] + 1 480 413 c[2] - 360 294 c[3] + 41 650 c[4] - 2303 c[5] + 49 c[6] < 0 &&
-47 835 c[1] + 30 461 c[2] - 7366 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 963 c[1] + 30 285 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 931 c[1] + 30 285 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 899 c[1] + 30 285 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-47 139 c[1] + 30 301 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-47 107 c[1] + 30 301 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-47 075 c[1] + 30 301 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-47 315 c[1] + 30 317 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-47 283 c[1] + 30 317 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 883 c[1] + 30 093 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 851 c[1] + 30 093 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&

```


[illegible]

```

-42 219 c[1] + 29 405 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 363 c[1] + 29 421 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 539 c[1] + 29 437 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 507 c[1] + 29 437 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 683 c[1] + 29 453 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 427 c[1] + 29 245 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 571 c[1] + 29 261 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 747 c[1] + 29 277 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 715 c[1] + 29 277 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 635 c[1] + 29 085 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 779 c[1] + 29 101 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 987 c[1] + 28 941 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]

{13 919, 85 409, 262 395, 0, 0, 0}

GCD[13 919, 85 409, 262 395, 0, 0, 0]

1

Reverse[cert]

{0, 0, 0, 262 395, 85 409, 13 919}

cert.g

-1 028 618

cert.Transpose[A]

{3 026 614, 2 231 158, 2 676 566, 3 121 974, 1 147 958, 1 593 366, 2 038 774, 64 758,
510 166, 2 964 310, 3 409 718, 3 855 126, 2 326 518, 2 771 926, 3 217 334, 1 243 318,
1 688 726, 2 134 134, 605 526, 1 050 934, 4 142 870, 4 588 278, 3 505 078, 3 950 486,
2 421 878, 2 867 286, 3 312 694, 1 784 086, 2 229 494, 2 674 902, 700 886, 1 146 294,
1 591 702, 63 094, 5 321 430, 4 238 230, 4 683 638, 3 600 438, 4 045 846, 2 962 646,
3 408 054, 1 879 446, 2 324 854, 2 770 262, 1 241 654, 1 687 062, 603 862, 5 416 790,
4 778 998, 4 141 206, 3 058 006, 3 503 414, 2 420 214, 2 865 622, 1 782 422,
2 227 830, 699 222, 4 236 566, 3 598 774, 2 960 982, 1 877 782, 2 323 190, 1 239 990,
3 056 342, 2 418 550, 1 335 350, 1 780 758, 2 513 910, 1 876 118, 1 333 686}

chi = listdim17[[19]]
(-9 + x)12 (5 + x)32 (109 - 22 x + x2) (-928 + 293 x - 30 x2 + x3)

```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {422 811, -319 688, 96 523, -15 008, 1273, -56, 1},
  {424 555, -320 040, 96 539, -15 008, 1273, -56, 1},
  {424 331, -320 008, 96 539, -15 008, 1273, -56, 1},
  {426 075, -320 360, 96 555, -15 008, 1273, -56, 1},
  {414 963, -317 232, 96 275, -15 000, 1273, -56, 1},
  {416 707, -317 584, 96 291, -15 000, 1273, -56, 1},
  {416 771, -317 584, 96 291, -15 000, 1273, -56, 1},
  {416 483, -317 552, 96 291, -15 000, 1273, -56, 1},
  {416 547, -317 552, 96 291, -15 000, 1273, -56, 1},
  {416 259, -317 520, 96 291, -15 000, 1273, -56, 1},
  {418 003, -317 872, 96 307, -15 000, 1273, -56, 1},
  {417 779, -317 840, 96 307, -15 000, 1273, -56, 1},
  {417 491, -317 808, 96 307, -15 000, 1273, -56, 1},
  {419 235, -318 160, 96 323, -15 000, 1273, -56, 1},
  {419 011, -318 128, 96 323, -15 000, 1273, -56, 1},
  {407 115, -314 776, 96 027, -14 992, 1273, -56, 1},
  {408 635, -315 096, 96 043, -14 992, 1273, -56, 1},
  {408 699, -315 096, 96 043, -14 992, 1273, -56, 1},
  {408 411, -315 064, 96 043, -14 992, 1273, -56, 1},
  {409 931, -315 384, 96 059, -14 992, 1273, -56, 1},
  {409 643, -315 352, 96 059, -14 992, 1273, -56, 1},
  {409 707, -315 352, 96 059, -14 992, 1273, -56, 1},
  {409 419, -315 320, 96 059, -14 992, 1273, -56, 1},
  {411 163, -315 672, 96 075, -14 992, 1273, -56, 1},
  {411 227, -315 672, 96 075, -14 992, 1273, -56, 1},
  {410 939, -315 640, 96 075, -14 992, 1273, -56, 1},
  {412 459, -315 960, 96 091, -14 992, 1273, -56, 1},
  {400 563, -312 608, 95 795, -14 984, 1273, -56, 1},
  {401 859, -312 896, 95 811, -14 984, 1273, -56, 1},
  {401 571, -312 864, 95 811, -14 984, 1273, -56, 1},
  {403 091, -313 184, 95 827, -14 984, 1273, -56, 1},
  {403 155, -313 184, 95 827, -14 984, 1273, -56, 1},
  {402 867, -313 152, 95 827, -14 984, 1273, -56, 1},
  {402 579, -313 120, 95 827, -14 984, 1273, -56, 1},
  {404 387, -313 472, 95 843, -14 984, 1273, -56, 1},
  {404 099, -313 440, 95 843, -14 984, 1273, -56, 1},
  {404 163, -313 440, 95 843, -14 984, 1273, -56, 1},
  {394 731, -310 664, 95 579, -14 976, 1273, -56, 1},
  {396 315, -310 984, 95 595, -14 976, 1273, -56, 1},
  {396 027, -310 952, 95 595, -14 976, 1273, -56, 1},
  {397 611, -311 272, 95 611, -14 976, 1273, -56, 1},
  {397 259, -311 240, 95 611, -14 976, 1273, -56, 1},
  {389 187, -308 752, 95 363, -14 968, 1273, -56, 1} }
```

```

A = {{422 811, -319 688, 96 523, -15 008, 1273, -56, 1},
      {424 555, -320 040, 96 539, -15 008, 1273, -56, 1},
      {424 331, -320 008, 96 539, -15 008, 1273, -56, 1},
      {426 075, -320 360, 96 555, -15 008, 1273, -56, 1},
      {414 963, -317 232, 96 275, -15 000, 1273, -56, 1},
      {416 707, -317 584, 96 291, -15 000, 1273, -56, 1},
      {416 771, -317 584, 96 291, -15 000, 1273, -56, 1},
      {416 483, -317 552, 96 291, -15 000, 1273, -56, 1},
      {416 547, -317 552, 96 291, -15 000, 1273, -56, 1},
      {416 259, -317 520, 96 291, -15 000, 1273, -56, 1},
      {418 003, -317 872, 96 307, -15 000, 1273, -56, 1},
      {417 779, -317 840, 96 307, -15 000, 1273, -56, 1},
      {417 491, -317 808, 96 307, -15 000, 1273, -56, 1},
      {419 235, -318 160, 96 323, -15 000, 1273, -56, 1},
      {419 011, -318 128, 96 323, -15 000, 1273, -56, 1},
      {407 115, -314 776, 96 027, -14 992, 1273, -56, 1},
      {408 635, -315 096, 96 043, -14 992, 1273, -56, 1},
      {408 699, -315 096, 96 043, -14 992, 1273, -56, 1},
      {408 411, -315 064, 96 043, -14 992, 1273, -56, 1},
      {409 931, -315 384, 96 059, -14 992, 1273, -56, 1},
      {409 643, -315 352, 96 059, -14 992, 1273, -56, 1},
      {409 707, -315 352, 96 059, -14 992, 1273, -56, 1},
      {409 419, -315 320, 96 059, -14 992, 1273, -56, 1},
      {411 163, -315 672, 96 075, -14 992, 1273, -56, 1},
      {411 227, -315 672, 96 075, -14 992, 1273, -56, 1},
      {410 939, -315 640, 96 075, -14 992, 1273, -56, 1},
      {412 459, -315 960, 96 091, -14 992, 1273, -56, 1},
      {400 563, -312 608, 95 795, -14 984, 1273, -56, 1},
      {401 859, -312 896, 95 811, -14 984, 1273, -56, 1},
      {401 571, -312 864, 95 811, -14 984, 1273, -56, 1},
      {403 091, -313 184, 95 827, -14 984, 1273, -56, 1},
      {403 155, -313 184, 95 827, -14 984, 1273, -56, 1},
      {402 867, -313 152, 95 827, -14 984, 1273, -56, 1},
      {402 579, -313 120, 95 827, -14 984, 1273, -56, 1},
      {404 387, -313 472, 95 843, -14 984, 1273, -56, 1},
      {404 099, -313 440, 95 843, -14 984, 1273, -56, 1},
      {404 163, -313 440, 95 843, -14 984, 1273, -56, 1},
      {394 731, -310 664, 95 579, -14 976, 1273, -56, 1},
      {396 315, -310 984, 95 595, -14 976, 1273, -56, 1},
      {396 027, -310 952, 95 595, -14 976, 1273, -56, 1},
      {397 611, -311 272, 95 611, -14 976, 1273, -56, 1},
      {397 259, -311 240, 95 611, -14 976, 1273, -56, 1},
      {389 187, -308 752, 95 363, -14 968, 1273, -56, 1}};

```

A // MatrixForm

```
( 422 811 -319 688 96 523 -15 008 1273 -56 1 )
 424 555 -320 040 96 539 -15 008 1273 -56 1
 424 331 -320 008 96 539 -15 008 1273 -56 1
 426 075 -320 360 96 555 -15 008 1273 -56 1
 414 963 -317 232 96 275 -15 000 1273 -56 1
 416 707 -317 584 96 291 -15 000 1273 -56 1
 416 771 -317 584 96 291 -15 000 1273 -56 1
 416 483 -317 552 96 291 -15 000 1273 -56 1
 416 547 -317 552 96 291 -15 000 1273 -56 1
 416 259 -317 520 96 291 -15 000 1273 -56 1
 418 003 -317 872 96 307 -15 000 1273 -56 1
 417 779 -317 840 96 307 -15 000 1273 -56 1
 417 491 -317 808 96 307 -15 000 1273 -56 1
 419 235 -318 160 96 323 -15 000 1273 -56 1
 419 011 -318 128 96 323 -15 000 1273 -56 1
 407 115 -314 776 96 027 -14 992 1273 -56 1
 408 635 -315 096 96 043 -14 992 1273 -56 1
 408 699 -315 096 96 043 -14 992 1273 -56 1
 408 411 -315 064 96 043 -14 992 1273 -56 1
 409 931 -315 384 96 059 -14 992 1273 -56 1
 409 643 -315 352 96 059 -14 992 1273 -56 1
 409 707 -315 352 96 059 -14 992 1273 -56 1
 409 419 -315 320 96 059 -14 992 1273 -56 1
 411 163 -315 672 96 075 -14 992 1273 -56 1
 411 227 -315 672 96 075 -14 992 1273 -56 1
 410 939 -315 640 96 075 -14 992 1273 -56 1
 412 459 -315 960 96 091 -14 992 1273 -56 1
 400 563 -312 608 95 795 -14 984 1273 -56 1
 401 859 -312 896 95 811 -14 984 1273 -56 1
 401 571 -312 864 95 811 -14 984 1273 -56 1
 403 091 -313 184 95 827 -14 984 1273 -56 1
 403 155 -313 184 95 827 -14 984 1273 -56 1
 402 867 -313 152 95 827 -14 984 1273 -56 1
 402 579 -313 120 95 827 -14 984 1273 -56 1
 404 387 -313 472 95 843 -14 984 1273 -56 1
 404 099 -313 440 95 843 -14 984 1273 -56 1
 404 163 -313 440 95 843 -14 984 1273 -56 1
 394 731 -310 664 95 579 -14 976 1273 -56 1
 396 315 -310 984 95 595 -14 976 1273 -56 1
 396 027 -310 952 95 595 -14 976 1273 -56 1
 397 611 -311 272 95 611 -14 976 1273 -56 1
 397 259 -311 240 95 611 -14 976 1273 -56 1
 389 187 -308 752 95 363 -14 968 1273 -56 1 )
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{20 706 771, -15 638 624, 4 724 499, -735 144, 62 377, -2744, 49}
```

Array[c, 7].Transpose[A]

```
{422 811 c[1] - 319 688 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 424 555 c[1] - 320 040 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 424 331 c[1] - 320 008 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 426 075 c[1] - 320 360 c[2] + 96 555 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 963 c[1] - 317 232 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 707 c[1] - 317 584 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 771 c[1] - 317 584 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 483 c[1] - 317 552 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 547 c[1] - 317 552 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 259 c[1] - 317 520 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 003 c[1] - 317 872 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 779 c[1] - 317 840 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 491 c[1] - 317 808 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 419 235 c[1] - 318 160 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 419 011 c[1] - 318 128 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 115 c[1] - 314 776 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 635 c[1] - 315 096 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 699 c[1] - 315 096 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 411 c[1] - 315 064 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 931 c[1] - 315 384 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 643 c[1] - 315 352 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 707 c[1] - 315 352 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 419 c[1] - 315 320 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 163 c[1] - 315 672 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 227 c[1] - 315 672 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 939 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 459 c[1] - 315 960 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 400 563 c[1] - 312 608 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 401 859 c[1] - 312 896 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 401 571 c[1] - 312 864 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 091 c[1] - 313 184 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 155 c[1] - 313 184 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 402 867 c[1] - 313 152 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 402 579 c[1] - 313 120 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 387 c[1] - 313 472 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 099 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 163 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 394 731 c[1] - 310 664 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 396 315 c[1] - 310 984 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 396 027 c[1] - 310 952 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 611 c[1] - 311 272 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 259 c[1] - 311 240 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 389 187 c[1] - 308 752 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7]}
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Array[c, 7].g

20 706 771 c[1] - 15 638 624 c[2] + 4 724 499 c[3] -
735 144 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

cert =

Flatten[Array[c, 7] /. FindInstance[20 706 771 c[1] - 15 638 624 c[2] + 4 724 499 c[3] -
735 144 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
422 811 c[1] - 319 688 c[2] + 96 523 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 424 555 c[1] - 320 040 c[2] + 96 539 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 424 331 c[1] - 320 008 c[2] +
96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
426 075 c[1] - 320 360 c[2] + 96 555 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 414 963 c[1] - 317 232 c[2] + 96 275 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 416 707 c[1] - 317 584 c[2] +
96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
416 771 c[1] - 317 584 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 416 483 c[1] - 317 552 c[2] + 96 291 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 416 547 c[1] - 317 552 c[2] +
96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
416 259 c[1] - 317 520 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 418 003 c[1] - 317 872 c[2] + 96 307 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 417 779 c[1] - 317 840 c[2] +
96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
417 491 c[1] - 317 808 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 419 235 c[1] - 318 160 c[2] + 96 323 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 419 011 c[1] - 318 128 c[2] +
96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
407 115 c[1] - 314 776 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 408 635 c[1] - 315 096 c[2] + 96 043 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 408 699 c[1] - 315 096 c[2] +
96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
408 411 c[1] - 315 064 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 409 931 c[1] - 315 384 c[2] + 96 059 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 409 643 c[1] - 315 352 c[2] +
96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
409 707 c[1] - 315 352 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 409 419 c[1] - 315 320 c[2] + 96 059 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 163 c[1] - 315 672 c[2] +
96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
411 227 c[1] - 315 672 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 410 939 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 459 c[1] - 315 960 c[2] +
96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
400 563 c[1] - 312 608 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 401 859 c[1] - 312 896 c[2] + 95 811 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 401 571 c[1] - 312 864 c[2] +
95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&

```

403 091 c[1] - 313 184 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 403 155 c[1] - 313 184 c[2] + 95 827 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 402 867 c[1] - 313 152 c[2] +
95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
402 579 c[1] - 313 120 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 404 387 c[1] - 313 472 c[2] + 95 843 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 404 099 c[1] - 313 440 c[2] +
95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
404 163 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 394 731 c[1] - 310 664 c[2] + 95 579 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 396 315 c[1] - 310 984 c[2] +
95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
396 027 c[1] - 310 952 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 397 611 c[1] - 311 272 c[2] + 95 611 c[3] -
14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
397 259 c[1] - 311 240 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 389 187 c[1] - 308 752 c[2] + 95 363 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-5606, -22 673, -50 486, 0, 0, 0, 0}

```

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GCD[-5606, -22 673, -50 486, 0, 0, 0, 0]
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1
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```
Reverse[cert]
```

```
{0, 0, 0, 0, -50 486, -22 673, -5606}
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```
cert.g
```

```
-28 692 788
```

```
cert.Transpose[A]
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{4 947 380, 2 343 636, 2 873 844, 270 100, 5 778 908, 3 175 164, 2 816 380,
3 705 372, 3 346 588, 4 235 580, 1 631 836, 2 162 044, 3 051 036, 447 292, 977 500,
6 610 436, 4 536 900, 4 178 116, 5 067 108, 2 993 572, 3 882 564, 3 523 780,
4 412 772, 1 809 028, 1 450 244, 2 339 236, 265 700, 5 898 636, 4 355 308,
5 244 300, 3 170 764, 2 811 980, 3 700 972, 4 589 964, 1 627 436, 2 516 428,
2 157 644, 5 421 492, 2 989 172, 3 878 164, 1 445 844, 2 693 620, 4 055 356}

```

```
chi = listdim17[[20]]
```

```
(-9 + x)12 (5 + x)32 (-101 120 + 52 353 x - 10 644 x2 + 1062 x3 - 52 x4 + x5)
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CoefficientList[feasibleinterlacingpolylist[chi], x]
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{388 611, -308 688, 95 363, -14 968, 1273, -56, 1},
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A // MatrixForm
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( 423 819 -319 944 96 539 -15 008 1273 -56 1 )
( 425 915 -320 328 96 555 -15 008 1273 -56 1 )
( 425 627 -320 296 96 555 -15 008 1273 -56 1 )
( 425 691 -320 296 96 555 -15 008 1273 -56 1 )
( 416 259 -317 520 96 291 -15 000 1273 -56 1 )
( 415 971 -317 488 96 291 -15 000 1273 -56 1 )
( 415 683 -317 456 96 291 -15 000 1273 -56 1 )
( 418 419 -317 904 96 307 -15 000 1273 -56 1 )
( 418 067 -317 872 96 307 -15 000 1273 -56 1 )
( 418 131 -317 872 96 307 -15 000 1273 -56 1 )
( 417 779 -317 840 96 307 -15 000 1273 -56 1 )
( 417 843 -317 840 96 307 -15 000 1273 -56 1 )
( 417 491 -317 808 96 307 -15 000 1273 -56 1 )
( 417 555 -317 808 96 307 -15 000 1273 -56 1 )
( 417 267 -317 776 96 307 -15 000 1273 -56 1 )
( 416 979 -317 744 96 307 -15 000 1273 -56 1 )
( 419 363 -318 160 96 323 -15 000 1273 -56 1 )
( 419 075 -318 128 96 323 -15 000 1273 -56 1 )
( 419 139 -318 128 96 323 -15 000 1273 -56 1 )
( 418 787 -318 096 96 323 -15 000 1273 -56 1 )
( 418 851 -318 096 96 323 -15 000 1273 -56 1 )
( 408 411 -315 064 96 043 -14 992 1273 -56 1 )
( 408 123 -315 032 96 043 -14 992 1273 -56 1 )
( 407 835 -315 000 96 043 -14 992 1273 -56 1 )
( 407 547 -314 968 96 043 -14 992 1273 -56 1 )
( 410 283 -315 416 96 059 -14 992 1273 -56 1 )
( 409 995 -315 384 96 059 -14 992 1273 -56 1 )
( 409 707 -315 352 96 059 -14 992 1273 -56 1 )
( 409 355 -315 320 96 059 -14 992 1273 -56 1 )
```

```

409419 -315320 96059 -14992 1273 -56 1
409131 -315288 96059 -14992 1273 -56 1
408843 -315256 96059 -14992 1273 -56 1
411579 -315704 96075 -14992 1273 -56 1
411291 -315672 96075 -14992 1273 -56 1
410939 -315640 96075 -14992 1273 -56 1
411003 -315640 96075 -14992 1273 -56 1
410651 -315608 96075 -14992 1273 -56 1
410715 -315608 96075 -14992 1273 -56 1
410427 -315576 96075 -14992 1273 -56 1
412875 -315992 96091 -14992 1273 -56 1
412587 -315960 96091 -14992 1273 -56 1
412235 -315928 96091 -14992 1273 -56 1
412299 -315928 96091 -14992 1273 -56 1
411947 -315896 96091 -14992 1273 -56 1
413819 -316248 96107 -14992 1273 -56 1
398403 -312224 95779 -14984 1273 -56 1
399987 -312544 95795 -14984 1273 -56 1
399699 -312512 95795 -14984 1273 -56 1
399411 -312480 95795 -14984 1273 -56 1
401571 -312864 95811 -14984 1273 -56 1
401283 -312832 95811 -14984 1273 -56 1
400995 -312800 95811 -14984 1273 -56 1
400707 -312768 95811 -14984 1273 -56 1
402867 -313152 95827 -14984 1273 -56 1
402579 -313120 95827 -14984 1273 -56 1
402291 -313088 95827 -14984 1273 -56 1
402003 -313056 95827 -14984 1273 -56 1
404451 -313472 95843 -14984 1273 -56 1
404163 -313440 95843 -14984 1273 -56 1
403875 -313408 95843 -14984 1273 -56 1
403523 -313376 95843 -14984 1273 -56 1
405747 -313760 95859 -14984 1273 -56 1
407331 -314080 95875 -14984 1273 -56 1
391563 -310024 95547 -14976 1273 -56 1
392859 -310312 95563 -14976 1273 -56 1
392571 -310280 95563 -14976 1273 -56 1
394443 -310632 95579 -14976 1273 -56 1
394155 -310600 95579 -14976 1273 -56 1
393867 -310568 95579 -14976 1273 -56 1
395739 -310920 95595 -14976 1273 -56 1
395451 -310888 95595 -14976 1273 -56 1
395163 -310856 95595 -14976 1273 -56 1
397323 -311240 95611 -14976 1273 -56 1
397035 -311208 95611 -14976 1273 -56 1
384435 -307792 95315 -14968 1273 -56 1
385731 -308080 95331 -14968 1273 -56 1
387027 -308368 95347 -14968 1273 -56 1
386739 -308336 95347 -14968 1273 -56 1
388611 -308688 95363 -14968 1273 -56 1
378603 -305848 95099 -14960 1273 -56 1

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

{20 699 475, -15 637 216, 4 724 499, -735 144, 62 377, -2744, 49}

Array[c, 7].Transpose[A]

{424 107 c[1] - 319 976 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 819 c[1] - 319 944 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 425 915 c[1] - 320 328 c[2] + 96 555 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 425 627 c[1] - 320 296 c[2] + 96 555 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 425 691 c[1] - 320 296 c[2] + 96 555 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 259 c[1] - 317 520 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 971 c[1] - 317 488 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 683 c[1] - 317 456 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 419 c[1] - 317 904 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 067 c[1] - 317 872 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 131 c[1] - 317 872 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 779 c[1] - 317 840 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 843 c[1] - 317 840 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 491 c[1] - 317 808 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 555 c[1] - 317 808 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 267 c[1] - 317 776 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 979 c[1] - 317 744 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 419 363 c[1] - 318 160 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 419 075 c[1] - 318 128 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 419 139 c[1] - 318 128 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 787 c[1] - 318 096 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 851 c[1] - 318 096 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 411 c[1] - 315 064 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 123 c[1] - 315 032 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 835 c[1] - 315 000 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 547 c[1] - 314 968 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 283 c[1] - 315 416 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 995 c[1] - 315 384 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 707 c[1] - 315 352 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 355 c[1] - 315 320 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 419 c[1] - 315 320 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 131 c[1] - 315 288 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 843 c[1] - 315 256 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 579 c[1] - 315 704 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 291 c[1] - 315 672 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 939 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 003 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 651 c[1] - 315 608 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 715 c[1] - 315 608 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 427 c[1] - 315 576 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 875 c[1] - 315 992 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 587 c[1] - 315 960 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 235 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 299 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],

```

411 947 c[1] - 315 896 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
413 819 c[1] - 316 248 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 403 c[1] - 312 224 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 987 c[1] - 312 544 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 699 c[1] - 312 512 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 411 c[1] - 312 480 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
401 571 c[1] - 312 864 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
401 283 c[1] - 312 832 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 995 c[1] - 312 800 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 707 c[1] - 312 768 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
402 867 c[1] - 313 152 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
402 579 c[1] - 313 120 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
402 291 c[1] - 313 088 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
402 003 c[1] - 313 056 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
404 451 c[1] - 313 472 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
404 163 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
403 875 c[1] - 313 408 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
403 523 c[1] - 313 376 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
405 747 c[1] - 313 760 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
407 331 c[1] - 314 080 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 563 c[1] - 310 024 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 859 c[1] - 310 312 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 571 c[1] - 310 280 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
394 443 c[1] - 310 632 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
394 155 c[1] - 310 600 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
393 867 c[1] - 310 568 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
395 739 c[1] - 310 920 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
395 451 c[1] - 310 888 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
395 163 c[1] - 310 856 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
397 323 c[1] - 311 240 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
397 035 c[1] - 311 208 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 435 c[1] - 307 792 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
385 731 c[1] - 308 080 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 027 c[1] - 308 368 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 739 c[1] - 308 336 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
378 603 c[1] - 305 848 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 699 475 c[1] - 15 637 216 c[2] + 4 724 499 c[3] -
735 144 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 699 475 c[1] - 15 637 216 c[2] + 4 724 499 c[3] -
735 144 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
424 107 c[1] - 319 976 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 423 819 c[1] - 319 944 c[2] + 96 539 c[3] - 15 008 c[4] +

```

$$\begin{aligned}
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 425915 c[1] - 320328 c[2] + \\
& 96555 c[3] - 15008 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 425627 c[1] - 320296 c[2] + 96555 c[3] - 15008 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 425691 c[1] - 320296 c[2] + 96555 c[3] - 15008 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 416259 c[1] - 317520 c[2] + \\
& 96291 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 415971 c[1] - 317488 c[2] + 96291 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 415683 c[1] - 317456 c[2] + 96291 c[3] - 15000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 418419 c[1] - 317904 c[2] + \\
& 96307 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 418067 c[1] - 317872 c[2] + 96307 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 418131 c[1] - 317872 c[2] + 96307 c[3] - 15000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 417779 c[1] - 317840 c[2] + \\
& 96307 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 417843 c[1] - 317840 c[2] + 96307 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 417491 c[1] - 317808 c[2] + 96307 c[3] - 15000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 417555 c[1] - 317808 c[2] + \\
& 96307 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 417267 c[1] - 317776 c[2] + 96307 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 416979 c[1] - 317744 c[2] + 96307 c[3] - 15000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 419363 c[1] - 318160 c[2] + \\
& 96323 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 419075 c[1] - 318128 c[2] + 96323 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 419139 c[1] - 318128 c[2] + 96323 c[3] - 15000 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 418787 c[1] - 318096 c[2] + \\
& 96323 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 418851 c[1] - 318096 c[2] + 96323 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 408411 c[1] - 315064 c[2] + 96043 c[3] - 14992 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 408123 c[1] - 315032 c[2] + \\
& 96043 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 407835 c[1] - 315000 c[2] + 96043 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 407547 c[1] - 314968 c[2] + 96043 c[3] - 14992 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 410283 c[1] - 315416 c[2] + \\
& 96059 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 409995 c[1] - 315384 c[2] + 96059 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 409707 c[1] - 315352 c[2] + 96059 c[3] - 14992 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 409355 c[1] - 315320 c[2] + \\
& 96059 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 409419 c[1] - 315320 c[2] + 96059 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 409131 c[1] - 315288 c[2] + 96059 c[3] - 14992 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 408843 c[1] - 315256 c[2] + \\
& 96059 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 411579 c[1] - 315704 c[2] + 96075 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 411291 c[1] - 315672 c[2] + 96075 c[3] - 14992 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 410939 c[1] - 315640 c[2] + \\
& 96075 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 411003 c[1] - 315640 c[2] + 96075 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq
\end{aligned}$$

$$\begin{aligned}
& 0 \&\& 410\,651\,c[1] - 315\,608\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 410\,715\,c[1] - 315\,608\,c[2] + \\
& 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
410\,427\,c[1] - 315\,576\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 412\,875\,c[1] - 315\,992\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 412\,587\,c[1] - 315\,960\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
412\,235\,c[1] - 315\,928\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 412\,299\,c[1] - 315\,928\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 411\,947\,c[1] - 315\,896\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
413\,819\,c[1] - 316\,248\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,403\,c[1] - 312\,224\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,987\,c[1] - 312\,544\,c[2] + \\
& 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
399\,699\,c[1] - 312\,512\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,411\,c[1] - 312\,480\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 401\,571\,c[1] - 312\,864\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
401\,283\,c[1] - 312\,832\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,995\,c[1] - 312\,800\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,707\,c[1] - 312\,768\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
402\,867\,c[1] - 313\,152\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,579\,c[1] - 313\,120\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,291\,c[1] - 313\,088\,c[2] + \\
& 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
402\,003\,c[1] - 313\,056\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,451\,c[1] - 313\,472\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 404\,163\,c[1] - 313\,440\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
403\,875\,c[1] - 313\,408\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,523\,c[1] - 313\,376\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,747\,c[1] - 313\,760\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
407\,331\,c[1] - 314\,080\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 391\,563\,c[1] - 310\,024\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 392\,859\,c[1] - 310\,312\,c[2] + \\
& 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
392\,571\,c[1] - 310\,280\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 394\,443\,c[1] - 310\,632\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 394\,155\,c[1] - 310\,600\,c[2] + \\
& 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
393\,867\,c[1] - 310\,568\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 395\,739\,c[1] - 310\,920\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 395\,451\,c[1] - 310\,888\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&
\end{aligned}$$

```

395 163 c[1] - 310 856 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 397 323 c[1] - 311 240 c[2] + 95 611 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 397 035 c[1] - 311 208 c[2] +
95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
384 435 c[1] - 307 792 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 385 731 c[1] - 308 080 c[2] + 95 331 c[3] -
14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
387 027 c[1] - 308 368 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 386 739 c[1] - 308 336 c[2] + 95 347 c[3] -
14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 378 603 c[1] - 305 848 c[2] + 95 099 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-19 567, -76 347, -166 968, 0, 0, 0, 0}

GCD[-19 567, -76 347, -166 968, 0, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 0, -166 968, -76 347, -19 567}

cert.g
-12 246 405

cert.Transpose[A]
{11 782 251, 14 974 443, 607 771, 3 799 963, 2 547 675, 19 243 899, 22 436 091, 25 628 283,
3 624 939, 8 069 419, 6 817 131, 11 261 611, 10 009 323, 14 453 803, 13 201 515, 16 393 707,
19 585 899, 2 027 035, 5 219 227, 3 966 939, 8 411 419, 7 159 131, 26 705 547, 29 897 739,
33 089 931, 36 282 123, 14 278 779, 17 470 971, 20 663 163, 25 107 643, 23 855 355,
27 047 547, 30 239 739, 8 236 395, 11 428 587, 15 873 067, 14 620 779, 19 065 259,
17 812 971, 21 005 163, 2 194 011, 5 386 203, 9 830 683, 8 578 395, 13 022 875, 596 107,
49 786 155, 40 551 579, 43 743 771, 46 935 963, 31 317 003, 34 509 195, 37 701 387,
40 893 579, 25 274 619, 28 466 811, 31 659 003, 34 851 195, 16 040 043, 19 232 235,
22 424 427, 26 868 907, 9 997 659, 763 083, 54 397 611, 48 355 227, 51 547 419,
39 120 651, 42 312 843, 45 505 035, 33 078 267, 36 270 459, 39 462 651, 23 843 691,
27 035 883, 62 201 259, 56 158 875, 50 116 491, 53 308 683, 40 881 915, 63 962 523}

```

chi = listdim17[[21]]

$(-13 + x) (-9 + x)^{14} (5 + x)^{32} (96 - 21 x + x^2)$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{ {5155, -2778, 508, -38, 1}, {5171, -2778, 508, -38, 1}, {5187, -2778, 508, -38, 1},
  {5051, -2770, 508, -38, 1}, {5067, -2770, 508, -38, 1}, {5083, -2770, 508, -38, 1},
  {4931, -2762, 508, -38, 1}, {4947, -2762, 508, -38, 1}, {4963, -2762, 508, -38, 1},
  {4979, -2762, 508, -38, 1}, {4811, -2754, 508, -38, 1}, {4827, -2754, 508, -38, 1},
  {4843, -2754, 508, -38, 1}, {4859, -2754, 508, -38, 1}, {4875, -2754, 508, -38, 1},
  {4707, -2746, 508, -38, 1}, {4723, -2746, 508, -38, 1}, {4739, -2746, 508, -38, 1},
  {4755, -2746, 508, -38, 1}, {4771, -2746, 508, -38, 1}, {4635, -2738, 508, -38, 1},
  {4651, -2738, 508, -38, 1}, {4667, -2738, 508, -38, 1}, {4563, -2730, 508, -38, 1}}
```

```
A = { {5155, -2778, 508, -38, 1}, {5171, -2778, 508, -38, 1},
  {5187, -2778, 508, -38, 1}, {5051, -2770, 508, -38, 1},
  {5067, -2770, 508, -38, 1}, {5083, -2770, 508, -38, 1},
  {4931, -2762, 508, -38, 1}, {4947, -2762, 508, -38, 1},
  {4963, -2762, 508, -38, 1}, {4979, -2762, 508, -38, 1},
  {4811, -2754, 508, -38, 1}, {4827, -2754, 508, -38, 1},
  {4843, -2754, 508, -38, 1}, {4859, -2754, 508, -38, 1},
  {4875, -2754, 508, -38, 1}, {4707, -2746, 508, -38, 1},
  {4723, -2746, 508, -38, 1}, {4739, -2746, 508, -38, 1},
  {4755, -2746, 508, -38, 1}, {4771, -2746, 508, -38, 1},
  {4635, -2738, 508, -38, 1}, {4651, -2738, 508, -38, 1},
  {4667, -2738, 508, -38, 1}, {4563, -2730, 508, -38, 1}};
```

```
A // MatrixForm
```

```
( 5155 -2778 508 -38 1
  5171 -2778 508 -38 1
  5187 -2778 508 -38 1
  5051 -2770 508 -38 1
  5067 -2770 508 -38 1
  5083 -2770 508 -38 1
  4931 -2762 508 -38 1
  4947 -2762 508 -38 1
  4963 -2762 508 -38 1
  4979 -2762 508 -38 1
  4811 -2754 508 -38 1
  4827 -2754 508 -38 1
  4843 -2754 508 -38 1
  4859 -2754 508 -38 1
  4875 -2754 508 -38 1
  4707 -2746 508 -38 1
  4723 -2746 508 -38 1
  4739 -2746 508 -38 1
  4755 -2746 508 -38 1
  4771 -2746 508 -38 1
  4635 -2738 508 -38 1
  4651 -2738 508 -38 1
  4667 -2738 508 -38 1
  4563 -2730 508 -38 1)
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{255 459, -136 266, 24 892, -1862, 49}
```

```
Array[c, 5].Transpose[A]
```

```
{5155 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
 5171 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
 5187 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5],
 5051 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
 5067 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
 5083 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5],
 4931 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
 4947 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
 4963 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
 4979 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5],
 4811 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
 4827 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
 4843 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
 4859 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
 4875 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5],
 4707 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5],
 4723 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5],
 4739 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5],
 4755 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5],
 4771 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5],
 4635 c[1] - 2738 c[2] + 508 c[3] - 38 c[4] + c[5],
 4651 c[1] - 2738 c[2] + 508 c[3] - 38 c[4] + c[5],
 4667 c[1] - 2738 c[2] + 508 c[3] - 38 c[4] + c[5],
 4563 c[1] - 2730 c[2] + 508 c[3] - 38 c[4] + c[5]}
```

```
Array[c, 5].g
```

```
255 459 c[1] - 136 266 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5]
```

```

cert = Flatten[Array[c, 5] /.
  FindInstance[255 459 c[1] - 136 266 c[2] + 24 892 c[3] - 1862 c[4] + 49 c[5] < 0 &&
    5155 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5171 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5187 c[1] - 2778 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5051 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5067 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    5083 c[1] - 2770 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4931 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4947 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4963 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4979 c[1] - 2762 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4811 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4827 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4843 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4859 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4875 c[1] - 2754 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4707 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4723 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4739 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4755 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4771 c[1] - 2746 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4635 c[1] - 2738 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4651 c[1] - 2738 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4667 c[1] - 2738 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0 &&
    4563 c[1] - 2730 c[2] + 508 c[3] - 38 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{-407, -761, 0, 0, 0}

GCD[-407, -761, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, -761, -407}

cert.g
-273387

cert.Transpose[A]
{15973, 9461, 2949, 52213, 45701, 39189, 94965, 88453,
 81941, 75429, 137717, 131205, 124693, 118181, 111669, 173957,
 167445, 160933, 154421, 147909, 197173, 190661, 184149, 220389}

```

```
chi = listdim17[[22]]
```

$$(-11 + x)^2 (-9 + x)^{13} (5 + x)^{32} (92 - 21 x + x^2)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{ {3969, -2340, 454, -36, 1}, {3985, -2340, 454, -36, 1}, {4001, -2340, 454, -36, 1},
  {4017, -2340, 454, -36, 1}, {4033, -2340, 454, -36, 1}, {4049, -2340, 454, -36, 1},
  {4065, -2340, 454, -36, 1}, {4081, -2340, 454, -36, 1}, {4281, -2364, 454, -36, 1},
  {4297, -2364, 454, -36, 1}, {4177, -2356, 454, -36, 1}, {4193, -2356, 454, -36, 1},
  {4209, -2356, 454, -36, 1}, {4225, -2356, 454, -36, 1}, {4241, -2356, 454, -36, 1},
  {4057, -2348, 454, -36, 1}, {4073, -2348, 454, -36, 1}, {4089, -2348, 454, -36, 1},
  {4105, -2348, 454, -36, 1}, {4121, -2348, 454, -36, 1}, {4137, -2348, 454, -36, 1},
  {4153, -2348, 454, -36, 1}, {4169, -2348, 454, -36, 1}, {3897, -2332, 454, -36, 1},
  {3913, -2332, 454, -36, 1}, {3929, -2332, 454, -36, 1}, {3945, -2332, 454, -36, 1},
  {3961, -2332, 454, -36, 1}, {3977, -2332, 454, -36, 1}, {3993, -2332, 454, -36, 1},
  {3825, -2324, 454, -36, 1}, {3841, -2324, 454, -36, 1}, {3857, -2324, 454, -36, 1},
  {3873, -2324, 454, -36, 1}, {3889, -2324, 454, -36, 1}, {3905, -2324, 454, -36, 1},
  {3753, -2316, 454, -36, 1}, {3769, -2316, 454, -36, 1}, {3785, -2316, 454, -36, 1},
  {3801, -2316, 454, -36, 1}, {3817, -2316, 454, -36, 1}, {3681, -2308, 454, -36, 1},
  {3697, -2308, 454, -36, 1}, {3713, -2308, 454, -36, 1}, {3729, -2308, 454, -36, 1},
  {3609, -2300, 454, -36, 1}, {3625, -2300, 454, -36, 1}, {3641, -2300, 454, -36, 1},
  {3537, -2292, 454, -36, 1}, {3553, -2292, 454, -36, 1}, {3465, -2284, 454, -36, 1} }
```

```
A = { {3969, -2340, 454, -36, 1}, {3985, -2340, 454, -36, 1},
  {4001, -2340, 454, -36, 1}, {4017, -2340, 454, -36, 1},
  {4033, -2340, 454, -36, 1}, {4049, -2340, 454, -36, 1},
  {4065, -2340, 454, -36, 1}, {4081, -2340, 454, -36, 1},
  {4281, -2364, 454, -36, 1}, {4297, -2364, 454, -36, 1},
  {4177, -2356, 454, -36, 1}, {4193, -2356, 454, -36, 1},
  {4209, -2356, 454, -36, 1}, {4225, -2356, 454, -36, 1},
  {4241, -2356, 454, -36, 1}, {4057, -2348, 454, -36, 1},
  {4073, -2348, 454, -36, 1}, {4089, -2348, 454, -36, 1},
  {4105, -2348, 454, -36, 1}, {4121, -2348, 454, -36, 1},
  {4137, -2348, 454, -36, 1}, {4153, -2348, 454, -36, 1},
  {4169, -2348, 454, -36, 1}, {3897, -2332, 454, -36, 1},
  {3913, -2332, 454, -36, 1}, {3929, -2332, 454, -36, 1},
  {3945, -2332, 454, -36, 1}, {3961, -2332, 454, -36, 1},
  {3977, -2332, 454, -36, 1}, {3993, -2332, 454, -36, 1},
  {3825, -2324, 454, -36, 1}, {3841, -2324, 454, -36, 1},
  {3857, -2324, 454, -36, 1}, {3873, -2324, 454, -36, 1},
  {3889, -2324, 454, -36, 1}, {3905, -2324, 454, -36, 1},
  {3753, -2316, 454, -36, 1}, {3769, -2316, 454, -36, 1},
  {3785, -2316, 454, -36, 1}, {3801, -2316, 454, -36, 1},
  {3817, -2316, 454, -36, 1}, {3681, -2308, 454, -36, 1},
  {3697, -2308, 454, -36, 1}, {3713, -2308, 454, -36, 1},
  {3729, -2308, 454, -36, 1}, {3609, -2300, 454, -36, 1},
  {3625, -2300, 454, -36, 1}, {3641, -2300, 454, -36, 1}, {3537, -2292,
    454, -36, 1}, {3553, -2292, 454, -36, 1}, {3465, -2284, 454, -36, 1} };
```

A // MatrixForm

$$\begin{pmatrix} 3969 & -2340 & 454 & -36 & 1 \\ 3985 & -2340 & 454 & -36 & 1 \\ 4001 & -2340 & 454 & -36 & 1 \\ 4017 & -2340 & 454 & -36 & 1 \\ 4033 & -2340 & 454 & -36 & 1 \\ 4049 & -2340 & 454 & -36 & 1 \\ 4065 & -2340 & 454 & -36 & 1 \\ 4081 & -2340 & 454 & -36 & 1 \\ 4281 & -2364 & 454 & -36 & 1 \\ 4297 & -2364 & 454 & -36 & 1 \\ 4177 & -2356 & 454 & -36 & 1 \\ 4193 & -2356 & 454 & -36 & 1 \\ 4209 & -2356 & 454 & -36 & 1 \\ 4225 & -2356 & 454 & -36 & 1 \\ 4241 & -2356 & 454 & -36 & 1 \\ 4057 & -2348 & 454 & -36 & 1 \\ 4073 & -2348 & 454 & -36 & 1 \\ 4089 & -2348 & 454 & -36 & 1 \\ 4105 & -2348 & 454 & -36 & 1 \\ 4121 & -2348 & 454 & -36 & 1 \\ 4137 & -2348 & 454 & -36 & 1 \\ 4153 & -2348 & 454 & -36 & 1 \\ 4169 & -2348 & 454 & -36 & 1 \\ 3897 & -2332 & 454 & -36 & 1 \\ 3913 & -2332 & 454 & -36 & 1 \\ 3929 & -2332 & 454 & -36 & 1 \\ 3945 & -2332 & 454 & -36 & 1 \\ 3961 & -2332 & 454 & -36 & 1 \\ 3977 & -2332 & 454 & -36 & 1 \\ 3993 & -2332 & 454 & -36 & 1 \\ 3825 & -2324 & 454 & -36 & 1 \\ 3841 & -2324 & 454 & -36 & 1 \\ 3857 & -2324 & 454 & -36 & 1 \\ 3873 & -2324 & 454 & -36 & 1 \\ 3889 & -2324 & 454 & -36 & 1 \\ 3905 & -2324 & 454 & -36 & 1 \\ 3753 & -2316 & 454 & -36 & 1 \\ 3769 & -2316 & 454 & -36 & 1 \\ 3785 & -2316 & 454 & -36 & 1 \\ 3801 & -2316 & 454 & -36 & 1 \\ 3817 & -2316 & 454 & -36 & 1 \\ 3681 & -2308 & 454 & -36 & 1 \\ 3697 & -2308 & 454 & -36 & 1 \\ 3713 & -2308 & 454 & -36 & 1 \\ 3729 & -2308 & 454 & -36 & 1 \\ 3609 & -2300 & 454 & -36 & 1 \\ 3625 & -2300 & 454 & -36 & 1 \\ 3641 & -2300 & 454 & -36 & 1 \\ 3537 & -2292 & 454 & -36 & 1 \\ 3553 & -2292 & 454 & -36 & 1 \\ 3465 & -2284 & 454 & -36 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{207 001, -115 404, 22 246, -1764, 49}
```

```
Array[c, 5].Transpose[A]
```

```
{3969 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5],
 3985 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5],
 4001 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5],
 4017 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5],
 4033 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5],
 4049 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5],
 4065 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5],
 4081 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5],
 4281 c[1] - 2364 c[2] + 454 c[3] - 36 c[4] + c[5],
 4297 c[1] - 2364 c[2] + 454 c[3] - 36 c[4] + c[5],
 4177 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5],
 4193 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5],
 4209 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5],
 4225 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5],
 4241 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5],
 4057 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5],
 4073 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5],
 4089 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5],
 4105 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5],
 4121 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5],
 4137 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5],
 4153 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5],
 4169 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5],
 3897 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5],
 3913 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5],
 3929 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5],
 3945 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5],
 3961 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5],
 3977 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5],
 3993 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5],
 3825 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5],
 3841 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5],
 3857 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5],
 3873 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5],
 3889 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5],
 3905 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5],
 3753 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5],
 3769 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5],
 3785 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5],
 3801 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5],
 3817 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5],
 3681 c[1] - 2308 c[2] + 454 c[3] - 36 c[4] + c[5],
 3697 c[1] - 2308 c[2] + 454 c[3] - 36 c[4] + c[5],
```



```

3713 c[1] - 2308 c[2] + 454 c[3] - 36 c[4] + c[5],
3729 c[1] - 2308 c[2] + 454 c[3] - 36 c[4] + c[5],
3609 c[1] - 2300 c[2] + 454 c[3] - 36 c[4] + c[5],
3625 c[1] - 2300 c[2] + 454 c[3] - 36 c[4] + c[5],
3641 c[1] - 2300 c[2] + 454 c[3] - 36 c[4] + c[5],
3537 c[1] - 2292 c[2] + 454 c[3] - 36 c[4] + c[5],
3553 c[1] - 2292 c[2] + 454 c[3] - 36 c[4] + c[5],
3465 c[1] - 2284 c[2] + 454 c[3] - 36 c[4] + c[5] }

```

```
Array[c, 5].g
```

```
207 001 c[1] - 115 404 c[2] + 22 246 c[3] - 1764 c[4] + 49 c[5]
```

```
cert = Flatten[Array[c, 5] /.
```

```
FindInstance[207 001 c[1] - 115 404 c[2] + 22 246 c[3] - 1764 c[4] + 49 c[5] < 0 &&
```

```
3969 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3985 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4001 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4017 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4033 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4049 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4065 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4081 c[1] - 2340 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4281 c[1] - 2364 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4297 c[1] - 2364 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4177 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4193 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4209 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4225 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4241 c[1] - 2356 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4057 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4073 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4089 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4105 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4121 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4137 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4153 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
4169 c[1] - 2348 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3897 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3913 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3929 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3945 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3961 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3977 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3993 c[1] - 2332 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3825 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3841 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```
3857 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
```

```

3873 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3889 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3905 c[1] - 2324 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3753 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3769 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3785 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3801 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3817 c[1] - 2316 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3681 c[1] - 2308 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3697 c[1] - 2308 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3713 c[1] - 2308 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3729 c[1] - 2308 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3609 c[1] - 2300 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3625 c[1] - 2300 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3641 c[1] - 2300 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3537 c[1] - 2292 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3553 c[1] - 2292 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0 &&
3465 c[1] - 2284 c[2] + 454 c[3] - 36 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{c[1], c[2], c[3], c[4], c[5]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[23]]
```

```
(-11 + x) (-9 + x)11 (-7 + x) (5 + x)32 (11 756 - 4665 x + 679 x2 - 43 x3 + x4)
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-3830211, 3307091, -1189019, 231611, -26465, 1777, -65, 1},
  {-3843763, 3311491, -1189483, 231627, -26465, 1777, -65, 1},
  {-3841299, 3310915, -1189451, 231627, -26465, 1777, -65, 1},
  {-3744459, 3272291, -1183835, 231275, -26457, 1777, -65, 1},
  {-3758139, 3276691, -1184299, 231291, -26457, 1777, -65, 1},
  {-3771691, 3281091, -1184763, 231307, -26457, 1777, -65, 1},
  {-3769227, 3280515, -1184731, 231307, -26457, 1777, -65, 1},
  {-3782779, 3284915, -1185195, 231323, -26457, 1777, -65, 1},
  {-3674979, 3242467, -1179147, 230955, -26449, 1777, -65, 1},
  {-3671811, 3241827, -1179115, 230955, -26449, 1777, -65, 1},
  {-3686067, 3246291, -1179579, 230971, -26449, 1777, -65, 1},
  {-3682899, 3245651, -1179547, 230971, -26449, 1777, -65, 1},
  {-3683475, 3245715, -1179547, 230971, -26449, 1777, -65, 1},
  {-3697155, 3250115, -1180011, 230987, -26449, 1777, -65, 1},
  {-3693987, 3249475, -1179979, 230987, -26449, 1777, -65, 1},
  {-3710707, 3254515, -1180475, 231003, -26449, 1777, -65, 1},
  {-3708243, 3253939, -1180443, 231003, -26449, 1777, -65, 1},
  {-3721795, 3258339, -1180907, 231019, -26449, 1777, -65, 1},
  {-3610827, 3215251, -1174827, 230651, -26441, 1777, -65, 1},
  {-3625083, 3219715, -1175291, 230667, -26441, 1777, -65, 1},
  {-3621915, 3219075, -1175259, 230667, -26441, 1777, -65, 1},
  {-3622491, 3219139, -1175259, 230667, -26441, 1777, -65, 1},
  {-3636171, 3223539, -1175723, 230683, -26441, 1777, -65, 1},
  {-3633003, 3222899, -1175691, 230683, -26441, 1777, -65, 1},
  {-3646555, 3227299, -1176155, 230699, -26441, 1777, -65, 1},
  {-3647259, 3227363, -1176155, 230699, -26441, 1777, -65, 1},
  {-3644091, 3226723, -1176123, 230699, -26441, 1777, -65, 1},
  {-3660811, 3231763, -1176619, 230715, -26441, 1777, -65, 1},
  {-3560931, 3192499, -1170971, 230363, -26433, 1777, -65, 1},
  {-3575187, 3196963, -1171435, 230379, -26433, 1777, -65, 1},
  {-3572019, 3196323, -1171403, 230379, -26433, 1777, -65, 1},
  {-3586275, 3200787, -1171867, 230395, -26433, 1777, -65, 1},
  {-3514203, 3170387, -1167147, 230075, -26425, 1777, -65, 1},
  {-3511035, 3169747, -1167115, 230075, -26425, 1777, -65, 1},
  {-3525291, 3174211, -1167579, 230091, -26425, 1777, -65, 1},
  {-3435795, 3138707, -1162363, 229755, -26417, 1777, -65, 1},
  {-3450051, 3143171, -1162827, 229771, -26417, 1777, -65, 1}}
```

```

A = {{-3 830 211, 3 307 091, -1 189 019, 231 611, -26 465, 1777, -65, 1},
      {-3 843 763, 3 311 491, -1 189 483, 231 627, -26 465, 1777, -65, 1},
      {-3 841 299, 3 310 915, -1 189 451, 231 627, -26 465, 1777, -65, 1},
      {-3 744 459, 3 272 291, -1 183 835, 231 275, -26 457, 1777, -65, 1},
      {-3 758 139, 3 276 691, -1 184 299, 231 291, -26 457, 1777, -65, 1},
      {-3 771 691, 3 281 091, -1 184 763, 231 307, -26 457, 1777, -65, 1},
      {-3 769 227, 3 280 515, -1 184 731, 231 307, -26 457, 1777, -65, 1},
      {-3 782 779, 3 284 915, -1 185 195, 231 323, -26 457, 1777, -65, 1},
      {-3 674 979, 3 242 467, -1 179 147, 230 955, -26 449, 1777, -65, 1},
      {-3 671 811, 3 241 827, -1 179 115, 230 955, -26 449, 1777, -65, 1},
      {-3 686 067, 3 246 291, -1 179 579, 230 971, -26 449, 1777, -65, 1},
      {-3 682 899, 3 245 651, -1 179 547, 230 971, -26 449, 1777, -65, 1},
      {-3 683 475, 3 245 715, -1 179 547, 230 971, -26 449, 1777, -65, 1},
      {-3 697 155, 3 250 115, -1 180 011, 230 987, -26 449, 1777, -65, 1},
      {-3 693 987, 3 249 475, -1 179 979, 230 987, -26 449, 1777, -65, 1},
      {-3 710 707, 3 254 515, -1 180 475, 231 003, -26 449, 1777, -65, 1},
      {-3 708 243, 3 253 939, -1 180 443, 231 003, -26 449, 1777, -65, 1},
      {-3 721 795, 3 258 339, -1 180 907, 231 019, -26 449, 1777, -65, 1},
      {-3 610 827, 3 215 251, -1 174 827, 230 651, -26 441, 1777, -65, 1},
      {-3 625 083, 3 219 715, -1 175 291, 230 667, -26 441, 1777, -65, 1},
      {-3 621 915, 3 219 075, -1 175 259, 230 667, -26 441, 1777, -65, 1},
      {-3 622 491, 3 219 139, -1 175 259, 230 667, -26 441, 1777, -65, 1},
      {-3 636 171, 3 223 539, -1 175 723, 230 683, -26 441, 1777, -65, 1},
      {-3 633 003, 3 222 899, -1 175 691, 230 683, -26 441, 1777, -65, 1},
      {-3 646 555, 3 227 299, -1 176 155, 230 699, -26 441, 1777, -65, 1},
      {-3 647 259, 3 227 363, -1 176 155, 230 699, -26 441, 1777, -65, 1},
      {-3 644 091, 3 226 723, -1 176 123, 230 699, -26 441, 1777, -65, 1},
      {-3 660 811, 3 231 763, -1 176 619, 230 715, -26 441, 1777, -65, 1},
      {-3 560 931, 3 192 499, -1 170 971, 230 363, -26 433, 1777, -65, 1},
      {-3 575 187, 3 196 963, -1 171 435, 230 379, -26 433, 1777, -65, 1},
      {-3 572 019, 3 196 323, -1 171 403, 230 379, -26 433, 1777, -65, 1},
      {-3 586 275, 3 200 787, -1 171 867, 230 395, -26 433, 1777, -65, 1},
      {-3 514 203, 3 170 387, -1 167 147, 230 075, -26 425, 1777, -65, 1},
      {-3 511 035, 3 169 747, -1 167 115, 230 075, -26 425, 1777, -65, 1},
      {-3 525 291, 3 174 211, -1 167 579, 230 091, -26 425, 1777, -65, 1},
      {-3 435 795, 3 138 707, -1 162 363, 229 755, -26 417, 1777, -65, 1},
      {-3 450 051, 3 143 171, -1 162 827, 229 771, -26 417, 1777, -65, 1}};

```

A // MatrixForm

$$\begin{pmatrix} -3830211 & 3307091 & -1189019 & 231611 & -26465 & 1777 & -65 & 1 \\ -3843763 & 3311491 & -1189483 & 231627 & -26465 & 1777 & -65 & 1 \\ -3841299 & 3310915 & -1189451 & 231627 & -26465 & 1777 & -65 & 1 \\ -3744459 & 3272291 & -1183835 & 231275 & -26457 & 1777 & -65 & 1 \\ -3758139 & 3276691 & -1184299 & 231291 & -26457 & 1777 & -65 & 1 \\ -3771691 & 3281091 & -1184763 & 231307 & -26457 & 1777 & -65 & 1 \\ -3769227 & 3280515 & -1184731 & 231307 & -26457 & 1777 & -65 & 1 \\ -3782779 & 3284915 & -1185195 & 231323 & -26457 & 1777 & -65 & 1 \\ -3674979 & 3242467 & -1179147 & 230955 & -26449 & 1777 & -65 & 1 \\ -3671811 & 3241827 & -1179115 & 230955 & -26449 & 1777 & -65 & 1 \\ -3686067 & 3246291 & -1179579 & 230971 & -26449 & 1777 & -65 & 1 \\ -3682899 & 3245651 & -1179547 & 230971 & -26449 & 1777 & -65 & 1 \\ -3683475 & 3245715 & -1179547 & 230971 & -26449 & 1777 & -65 & 1 \\ -3697155 & 3250115 & -1180011 & 230987 & -26449 & 1777 & -65 & 1 \\ -3693987 & 3249475 & -1179979 & 230987 & -26449 & 1777 & -65 & 1 \\ -3710707 & 3254515 & -1180475 & 231003 & -26449 & 1777 & -65 & 1 \\ -3708243 & 3253939 & -1180443 & 231003 & -26449 & 1777 & -65 & 1 \\ -3721795 & 3258339 & -1180907 & 231019 & -26449 & 1777 & -65 & 1 \\ -3610827 & 3215251 & -1174827 & 230651 & -26441 & 1777 & -65 & 1 \\ -3625083 & 3219715 & -1175291 & 230667 & -26441 & 1777 & -65 & 1 \\ -3621915 & 3219075 & -1175259 & 230667 & -26441 & 1777 & -65 & 1 \\ -3622491 & 3219139 & -1175259 & 230667 & -26441 & 1777 & -65 & 1 \\ -3636171 & 3223539 & -1175723 & 230683 & -26441 & 1777 & -65 & 1 \\ -3633003 & 3222899 & -1175691 & 230683 & -26441 & 1777 & -65 & 1 \\ -3646555 & 3227299 & -1176155 & 230699 & -26441 & 1777 & -65 & 1 \\ -3647259 & 3227363 & -1176155 & 230699 & -26441 & 1777 & -65 & 1 \\ -3644091 & 3226723 & -1176123 & 230699 & -26441 & 1777 & -65 & 1 \\ -3660811 & 3231763 & -1176619 & 230715 & -26441 & 1777 & -65 & 1 \\ -3560931 & 3192499 & -1170971 & 230363 & -26433 & 1777 & -65 & 1 \\ -3575187 & 3196963 & -1171435 & 230379 & -26433 & 1777 & -65 & 1 \\ -3572019 & 3196323 & -1171403 & 230379 & -26433 & 1777 & -65 & 1 \\ -3586275 & 3200787 & -1171867 & 230395 & -26433 & 1777 & -65 & 1 \\ -3514203 & 3170387 & -1167147 & 230075 & -26425 & 1777 & -65 & 1 \\ -3511035 & 3169747 & -1167115 & 230075 & -26425 & 1777 & -65 & 1 \\ -3525291 & 3174211 & -1167579 & 230091 & -26425 & 1777 & -65 & 1 \\ -3435795 & 3138707 & -1162363 & 229755 & -26417 & 1777 & -65 & 1 \\ -3450051 & 3143171 & -1162827 & 229771 & -26417 & 1777 & -65 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-185227811, 160885987, -58059211, 11333515, -1296353, 87073, -3185, 49}

Array[c, 8].Transpose[A]

$$\begin{aligned} & \{-3830211 c[1] + 3307091 c[2] - 1189019 c[3] + 231611 c[4] - \\ & \quad 26465 c[5] + 1777 c[6] - 65 c[7] + c[8], -3843763 c[1] + 3311491 c[2] - \\ & \quad 1189483 c[3] + 231627 c[4] - 26465 c[5] + 1777 c[6] - 65 c[7] + c[8], \\ & -3841299 c[1] + 3310915 c[2] - 1189451 c[3] + 231627 c[4] - 26465 c[5] + \\ & \quad 1777 c[6] - 65 c[7] + c[8], -3744459 c[1] + 3272291 c[2] - \\ & \quad 1183835 c[3] + 231275 c[4] - 26457 c[5] + 1777 c[6] - 65 c[7] + c[8], \\ & -3758139 c[1] + 3276691 c[2] - 1184299 c[3] + 231291 c[4] - 26457 c[5] + \\ & \quad 1777 c[6] - 65 c[7] + c[8], -3771691 c[1] + 3281091 c[2] - \\ & \quad 1184763 c[3] + 231307 c[4] - 26457 c[5] + 1777 c[6] - 65 c[7] + c[8], \end{aligned}$$

$$\begin{aligned}
& -3769227c[1] + 3280515c[2] - 1184731c[3] + 231307c[4] - 26457c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3782779c[1] + 3284915c[2] - \\
& 1185195c[3] + 231323c[4] - 26457c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3674979c[1] + 3242467c[2] - 1179147c[3] + 230955c[4] - 26449c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3671811c[1] + 3241827c[2] - \\
& 1179115c[3] + 230955c[4] - 26449c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3686067c[1] + 3246291c[2] - 1179579c[3] + 230971c[4] - 26449c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3682899c[1] + 3245651c[2] - \\
& 1179547c[3] + 230971c[4] - 26449c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3683475c[1] + 3245715c[2] - 1179547c[3] + 230971c[4] - 26449c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3697155c[1] + 3250115c[2] - \\
& 1180011c[3] + 230987c[4] - 26449c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3693987c[1] + 3249475c[2] - 1179979c[3] + 230987c[4] - 26449c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3710707c[1] + 3254515c[2] - \\
& 1180475c[3] + 231003c[4] - 26449c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3708243c[1] + 3253939c[2] - 1180443c[3] + 231003c[4] - 26449c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3721795c[1] + 3258339c[2] - \\
& 1180907c[3] + 231019c[4] - 26449c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3610827c[1] + 3215251c[2] - 1174827c[3] + 230651c[4] - 26441c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3625083c[1] + 3219715c[2] - \\
& 1175291c[3] + 230667c[4] - 26441c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3621915c[1] + 3219075c[2] - 1175259c[3] + 230667c[4] - 26441c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3622491c[1] + 3219139c[2] - \\
& 1175259c[3] + 230667c[4] - 26441c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3636171c[1] + 3223539c[2] - 1175723c[3] + 230683c[4] - 26441c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3633003c[1] + 3222899c[2] - \\
& 1175691c[3] + 230683c[4] - 26441c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3646555c[1] + 3227299c[2] - 1176155c[3] + 230699c[4] - 26441c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3647259c[1] + 3227363c[2] - \\
& 1176155c[3] + 230699c[4] - 26441c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3644091c[1] + 3226723c[2] - 1176123c[3] + 230699c[4] - 26441c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3660811c[1] + 3231763c[2] - \\
& 1176619c[3] + 230715c[4] - 26441c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3560931c[1] + 3192499c[2] - 1170971c[3] + 230363c[4] - 26433c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3575187c[1] + 3196963c[2] - 1171435c[3] + \\
& 230379c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8], -3572019c[1] + \\
& 3196323c[2] - 1171403c[3] + 230379c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3586275c[1] + 3200787c[2] - 1171867c[3] + 230395c[4] - 26433c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3514203c[1] + 3170387c[2] - \\
& 1167147c[3] + 230075c[4] - 26425c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3511035c[1] + 3169747c[2] - 1167115c[3] + 230075c[4] - 26425c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3525291c[1] + 3174211c[2] - \\
& 1167579c[3] + 230091c[4] - 26425c[5] + 1777c[6] - 65c[7] + c[8], \\
& -3435795c[1] + 3138707c[2] - 1162363c[3] + 229755c[4] - 26417c[5] + \\
& 1777c[6] - 65c[7] + c[8], -3450051c[1] + 3143171c[2] - \\
& 1162827c[3] + 229771c[4] - 26417c[5] + 1777c[6] - 65c[7] + c[8] \}
\end{aligned}$$

Array[c, 8].g

-185 227 811 c[1] + 160 885 987 c[2] - 58 059 211 c[3] +
11 333 515 c[4] - 1 296 353 c[5] + 87 073 c[6] - 3185 c[7] + 49 c[8]

cert = Flatten[

Array[c, 8] /. FindInstance[-185 227 811 c[1] + 160 885 987 c[2] - 58 059 211 c[3] +
11 333 515 c[4] - 1 296 353 c[5] + 87 073 c[6] - 3185 c[7] + 49 c[8] < 0 &&
-3 830 211 c[1] + 3 307 091 c[2] - 1 189 019 c[3] + 231 611 c[4] - 26 465 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 843 763 c[1] + 3 311 491 c[2] -
1 189 483 c[3] + 231 627 c[4] - 26 465 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 841 299 c[1] + 3 310 915 c[2] - 1 189 451 c[3] + 231 627 c[4] - 26 465 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 744 459 c[1] + 3 272 291 c[2] -
1 183 835 c[3] + 231 275 c[4] - 26 457 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 758 139 c[1] + 3 276 691 c[2] - 1 184 299 c[3] + 231 291 c[4] - 26 457 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 771 691 c[1] + 3 281 091 c[2] -
1 184 763 c[3] + 231 307 c[4] - 26 457 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 769 227 c[1] + 3 280 515 c[2] - 1 184 731 c[3] + 231 307 c[4] - 26 457 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 782 779 c[1] + 3 284 915 c[2] -
1 185 195 c[3] + 231 323 c[4] - 26 457 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 674 979 c[1] + 3 242 467 c[2] - 1 179 147 c[3] + 230 955 c[4] - 26 449 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 671 811 c[1] + 3 241 827 c[2] -
1 179 115 c[3] + 230 955 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 686 067 c[1] + 3 246 291 c[2] - 1 179 579 c[3] + 230 971 c[4] - 26 449 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 682 899 c[1] + 3 245 651 c[2] -
1 179 547 c[3] + 230 971 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 683 475 c[1] + 3 245 715 c[2] - 1 179 547 c[3] + 230 971 c[4] - 26 449 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 697 155 c[1] + 3 250 115 c[2] -
1 180 011 c[3] + 230 987 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 693 987 c[1] + 3 249 475 c[2] - 1 179 979 c[3] + 230 987 c[4] - 26 449 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 710 707 c[1] + 3 254 515 c[2] -
1 180 475 c[3] + 231 003 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 708 243 c[1] + 3 253 939 c[2] - 1 180 443 c[3] + 231 003 c[4] - 26 449 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 721 795 c[1] + 3 258 339 c[2] -
1 180 907 c[3] + 231 019 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 610 827 c[1] + 3 215 251 c[2] - 1 174 827 c[3] + 230 651 c[4] - 26 441 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 625 083 c[1] + 3 219 715 c[2] -
1 175 291 c[3] + 230 667 c[4] - 26 441 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 621 915 c[1] + 3 219 075 c[2] - 1 175 259 c[3] + 230 667 c[4] - 26 441 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 622 491 c[1] + 3 219 139 c[2] -
1 175 259 c[3] + 230 667 c[4] - 26 441 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 636 171 c[1] + 3 223 539 c[2] - 1 175 723 c[3] + 230 683 c[4] - 26 441 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 633 003 c[1] + 3 222 899 c[2] -
1 175 691 c[3] + 230 683 c[4] - 26 441 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 646 555 c[1] + 3 227 299 c[2] - 1 176 155 c[3] + 230 699 c[4] - 26 441 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 647 259 c[1] + 3 227 363 c[2] -
1 176 155 c[3] + 230 699 c[4] - 26 441 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 644 091 c[1] + 3 226 723 c[2] - 1 176 123 c[3] + 230 699 c[4] - 26 441 c[5] +

```

1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 660 811 c[1] + 3 231 763 c[2] -
1 176 619 c[3] + 230 715 c[4] - 26 441 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 560 931 c[1] + 3 192 499 c[2] - 1 170 971 c[3] + 230 363 c[4] - 26 433 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 575 187 c[1] + 3 196 963 c[2] -
1 171 435 c[3] + 230 379 c[4] - 26 433 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 572 019 c[1] + 3 196 323 c[2] - 1 171 403 c[3] + 230 379 c[4] - 26 433 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 586 275 c[1] + 3 200 787 c[2] -
1 171 867 c[3] + 230 395 c[4] - 26 433 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 514 203 c[1] + 3 170 387 c[2] - 1 167 147 c[3] + 230 075 c[4] - 26 425 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 511 035 c[1] + 3 169 747 c[2] -
1 167 115 c[3] + 230 075 c[4] - 26 425 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 525 291 c[1] + 3 174 211 c[2] - 1 167 579 c[3] + 230 091 c[4] - 26 425 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 435 795 c[1] + 3 138 707 c[2] -
1 162 363 c[3] + 229 755 c[4] - 26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 450 051 c[1] + 3 143 171 c[2] - 1 162 827 c[3] + 229 771 c[4] -
26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0, Array[c, 8], Integers]]
{16 900, 54 412, 96 866, 0, 0, 0, 0, 0}

GCD[16 900, 54 412, 96 866, 0, 0, 0, 0, 0]
2

cert = cert / 2
{8450, 27 206, 48 433, 0, 0, 0, 0, 0}

Reverse[cert]
{0, 0, 0, 0, 0, 48 433, 27 206, 8450}

cert.g
-92 606 991

cert.Transpose[A]
{19 677 569, 2 396 657, 9 096 657, 48 589 841, 30 227 329, 12 946 417,
19 646 417, 2 365 505, 51 358 001, 62 265 617, 40 777 089, 51 684 705,
48 558 689, 30 196 177, 41 103 793, 12 915 265, 19 615 265, 2 334 353,
62 234 465, 40 745 937, 51 653 553, 48 527 537, 30 165 025, 41 072 641,
23 791 729, 19 584 113, 30 491 729, 2 303 201, 51 622 401, 30 133 873, 41 041 489,
19 552 961, 30 102 721, 41 010 337, 19 521 809, 62 467 713, 40 979 185}

chi = listdim17[[24]]
(-11 + x) (-9 + x)12 (5 + x)32 (9140 - 3919 x + 611 x2 - 41 x3 + x4)

CoefficientList[feasibleinterlacingpolylist[chi], x]

```



```

{415 699, -317 328, 96 275, -15 000, 1273, -56, 1},
{415 763, -317 328, 96 275, -15 000, 1273, -56, 1},
{417 923, -317 712, 96 291, -15 000, 1273, -56, 1},
{417 987, -317 712, 96 291, -15 000, 1273, -56, 1},
{417 571, -317 680, 96 291, -15 000, 1273, -56, 1},
{417 635, -317 680, 96 291, -15 000, 1273, -56, 1},
{417 699, -317 680, 96 291, -15 000, 1273, -56, 1},
{417 283, -317 648, 96 291, -15 000, 1273, -56, 1},
{417 347, -317 648, 96 291, -15 000, 1273, -56, 1},
{419 155, -318 000, 96 307, -15 000, 1273, -56, 1},
{419 219, -318 000, 96 307, -15 000, 1273, -56, 1},
{418 803, -317 968, 96 307, -15 000, 1273, -56, 1},
{418 867, -317 968, 96 307, -15 000, 1273, -56, 1},
{420 387, -318 288, 96 323, -15 000, 1273, -56, 1},
{420 451, -318 288, 96 323, -15 000, 1273, -56, 1},
{421 619, -318 576, 96 339, -15 000, 1273, -56, 1},
{406 107, -314 520, 96 011, -14 992, 1273, -56, 1},
{405 819, -314 488, 96 011, -14 992, 1273, -56, 1},
{405 531, -314 456, 96 011, -14 992, 1273, -56, 1},
{407 979, -314 872, 96 027, -14 992, 1273, -56, 1},
{407 627, -314 840, 96 027, -14 992, 1273, -56, 1},
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{407 403, -314 808, 96 027, -14 992, 1273, -56, 1},
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{409 211, -315 160, 96 043, -14 992, 1273, -56, 1},
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{411 147, -315 512, 96 059, -14 992, 1273, -56, 1},
{410 795, -315 480, 96 059, -14 992, 1273, -56, 1},
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{410 155, -315 416, 96 059, -14 992, 1273, -56, 1},
{412 731, -315 832, 96 075, -14 992, 1273, -56, 1},
{412 379, -315 800, 96 075, -14 992, 1273, -56, 1},
{412 443, -315 800, 96 075, -14 992, 1273, -56, 1},
{412 027, -315 768, 96 075, -14 992, 1273, -56, 1},
{412 091, -315 768, 96 075, -14 992, 1273, -56, 1},
{411 675, -315 736, 96 075, -14 992, 1273, -56, 1},
{411 739, -315 736, 96 075, -14 992, 1273, -56, 1},
{413 963, -316 120, 96 091, -14 992, 1273, -56, 1},
{413 611, -316 088, 96 091, -14 992, 1273, -56, 1},

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{413 675, -316 088, 96 091, -14 992, 1273, -56, 1},
{413 259, -316 056, 96 091, -14 992, 1273, -56, 1},
{414 843, -316 376, 96 107, -14 992, 1273, -56, 1},
{396 099, -311 680, 95 747, -14 984, 1273, -56, 1},
{397 683, -312 000, 95 763, -14 984, 1273, -56, 1},
{397 395, -311 968, 95 763, -14 984, 1273, -56, 1},
{397 107, -311 936, 95 763, -14 984, 1273, -56, 1},
{399 267, -312 320, 95 779, -14 984, 1273, -56, 1},
{398 915, -312 288, 95 779, -14 984, 1273, -56, 1},
{398 979, -312 288, 95 779, -14 984, 1273, -56, 1},
{398 691, -312 256, 95 779, -14 984, 1273, -56, 1},
{400 851, -312 640, 95 795, -14 984, 1273, -56, 1},
{400 499, -312 608, 95 795, -14 984, 1273, -56, 1},
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g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{20 571 915, -15 587 928, 4 718 875, -734 960, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```

{415 699 c[1] - 317 328 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 763 c[1] - 317 328 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 923 c[1] - 317 712 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 987 c[1] - 317 712 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 571 c[1] - 317 680 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 635 c[1] - 317 680 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 699 c[1] - 317 680 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 283 c[1] - 317 648 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],

```


[illegible]

[illegible]

```

400 059 c[1] - 311 688 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 707 c[1] - 311 656 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 427 c[1] - 307 536 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
385 011 c[1] - 307 856 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 595 c[1] - 308 176 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 243 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 307 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 179 c[1] - 308 496 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 827 c[1] - 308 464 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 763 c[1] - 308 816 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 411 c[1] - 308 784 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 059 c[1] - 308 752 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 347 c[1] - 309 136 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
376 299 c[1] - 305 304 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 883 c[1] - 305 624 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
379 467 c[1] - 305 944 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 051 c[1] - 306 264 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 699 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 635 c[1] - 306 584 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
370 755 c[1] - 303 392 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
372 339 c[1] - 303 712 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
363 627 c[1] - 301 160 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 571 915 c[1] - 15 587 928 c[2] + 4 718 875 c[3] -
734 960 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 571 915 c[1] - 15 587 928 c[2] + 4 718 875 c[3] -
734 960 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
415 699 c[1] - 317 328 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 415 763 c[1] - 317 328 c[2] + 96 275 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 417 923 c[1] - 317 712 c[2] +
96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
417 987 c[1] - 317 712 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 417 571 c[1] - 317 680 c[2] + 96 291 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 417 635 c[1] - 317 680 c[2] +
96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
417 699 c[1] - 317 680 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 417 283 c[1] - 317 648 c[2] + 96 291 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 417 347 c[1] - 317 648 c[2] +
96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
419 155 c[1] - 318 000 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 419 219 c[1] - 318 000 c[2] + 96 307 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 418 803 c[1] - 317 968 c[2] +

```

$$\begin{aligned}
& 96\,307\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 418\,867\,c[1] - 317\,968\,c[2] + 96\,307\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 420\,387\,c[1] - 318\,288\,c[2] + 96\,323\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 420\,451\,c[1] - 318\,288\,c[2] + \\
& 96\,323\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 421\,619\,c[1] - 318\,576\,c[2] + 96\,339\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 406\,107\,c[1] - 314\,520\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,819\,c[1] - 314\,488\,c[2] + \\
& 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 405\,531\,c[1] - 314\,456\,c[2] + 96\,011\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,979\,c[1] - 314\,872\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,627\,c[1] - 314\,840\,c[2] + \\
& 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 407\,691\,c[1] - 314\,840\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,339\,c[1] - 314\,808\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,403\,c[1] - 314\,808\,c[2] + \\
& 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 407\,051\,c[1] - 314\,776\,c[2] + 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 409\,563\,c[1] - 315\,192\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 409\,211\,c[1] - 315\,160\,c[2] + \\
& 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 409\,275\,c[1] - 315\,160\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 408\,859\,c[1] - 315\,128\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,923\,c[1] - 315\,128\,c[2] + \\
& 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 408\,987\,c[1] - 315\,128\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 408\,635\,c[1] - 315\,096\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 411\,147\,c[1] - 315\,512\,c[2] + \\
& 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 410\,795\,c[1] - 315\,480\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 410\,859\,c[1] - 315\,480\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 410\,443\,c[1] - 315\,448\,c[2] + \\
& 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 410\,507\,c[1] - 315\,448\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 410\,155\,c[1] - 315\,416\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 412\,731\,c[1] - 315\,832\,c[2] + \\
& 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 412\,379\,c[1] - 315\,800\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 412\,443\,c[1] - 315\,800\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 412\,027\,c[1] - 315\,768\,c[2] + \\
& 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 412\,091\,c[1] - 315\,768\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 411\,675\,c[1] - 315\,736\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 411\,739\,c[1] - 315\,736\,c[2] + \\
& 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 413\,963\,c[1] - 316\,120\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 413\,611\,c[1] - 316\,088\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 413\,675\,c[1] - 316\,088\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 413\,259\,c[1] - 316\,056\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 414\,843\,c[1] - 316\,376\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 396\,099\,c[1] - 311\,680\,c[2] + \\
& 95\,747\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,683\,c[1] - 312\,000\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,395\,c[1] - 311\,968\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,107\,c[1] - 311\,936\,c[2] + \\
& 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,267\,c[1] - 312\,320\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,915\,c[1] - 312\,288\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 398\,979\,c[1] - 312\,288\,c[2] + \\
& 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 398\,691\,c[1] - 312\,256\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,851\,c[1] - 312\,640\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,499\,c[1] - 312\,608\,c[2] + \\
& 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 400\,563\,c[1] - 312\,608\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,211\,c[1] - 312\,576\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,275\,c[1] - 312\,576\,c[2] + \\
& 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 402\,435\,c[1] - 312\,960\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,083\,c[1] - 312\,928\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,147\,c[1] - 312\,928\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 401\,795\,c[1] - 312\,896\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,019\,c[1] - 313\,280\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 403\,667\,c[1] - 313\,248\,c[2] + \\
& 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 403\,731\,c[1] - 313\,248\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,315\,c[1] - 313\,216\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 403\,379\,c[1] - 313\,216\,c[2] + \\
& 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 405\,603\,c[1] - 313\,600\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,251\,c[1] - 313\,568\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,315\,c[1] - 313\,568\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 404\,899\,c[1] - 313\,536\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,187\,c[1] - 313\,920\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 406\,835\,c[1] - 313\,888\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 406\,483\,c[1] - 313\,856\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 406\,131\,c[1] - 313\,824\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,419\,c[1] - 314\,208\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 388\,971\,c[1] - 309\,448\,c[2] + 95\,515\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq
\end{aligned}$$

$$\begin{aligned}
& 0 \ \&\& 390\,555\,c[1] - 309\,768\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 390\,267\,c[1] - 309\,736\,c[2] + \\
& 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 392\,139\,c[1] - 310\,088\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 391\,851\,c[1] - 310\,056\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 391\,563\,c[1] - 310\,024\,c[2] + \\
& 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 393\,723\,c[1] - 310\,408\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 393\,371\,c[1] - 310\,376\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 393\,435\,c[1] - 310\,376\,c[2] + \\
& 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 393\,083\,c[1] - 310\,344\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 395\,307\,c[1] - 310\,728\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 394\,955\,c[1] - 310\,696\,c[2] + \\
& 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 395\,019\,c[1] - 310\,696\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 394\,667\,c[1] - 310\,664\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 396\,891\,c[1] - 311\,048\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 396\,539\,c[1] - 311\,016\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 396\,603\,c[1] - 311\,016\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 396\,187\,c[1] - 310\,984\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 398\,475\,c[1] - 311\,368\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 398\,123\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 397\,771\,c[1] - 311\,304\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 400\,059\,c[1] - 311\,688\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 399\,707\,c[1] - 311\,656\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 383\,427\,c[1] - 307\,536\,c[2] + \\
& 95\,299\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 385\,011\,c[1] - 307\,856\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 384\,723\,c[1] - 307\,824\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 386\,595\,c[1] - 308\,176\,c[2] + \\
& 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 386\,243\,c[1] - 308\,144\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 386\,307\,c[1] - 308\,144\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + \\
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& 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 387\,827\,c[1] - 308\,464\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 389\,763\,c[1] - 308\,816\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 389\,411\,c[1] - 308\,784\,c[2] + \\
& 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 389\,059\,c[1] - 308\,752\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 391\,347\,c[1] - 309\,136\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 376\,299\,c[1] - 305\,304\,c[2] + \\
& 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\&
\end{aligned}$$

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377 883 c[1] - 305 624 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] +
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0 && 380 699 c[1] - 306 232 c[2] + 95 115 c[3] -
14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
382 635 c[1] - 306 584 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 370 755 c[1] - 303 392 c[2] + 94 851 c[3] -
14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
372 339 c[1] - 303 712 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 363 627 c[1] - 301 160 c[2] + 94 619 c[3] - 14 944 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
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GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

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(-9 + x)12 (5 + x)32 (-100 508 + 52 249 x - 10 640 x2 + 1062 x3 - 52 x4 + x5)

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{381 555, -307 184, 95 283, -14 968, 1273, -56, 1},
{383 139, -307 504, 95 299, -14 968, 1273, -56, 1},
{382 851, -307 472, 95 299, -14 968, 1273, -56, 1},
{384 723, -307 824, 95 315, -14 968, 1273, -56, 1},
{384 435, -307 792, 95 315, -14 968, 1273, -56, 1},
{384 147, -307 760, 95 315, -14 968, 1273, -56, 1},
{386 307, -308 144, 95 331, -14 968, 1273, -56, 1},
{386 019, -308 112, 95 331, -14 968, 1273, -56, 1},
{385 731, -308 080, 95 331, -14 968, 1273, -56, 1},
{387 603, -308 432, 95 347, -14 968, 1273, -56, 1},
{389 187, -308 752, 95 363, -14 968, 1273, -56, 1},
{376 011, -305 272, 95 067, -14 960, 1273, -56, 1},
{375 723, -305 240, 95 067, -14 960, 1273, -56, 1},
{377 595, -305 592, 95 083, -14 960, 1273, -56, 1},
{377 307, -305 560, 95 083, -14 960, 1273, -56, 1},
{377 019, -305 528, 95 083, -14 960, 1273, -56, 1},
{378 891, -305 880, 95 099, -14 960, 1273, -56, 1},
{368 883, -303 040, 94 835, -14 952, 1273, -56, 1},
{370 179, -303 328, 94 851, -14 952, 1273, -56, 1},
{361 755, -300 808, 94 603, -14 944, 1273, -56, 1}};

```

```
A // MatrixForm
```

```

( 425 259 -320 104 96 539 -15 008 1273 -56 1 )
( 426 779 -320 424 96 555 -15 008 1273 -56 1 )
( 415 251 -317 264 96 275 -15 000 1273 -56 1 )
( 414 963 -317 232 96 275 -15 000 1273 -56 1 )
( 417 411 -317 648 96 291 -15 000 1273 -56 1 )
( 417 059 -317 616 96 291 -15 000 1273 -56 1 )
( 417 123 -317 616 96 291 -15 000 1273 -56 1 )
( 416 771 -317 584 96 291 -15 000 1273 -56 1 )
( 416 835 -317 584 96 291 -15 000 1273 -56 1 )
( 416 547 -317 552 96 291 -15 000 1273 -56 1 )
( 419 283 -318 000 96 307 -15 000 1273 -56 1 )
( 418 931 -317 968 96 307 -15 000 1273 -56 1 )
( 418 995 -317 968 96 307 -15 000 1273 -56 1 )
( 418 643 -317 936 96 307 -15 000 1273 -56 1 )
( 418 707 -317 936 96 307 -15 000 1273 -56 1 )
( 418 355 -317 904 96 307 -15 000 1273 -56 1 )

```

418 419	-317 904	96 307	-15 000	1273	-56	1
418 067	-317 872	96 307	-15 000	1273	-56	1
420 515	-318 288	96 323	-15 000	1273	-56	1
420 227	-318 256	96 323	-15 000	1273	-56	1
420 291	-318 256	96 323	-15 000	1273	-56	1
419 939	-318 224	96 323	-15 000	1273	-56	1
421 459	-318 544	96 339	-15 000	1273	-56	1
405 243	-314 424	96 011	-14 992	1273	-56	1
407 339	-314 808	96 027	-14 992	1273	-56	1
407 403	-314 808	96 027	-14 992	1273	-56	1
407 115	-314 776	96 027	-14 992	1273	-56	1
406 827	-314 744	96 027	-14 992	1273	-56	1
406 539	-314 712	96 027	-14 992	1273	-56	1
409 275	-315 160	96 043	-14 992	1273	-56	1
408 987	-315 128	96 043	-14 992	1273	-56	1
408 635	-315 096	96 043	-14 992	1273	-56	1
408 699	-315 096	96 043	-14 992	1273	-56	1
408 411	-315 064	96 043	-14 992	1273	-56	1
408 123	-315 032	96 043	-14 992	1273	-56	1
410 859	-315 480	96 059	-14 992	1273	-56	1
410 571	-315 448	96 059	-14 992	1273	-56	1
410 219	-315 416	96 059	-14 992	1273	-56	1
410 283	-315 416	96 059	-14 992	1273	-56	1
409 931	-315 384	96 059	-14 992	1273	-56	1
409 995	-315 384	96 059	-14 992	1273	-56	1
409 707	-315 352	96 059	-14 992	1273	-56	1
412 155	-315 768	96 075	-14 992	1273	-56	1
411 803	-315 736	96 075	-14 992	1273	-56	1
411 867	-315 736	96 075	-14 992	1273	-56	1
411 515	-315 704	96 075	-14 992	1273	-56	1
411 579	-315 704	96 075	-14 992	1273	-56	1
411 227	-315 672	96 075	-14 992	1273	-56	1
413 739	-316 088	96 091	-14 992	1273	-56	1
413 451	-316 056	96 091	-14 992	1273	-56	1
413 099	-316 024	96 091	-14 992	1273	-56	1
415 035	-316 376	96 107	-14 992	1273	-56	1
397 683	-312 000	95 763	-14 984	1273	-56	1
397 395	-311 968	95 763	-14 984	1273	-56	1
397 107	-311 936	95 763	-14 984	1273	-56	1
396 819	-311 904	95 763	-14 984	1273	-56	1
398 979	-312 288	95 779	-14 984	1273	-56	1
398 691	-312 256	95 779	-14 984	1273	-56	1
398 403	-312 224	95 779	-14 984	1273	-56	1
398 115	-312 192	95 779	-14 984	1273	-56	1
400 563	-312 608	95 795	-14 984	1273	-56	1
400 275	-312 576	95 795	-14 984	1273	-56	1
399 987	-312 544	95 795	-14 984	1273	-56	1
399 699	-312 512	95 795	-14 984	1273	-56	1
399 411	-312 480	95 795	-14 984	1273	-56	1
402 147	-312 928	95 811	-14 984	1273	-56	1
401 859	-312 896	95 811	-14 984	1273	-56	1
401 507	-312 864	95 811	-14 984	1273	-56	1
401 571	-312 864	95 811	-14 984	1273	-56	1
401 283	-312 832	95 811	-14 984	1273	-56	1
403 443	-313 216	95 827	-14 984	1273	-56	1

403 091	-313 184	95 827	-14 984	1273	-56	1
403 155	-313 184	95 827	-14 984	1273	-56	1
402 803	-313 152	95 827	-14 984	1273	-56	1
402 867	-313 152	95 827	-14 984	1273	-56	1
405 027	-313 536	95 843	-14 984	1273	-56	1
404 739	-313 504	95 843	-14 984	1273	-56	1
404 387	-313 472	95 843	-14 984	1273	-56	1
406 611	-313 856	95 859	-14 984	1273	-56	1
387 387	-309 128	95 499	-14 976	1273	-56	1
388 971	-309 448	95 515	-14 976	1273	-56	1
388 683	-309 416	95 515	-14 976	1273	-56	1
390 267	-309 736	95 531	-14 976	1273	-56	1
389 979	-309 704	95 531	-14 976	1273	-56	1
391 851	-310 056	95 547	-14 976	1273	-56	1
391 563	-310 024	95 547	-14 976	1273	-56	1
391 275	-309 992	95 547	-14 976	1273	-56	1
393 435	-310 376	95 563	-14 976	1273	-56	1
393 147	-310 344	95 563	-14 976	1273	-56	1
392 859	-310 312	95 563	-14 976	1273	-56	1
392 571	-310 280	95 563	-14 976	1273	-56	1
394 731	-310 664	95 579	-14 976	1273	-56	1
394 443	-310 632	95 579	-14 976	1273	-56	1
396 315	-310 984	95 595	-14 976	1273	-56	1
395 963	-310 952	95 595	-14 976	1273	-56	1
396 027	-310 952	95 595	-14 976	1273	-56	1
397 899	-311 304	95 611	-14 976	1273	-56	1
381 843	-307 216	95 283	-14 968	1273	-56	1
381 555	-307 184	95 283	-14 968	1273	-56	1
383 139	-307 504	95 299	-14 968	1273	-56	1
382 851	-307 472	95 299	-14 968	1273	-56	1
384 723	-307 824	95 315	-14 968	1273	-56	1
384 435	-307 792	95 315	-14 968	1273	-56	1
384 147	-307 760	95 315	-14 968	1273	-56	1
386 307	-308 144	95 331	-14 968	1273	-56	1
386 019	-308 112	95 331	-14 968	1273	-56	1
385 731	-308 080	95 331	-14 968	1273	-56	1
387 603	-308 432	95 347	-14 968	1273	-56	1
389 187	-308 752	95 363	-14 968	1273	-56	1
376 011	-305 272	95 067	-14 960	1273	-56	1
375 723	-305 240	95 067	-14 960	1273	-56	1
377 595	-305 592	95 083	-14 960	1273	-56	1
377 307	-305 560	95 083	-14 960	1273	-56	1
377 019	-305 528	95 083	-14 960	1273	-56	1
378 891	-305 880	95 099	-14 960	1273	-56	1
368 883	-303 040	94 835	-14 952	1273	-56	1
370 179	-303 328	94 851	-14 952	1273	-56	1
361 755	-300 808	94 603	-14 944	1273	-56	1

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 564 619, -15 586 520, 4 718 875, -734 960, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
{425 259 c[1] - 320 104 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 426 779 c[1] - 320 424 c[2] + 96 555 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
```

[illegible]

$413\,451\,c[1] - 316\,056\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $413\,099\,c[1] - 316\,024\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,035\,c[1] - 316\,376\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $397\,683\,c[1] - 312\,000\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $397\,395\,c[1] - 311\,968\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $397\,107\,c[1] - 311\,936\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,819\,c[1] - 311\,904\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,979\,c[1] - 312\,288\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,691\,c[1] - 312\,256\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,403\,c[1] - 312\,224\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,115\,c[1] - 312\,192\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $400\,563\,c[1] - 312\,608\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $400\,275\,c[1] - 312\,576\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $399\,987\,c[1] - 312\,544\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $399\,699\,c[1] - 312\,512\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $399\,411\,c[1] - 312\,480\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $402\,147\,c[1] - 312\,928\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $401\,859\,c[1] - 312\,896\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $401\,507\,c[1] - 312\,864\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $401\,571\,c[1] - 312\,864\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $401\,283\,c[1] - 312\,832\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,443\,c[1] - 313\,216\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,091\,c[1] - 313\,184\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,155\,c[1] - 313\,184\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $402\,803\,c[1] - 313\,152\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $402\,867\,c[1] - 313\,152\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,027\,c[1] - 313\,536\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,739\,c[1] - 313\,504\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,387\,c[1] - 313\,472\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,611\,c[1] - 313\,856\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $387\,387\,c[1] - 309\,128\,c[2] + 95\,499\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $388\,971\,c[1] - 309\,448\,c[2] + 95\,515\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $388\,683\,c[1] - 309\,416\,c[2] + 95\,515\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $390\,267\,c[1] - 309\,736\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $389\,979\,c[1] - 309\,704\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $391\,851\,c[1] - 310\,056\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $391\,563\,c[1] - 310\,024\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $391\,275\,c[1] - 309\,992\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $393\,435\,c[1] - 310\,376\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $393\,147\,c[1] - 310\,344\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $392\,859\,c[1] - 310\,312\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $392\,571\,c[1] - 310\,280\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,731\,c[1] - 310\,664\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,443\,c[1] - 310\,632\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,315\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $395\,963\,c[1] - 310\,952\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,027\,c[1] - 310\,952\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$


```

397 899 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 843 c[1] - 307 216 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 139 c[1] - 307 504 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 435 c[1] - 307 792 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 147 c[1] - 307 760 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 307 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 019 c[1] - 308 112 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
385 731 c[1] - 308 080 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 603 c[1] - 308 432 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 187 c[1] - 308 752 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
376 011 c[1] - 305 272 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
375 723 c[1] - 305 240 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 019 c[1] - 305 528 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
370 179 c[1] - 303 328 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
361 755 c[1] - 300 808 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 564 619 c[1] - 15 586 520 c[2] + 4 718 875 c[3] -
734 960 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 564 619 c[1] - 15 586 520 c[2] + 4 718 875 c[3] -
734 960 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
425 259 c[1] - 320 104 c[2] + 96 539 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 426 779 c[1] - 320 424 c[2] + 96 555 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 251 c[1] - 317 264 c[2] +
96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
414 963 c[1] - 317 232 c[2] + 96 275 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 417 411 c[1] - 317 648 c[2] + 96 291 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 417 059 c[1] - 317 616 c[2] +
96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
417 123 c[1] - 317 616 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 416 771 c[1] - 317 584 c[2] + 96 291 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 416 835 c[1] - 317 584 c[2] +
96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
416 547 c[1] - 317 552 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 419 283 c[1] - 318 000 c[2] + 96 307 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 418 931 c[1] - 317 968 c[2] +
96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
418 995 c[1] - 317 968 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥

```

[illegible]

$$\begin{aligned}
& 413\,739\,c[1] - 316\,088\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 413\,451\,c[1] - 316\,056\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 413\,099\,c[1] - 316\,024\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 415\,035\,c[1] - 316\,376\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 397\,683\,c[1] - 312\,000\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 397\,395\,c[1] - 311\,968\,c[2] + \\
& 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 397\,107\,c[1] - 311\,936\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 396\,819\,c[1] - 311\,904\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 398\,979\,c[1] - 312\,288\,c[2] + \\
& 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 398\,691\,c[1] - 312\,256\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 398\,403\,c[1] - 312\,224\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 398\,115\,c[1] - 312\,192\,c[2] + \\
& 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 400\,563\,c[1] - 312\,608\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 400\,275\,c[1] - 312\,576\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 399\,987\,c[1] - 312\,544\,c[2] + \\
& 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 399\,699\,c[1] - 312\,512\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 399\,411\,c[1] - 312\,480\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 402\,147\,c[1] - 312\,928\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 401\,859\,c[1] - 312\,896\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 401\,507\,c[1] - 312\,864\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 401\,571\,c[1] - 312\,864\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 401\,283\,c[1] - 312\,832\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 403\,443\,c[1] - 313\,216\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 403\,091\,c[1] - 313\,184\,c[2] + \\
& 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 403\,155\,c[1] - 313\,184\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 402\,803\,c[1] - 313\,152\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 402\,867\,c[1] - 313\,152\,c[2] + \\
& 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 405\,027\,c[1] - 313\,536\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 404\,739\,c[1] - 313\,504\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 404\,387\,c[1] - 313\,472\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 406\,611\,c[1] - 313\,856\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 387\,387\,c[1] - 309\,128\,c[2] + 95\,499\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 388\,971\,c[1] - 309\,448\,c[2] + \\
& 95\,515\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 388\,683\,c[1] - 309\,416\,c[2] + 95\,515\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 390\,267\,c[1] - 309\,736\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 389\,979\,c[1] - 309\,704\,c[2] +
\end{aligned}$$

```

95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
391 851 c[1] - 310 056 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 391 563 c[1] - 310 024 c[2] + 95 547 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 391 275 c[1] - 309 992 c[2] +
95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
393 435 c[1] - 310 376 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 393 147 c[1] - 310 344 c[2] + 95 563 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 392 859 c[1] - 310 312 c[2] +
95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
392 571 c[1] - 310 280 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 394 731 c[1] - 310 664 c[2] + 95 579 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 394 443 c[1] - 310 632 c[2] +
95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
396 315 c[1] - 310 984 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 395 963 c[1] - 310 952 c[2] + 95 595 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 396 027 c[1] - 310 952 c[2] +
95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
397 899 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 381 843 c[1] - 307 216 c[2] + 95 283 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 381 555 c[1] - 307 184 c[2] +
95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
383 139 c[1] - 307 504 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 384 723 c[1] - 307 824 c[2] +
95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
384 435 c[1] - 307 792 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 384 147 c[1] - 307 760 c[2] + 95 315 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 386 307 c[1] - 308 144 c[2] +
95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
386 019 c[1] - 308 112 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 385 731 c[1] - 308 080 c[2] + 95 331 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 387 603 c[1] - 308 432 c[2] +
95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
389 187 c[1] - 308 752 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 376 011 c[1] - 305 272 c[2] + 95 067 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 375 723 c[1] - 305 240 c[2] +
95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 377 019 c[1] - 305 528 c[2] +
95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 368 883 c[1] - 303 040 c[2] + 94 835 c[3] -
14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
370 179 c[1] - 303 328 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 361 755 c[1] - 300 808 c[2] + 94 603 c[3] - 14 944 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]

```

```
{c[1], c[2], c[3], c[4], c[5], c[6], c[7]}
```

```
GCD[]
```

```
Reverse[cert]
```

```
cert.g
```

```
cert.Transpose[A]
```

```
chi = listdim17[[26]]
```

```
 $(-9 + x)^{13} (5 + x)^{32} (11\,164 - 4565\,x + 675\,x^2 - 43\,x^3 + x^4)$ 
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-47 187, 30 317, -7358, 850, -47, 1}, {-47 395, 30 333, -7358, 850, -47, 1},
  {-47 363, 30 333, -7358, 850, -47, 1}, {-46 315, 30 141, -7350, 850, -47, 1},
  {-46 283, 30 141, -7350, 850, -47, 1}, {-46 251, 30 141, -7350, 850, -47, 1},
  {-46 491, 30 157, -7350, 850, -47, 1}, {-46 459, 30 157, -7350, 850, -47, 1},
  {-46 427, 30 157, -7350, 850, -47, 1}, {-46 635, 30 173, -7350, 850, -47, 1},
  {-46 603, 30 173, -7350, 850, -47, 1}, {-46 811, 30 189, -7350, 850, -47, 1},
  {-45 203, 29 949, -7342, 850, -47, 1}, {-45 171, 29 949, -7342, 850, -47, 1},
  {-45 379, 29 965, -7342, 850, -47, 1}, {-45 347, 29 965, -7342, 850, -47, 1},
  {-45 315, 29 965, -7342, 850, -47, 1}, {-45 555, 29 981, -7342, 850, -47, 1},
  {-45 523, 29 981, -7342, 850, -47, 1}, {-45 491, 29 981, -7342, 850, -47, 1},
  {-45 459, 29 981, -7342, 850, -47, 1}, {-45 699, 29 997, -7342, 850, -47, 1},
  {-45 667, 29 997, -7342, 850, -47, 1}, {-44 091, 29 757, -7334, 850, -47, 1},
  {-44 267, 29 773, -7334, 850, -47, 1}, {-44 235, 29 773, -7334, 850, -47, 1},
  {-44 443, 29 789, -7334, 850, -47, 1}, {-44 411, 29 789, -7334, 850, -47, 1},
  {-44 379, 29 789, -7334, 850, -47, 1}, {-44 587, 29 805, -7334, 850, -47, 1},
  {-44 555, 29 805, -7334, 850, -47, 1}, {-44 523, 29 805, -7334, 850, -47, 1},
  {-44 731, 29 821, -7334, 850, -47, 1}, {-44 699, 29 821, -7334, 850, -47, 1},
  {-44 907, 29 837, -7334, 850, -47, 1}, {-43 155, 29 581, -7326, 850, -47, 1},
  {-43 331, 29 597, -7326, 850, -47, 1}, {-43 299, 29 597, -7326, 850, -47, 1},
  {-43 475, 29 613, -7326, 850, -47, 1}, {-43 443, 29 613, -7326, 850, -47, 1},
  {-43 619, 29 629, -7326, 850, -47, 1}, {-43 587, 29 629, -7326, 850, -47, 1},
  {-43 795, 29 645, -7326, 850, -47, 1}, {-43 763, 29 645, -7326, 850, -47, 1},
  {-42 075, 29 389, -7318, 850, -47, 1}, {-42 219, 29 405, -7318, 850, -47, 1},
  {-42 363, 29 421, -7318, 850, -47, 1}, {-42 539, 29 437, -7318, 850, -47, 1},
  {-42 507, 29 437, -7318, 850, -47, 1}, {-42 683, 29 453, -7318, 850, -47, 1},
  {-42 651, 29 453, -7318, 850, -47, 1}, {-42 827, 29 469, -7318, 850, -47, 1},
  {-43 003, 29 485, -7318, 850, -47, 1}, {-41 427, 29 245, -7310, 850, -47, 1},
  {-41 571, 29 261, -7310, 850, -47, 1}, {-41 715, 29 277, -7310, 850, -47, 1},
  {-41 891, 29 293, -7310, 850, -47, 1}, {-41 859, 29 293, -7310, 850, -47, 1},
  {-40 635, 29 085, -7302, 850, -47, 1}, {-40 779, 29 101, -7302, 850, -47, 1},
  {-40 923, 29 117, -7302, 850, -47, 1}, {-39 987, 28 941, -7294, 850, -47, 1}}
```

```

A = {{-47 187, 30 317, -7358, 850, -47, 1}, {-47 395, 30 333, -7358, 850, -47, 1},
      {-47 363, 30 333, -7358, 850, -47, 1}, {-46 315, 30 141, -7350, 850, -47, 1},
      {-46 283, 30 141, -7350, 850, -47, 1}, {-46 251, 30 141, -7350, 850, -47, 1},
      {-46 491, 30 157, -7350, 850, -47, 1}, {-46 459, 30 157, -7350, 850, -47, 1},
      {-46 427, 30 157, -7350, 850, -47, 1}, {-46 635, 30 173, -7350, 850, -47, 1},
      {-46 603, 30 173, -7350, 850, -47, 1}, {-46 811, 30 189, -7350, 850, -47, 1},
      {-45 203, 29 949, -7342, 850, -47, 1}, {-45 171, 29 949, -7342, 850, -47, 1},
      {-45 379, 29 965, -7342, 850, -47, 1}, {-45 347, 29 965, -7342, 850, -47, 1},
      {-45 315, 29 965, -7342, 850, -47, 1}, {-45 555, 29 981, -7342, 850, -47, 1},
      {-45 523, 29 981, -7342, 850, -47, 1}, {-45 491, 29 981, -7342, 850, -47, 1},
      {-45 459, 29 981, -7342, 850, -47, 1}, {-45 699, 29 997, -7342, 850, -47, 1},
      {-45 667, 29 997, -7342, 850, -47, 1}, {-44 091, 29 757, -7334, 850, -47, 1},
      {-44 267, 29 773, -7334, 850, -47, 1}, {-44 235, 29 773, -7334, 850, -47, 1},
      {-44 443, 29 789, -7334, 850, -47, 1}, {-44 411, 29 789, -7334, 850, -47, 1},
      {-44 379, 29 789, -7334, 850, -47, 1}, {-44 587, 29 805, -7334, 850, -47, 1},
      {-44 555, 29 805, -7334, 850, -47, 1}, {-44 523, 29 805, -7334, 850, -47, 1},
      {-44 731, 29 821, -7334, 850, -47, 1}, {-44 699, 29 821, -7334, 850, -47, 1},
      {-44 907, 29 837, -7334, 850, -47, 1}, {-43 155, 29 581, -7326, 850, -47, 1},
      {-43 331, 29 597, -7326, 850, -47, 1}, {-43 299, 29 597, -7326, 850, -47, 1},
      {-43 475, 29 613, -7326, 850, -47, 1}, {-43 443, 29 613, -7326, 850, -47, 1},
      {-43 619, 29 629, -7326, 850, -47, 1}, {-43 587, 29 629, -7326, 850, -47, 1},
      {-43 795, 29 645, -7326, 850, -47, 1}, {-43 763, 29 645, -7326, 850, -47, 1},
      {-42 075, 29 389, -7318, 850, -47, 1}, {-42 219, 29 405, -7318, 850, -47, 1},
      {-42 363, 29 421, -7318, 850, -47, 1}, {-42 539, 29 437, -7318, 850, -47, 1},
      {-42 507, 29 437, -7318, 850, -47, 1}, {-42 683, 29 453, -7318, 850, -47, 1},
      {-42 651, 29 453, -7318, 850, -47, 1}, {-42 827, 29 469, -7318, 850, -47, 1},
      {-43 003, 29 485, -7318, 850, -47, 1}, {-41 427, 29 245, -7310, 850, -47, 1},
      {-41 571, 29 261, -7310, 850, -47, 1}, {-41 715, 29 277, -7310, 850, -47, 1},
      {-41 891, 29 293, -7310, 850, -47, 1}, {-41 859, 29 293, -7310, 850, -47, 1},
      {-40 635, 29 085, -7302, 850, -47, 1}, {-40 779, 29 101, -7302, 850, -47, 1},
      {-40 923, 29 117, -7302, 850, -47, 1}, {-39 987, 28 941, -7294, 850, -47, 1}};

```

```
A // MatrixForm
```

```

(
-47 187 30 317 -7358 850 -47 1
-47 395 30 333 -7358 850 -47 1
-47 363 30 333 -7358 850 -47 1
-46 315 30 141 -7350 850 -47 1
-46 283 30 141 -7350 850 -47 1
-46 251 30 141 -7350 850 -47 1
-46 491 30 157 -7350 850 -47 1
-46 459 30 157 -7350 850 -47 1
-46 427 30 157 -7350 850 -47 1
-46 635 30 173 -7350 850 -47 1
-46 603 30 173 -7350 850 -47 1
-46 811 30 189 -7350 850 -47 1
-45 203 29 949 -7342 850 -47 1
-45 171 29 949 -7342 850 -47 1
-45 379 29 965 -7342 850 -47 1
-45 347 29 965 -7342 850 -47 1
-45 315 29 965 -7342 850 -47 1

```

```

-45 555 29 981 -7342 850 -47 1
-45 523 29 981 -7342 850 -47 1
-45 491 29 981 -7342 850 -47 1
-45 459 29 981 -7342 850 -47 1
-45 699 29 997 -7342 850 -47 1
-45 667 29 997 -7342 850 -47 1
-44 091 29 757 -7334 850 -47 1
-44 267 29 773 -7334 850 -47 1
-44 235 29 773 -7334 850 -47 1
-44 443 29 789 -7334 850 -47 1
-44 411 29 789 -7334 850 -47 1
-44 379 29 789 -7334 850 -47 1
-44 587 29 805 -7334 850 -47 1
-44 555 29 805 -7334 850 -47 1
-44 523 29 805 -7334 850 -47 1
-44 731 29 821 -7334 850 -47 1
-44 699 29 821 -7334 850 -47 1
-44 907 29 837 -7334 850 -47 1
-43 155 29 581 -7326 850 -47 1
-43 331 29 597 -7326 850 -47 1
-43 299 29 597 -7326 850 -47 1
-43 475 29 613 -7326 850 -47 1
-43 443 29 613 -7326 850 -47 1
-43 619 29 629 -7326 850 -47 1
-43 587 29 629 -7326 850 -47 1
-43 795 29 645 -7326 850 -47 1
-43 763 29 645 -7326 850 -47 1
-42 075 29 389 -7318 850 -47 1
-42 219 29 405 -7318 850 -47 1
-42 363 29 421 -7318 850 -47 1
-42 539 29 437 -7318 850 -47 1
-42 507 29 437 -7318 850 -47 1
-42 683 29 453 -7318 850 -47 1
-42 651 29 453 -7318 850 -47 1
-42 827 29 469 -7318 850 -47 1
-43 003 29 485 -7318 850 -47 1
-41 427 29 245 -7310 850 -47 1
-41 571 29 261 -7310 850 -47 1
-41 715 29 277 -7310 850 -47 1
-41 891 29 293 -7310 850 -47 1
-41 859 29 293 -7310 850 -47 1
-40 635 29 085 -7302 850 -47 1
-40 779 29 101 -7302 850 -47 1
-40 923 29 117 -7302 850 -47 1
-39 987 28 941 -7294 850 -47 1

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-2 284 147, 1 477 885, -360 110, 41 650, -2303, 49}
```

```
Array[c, 6].Transpose[A]
```

```

{-47 187 c[1] + 30 317 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
 -47 395 c[1] + 30 333 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],
 -47 363 c[1] + 30 333 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6],

```


[illegible]

```

-42 651 c[1] + 29 453 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 827 c[1] + 29 469 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-43 003 c[1] + 29 485 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 427 c[1] + 29 245 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 571 c[1] + 29 261 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 715 c[1] + 29 277 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 891 c[1] + 29 293 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 859 c[1] + 29 293 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 635 c[1] + 29 085 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 779 c[1] + 29 101 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 923 c[1] + 29 117 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-39 987 c[1] + 28 941 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] }

```

Array[c, 6].g

```
-2 284 147 c[1] + 1 477 885 c[2] - 360 110 c[3] + 41 650 c[4] - 2303 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```

-2 284 147 c[1] + 1 477 885 c[2] - 360 110 c[3] + 41 650 c[4] - 2303 c[5] + 49 c[6] < 0 &&
-47 187 c[1] + 30 317 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-47 395 c[1] + 30 333 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-47 363 c[1] + 30 333 c[2] - 7358 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 315 c[1] + 30 141 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 283 c[1] + 30 141 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 251 c[1] + 30 141 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 491 c[1] + 30 157 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 459 c[1] + 30 157 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 427 c[1] + 30 157 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 635 c[1] + 30 173 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 603 c[1] + 30 173 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-46 811 c[1] + 30 189 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 203 c[1] + 29 949 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 171 c[1] + 29 949 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 379 c[1] + 29 965 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 347 c[1] + 29 965 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 315 c[1] + 29 965 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 555 c[1] + 29 981 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 523 c[1] + 29 981 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 491 c[1] + 29 981 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 459 c[1] + 29 981 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 699 c[1] + 29 997 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-45 667 c[1] + 29 997 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 091 c[1] + 29 757 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 267 c[1] + 29 773 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 235 c[1] + 29 773 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 443 c[1] + 29 789 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 411 c[1] + 29 789 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 379 c[1] + 29 789 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&

```

```

-44 587 c[1] + 29 805 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 555 c[1] + 29 805 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 523 c[1] + 29 805 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 731 c[1] + 29 821 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 699 c[1] + 29 821 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-44 907 c[1] + 29 837 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 155 c[1] + 29 581 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 331 c[1] + 29 597 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 299 c[1] + 29 597 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 475 c[1] + 29 613 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 443 c[1] + 29 613 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 619 c[1] + 29 629 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 587 c[1] + 29 629 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 795 c[1] + 29 645 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 763 c[1] + 29 645 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 075 c[1] + 29 389 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 219 c[1] + 29 405 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 363 c[1] + 29 421 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 539 c[1] + 29 437 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 507 c[1] + 29 437 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 683 c[1] + 29 453 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 651 c[1] + 29 453 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 827 c[1] + 29 469 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-43 003 c[1] + 29 485 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 427 c[1] + 29 245 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 571 c[1] + 29 261 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 715 c[1] + 29 277 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 891 c[1] + 29 293 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 859 c[1] + 29 293 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 635 c[1] + 29 085 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 779 c[1] + 29 101 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 923 c[1] + 29 117 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 987 c[1] + 28 941 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{86 794, 867 947, 8 939 852, 0, 0, 43 568 416 850}

GCD[86 794, 867 947, 8 939 852, 0, 0, 43 568 416 850]
1

Reverse[cert]
{43 568 416 850, 0, 0, 8 939 852, 867 947, 86 794}

cert.g
-2 080 693

```

cert.Transpose[A]

```
{6986555, 2820555, 5597963, 1431067, 4208475, 6985883, 42475, 2819883,
 5597291, 1431291, 4208699, 42699, 2818987, 5596395, 1430395, 4207803,
 6985211, 41803, 2819211, 5596619, 8374027, 1430619, 4208027, 4206907,
 2818315, 5595723, 1429723, 4207131, 6984539, 2818539, 5595947, 8373355,
 4207355, 6984763, 2818763, 4206235, 2817643, 5595051, 4206459, 6983867,
 5595275, 8372683, 4206683, 6984091, 2816747, 4205563, 5594379, 4205787,
 6983195, 5594603, 8372011, 6983419, 5594827, 5593707, 6982523,
 8371339, 6982747, 9760155, 6981851, 8370667, 9759483, 9758811}
```

chi = listdim17[[27]]

$$(-13 + x) (-9 + x)^{12} (-7 + x) (5 + x)^{32} (-1108 + 331x - 32x^2 + x^3)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{{426699, -320552, 96571, -15008, 1273, -56, 1},
 {428155, -320872, 96587, -15008, 1273, -56, 1},
 {418499, -318064, 96323, -15000, 1273, -56, 1},
 {418563, -318064, 96323, -15000, 1273, -56, 1},
 {418275, -318032, 96323, -15000, 1273, -56, 1},
 {420307, -318416, 96339, -15000, 1273, -56, 1},
 {420371, -318416, 96339, -15000, 1273, -56, 1},
 {420019, -318384, 96339, -15000, 1273, -56, 1},
 {420083, -318384, 96339, -15000, 1273, -56, 1},
 {420147, -318384, 96339, -15000, 1273, -56, 1},
 {421827, -318736, 96355, -15000, 1273, -56, 1},
 {421539, -318704, 96355, -15000, 1273, -56, 1},
 {421603, -318704, 96355, -15000, 1273, -56, 1},
 {423059, -319024, 96371, -15000, 1273, -56, 1},
 {410715, -315608, 96075, -14992, 1273, -56, 1},
 {410427, -315576, 96075, -14992, 1273, -56, 1},
 {410139, -315544, 96075, -14992, 1273, -56, 1},
 {412523, -315960, 96091, -14992, 1273, -56, 1},
 {412587, -315960, 96091, -14992, 1273, -56, 1},
 {412171, -315928, 96091, -14992, 1273, -56, 1},
 {412235, -315928, 96091, -14992, 1273, -56, 1},
 {412299, -315928, 96091, -14992, 1273, -56, 1},
 {411947, -315896, 96091, -14992, 1273, -56, 1},
 {412011, -315896, 96091, -14992, 1273, -56, 1},
 {411659, -315864, 96091, -14992, 1273, -56, 1},
 {411723, -315864, 96091, -14992, 1273, -56, 1},
 {414043, -316280, 96107, -14992, 1273, -56, 1},
```

```

{413 755, -316 248, 96 107, -14 992, 1273, -56, 1},
{413 819, -316 248, 96 107, -14 992, 1273, -56, 1},
{413 467, -316 216, 96 107, -14 992, 1273, -56, 1},
{413 531, -316 216, 96 107, -14 992, 1273, -56, 1},
{413 595, -316 216, 96 107, -14 992, 1273, -56, 1},
{413 179, -316 184, 96 107, -14 992, 1273, -56, 1},
{414 987, -316 536, 96 123, -14 992, 1273, -56, 1},
{415 051, -316 536, 96 123, -14 992, 1273, -56, 1},
{402 579, -313 120, 95 827, -14 984, 1273, -56, 1},
{402 291, -313 088, 95 827, -14 984, 1273, -56, 1},
{404 739, -313 504, 95 843, -14 984, 1273, -56, 1},
{404 387, -313 472, 95 843, -14 984, 1273, -56, 1},
{404 451, -313 472, 95 843, -14 984, 1273, -56, 1},
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{403 587, -313 376, 95 843, -14 984, 1273, -56, 1},
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{407 043, -314 048, 95 875, -14 984, 1273, -56, 1},
{406 627, -314 016, 95 875, -14 984, 1273, -56, 1},
{394 443, -310 632, 95 579, -14 976, 1273, -56, 1},
{396 315, -310 984, 95 595, -14 976, 1273, -56, 1},
{396 027, -310 952, 95 595, -14 976, 1273, -56, 1},
{395 739, -310 920, 95 595, -14 976, 1273, -56, 1},
{395 451, -310 888, 95 595, -14 976, 1273, -56, 1},
{397 611, -311 272, 95 611, -14 976, 1273, -56, 1},
{397 259, -311 240, 95 611, -14 976, 1273, -56, 1},
{397 323, -311 240, 95 611, -14 976, 1273, -56, 1},
{396 971, -311 208, 95 611, -14 976, 1273, -56, 1},
{397 035, -311 208, 95 611, -14 976, 1273, -56, 1},
{396 747, -311 176, 95 611, -14 976, 1273, -56, 1},
{399 195, -311 592, 95 627, -14 976, 1273, -56, 1},
{398 907, -311 560, 95 627, -14 976, 1273, -56, 1},
{398 555, -311 528, 95 627, -14 976, 1273, -56, 1},
{398 619, -311 528, 95 627, -14 976, 1273, -56, 1},
{400 491, -311 880, 95 643, -14 976, 1273, -56, 1},
{387 603, -308 432, 95 347, -14 968, 1273, -56, 1},

```

```
{388 899, -308 720, 95 363, -14 968, 1273, -56, 1},
{388 611, -308 688, 95 363, -14 968, 1273, -56, 1},
{390 483, -309 040, 95 379, -14 968, 1273, -56, 1},
{390 195, -309 008, 95 379, -14 968, 1273, -56, 1},
{392 067, -309 360, 95 395, -14 968, 1273, -56, 1},
{381 771, -306 488, 95 131, -14 960, 1273, -56, 1}}
```

```
A = {{426 699, -320 552, 96 571, -15 008, 1273, -56, 1},
      {428 155, -320 872, 96 587, -15 008, 1273, -56, 1},
      {418 499, -318 064, 96 323, -15 000, 1273, -56, 1},
      {418 563, -318 064, 96 323, -15 000, 1273, -56, 1},
      {418 275, -318 032, 96 323, -15 000, 1273, -56, 1},
      {420 307, -318 416, 96 339, -15 000, 1273, -56, 1},
      {420 371, -318 416, 96 339, -15 000, 1273, -56, 1},
      {420 019, -318 384, 96 339, -15 000, 1273, -56, 1},
      {420 083, -318 384, 96 339, -15 000, 1273, -56, 1},
      {420 147, -318 384, 96 339, -15 000, 1273, -56, 1},
      {421 827, -318 736, 96 355, -15 000, 1273, -56, 1},
      {421 539, -318 704, 96 355, -15 000, 1273, -56, 1},
      {421 603, -318 704, 96 355, -15 000, 1273, -56, 1},
      {423 059, -319 024, 96 371, -15 000, 1273, -56, 1},
      {410 715, -315 608, 96 075, -14 992, 1273, -56, 1},
      {410 427, -315 576, 96 075, -14 992, 1273, -56, 1},
      {410 139, -315 544, 96 075, -14 992, 1273, -56, 1},
      {412 523, -315 960, 96 091, -14 992, 1273, -56, 1},
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      {413 755, -316 248, 96 107, -14 992, 1273, -56, 1},
      {413 819, -316 248, 96 107, -14 992, 1273, -56, 1},
      {413 467, -316 216, 96 107, -14 992, 1273, -56, 1},
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      {413 595, -316 216, 96 107, -14 992, 1273, -56, 1},
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      {414 987, -316 536, 96 123, -14 992, 1273, -56, 1},
      {415 051, -316 536, 96 123, -14 992, 1273, -56, 1},
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      {402 291, -313 088, 95 827, -14 984, 1273, -56, 1},
      {404 739, -313 504, 95 843, -14 984, 1273, -56, 1},
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      {404 451, -313 472, 95 843, -14 984, 1273, -56, 1},
```

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{406 627, -314 016, 95 875, -14 984, 1273, -56, 1},
{394 443, -310 632, 95 579, -14 976, 1273, -56, 1},
{396 315, -310 984, 95 595, -14 976, 1273, -56, 1},
{396 027, -310 952, 95 595, -14 976, 1273, -56, 1},
{395 739, -310 920, 95 595, -14 976, 1273, -56, 1},
{395 451, -310 888, 95 595, -14 976, 1273, -56, 1},
{397 611, -311 272, 95 611, -14 976, 1273, -56, 1},
{397 259, -311 240, 95 611, -14 976, 1273, -56, 1},
{397 323, -311 240, 95 611, -14 976, 1273, -56, 1},
{396 971, -311 208, 95 611, -14 976, 1273, -56, 1},
{397 035, -311 208, 95 611, -14 976, 1273, -56, 1},
{396 747, -311 176, 95 611, -14 976, 1273, -56, 1},
{399 195, -311 592, 95 627, -14 976, 1273, -56, 1},
{398 907, -311 560, 95 627, -14 976, 1273, -56, 1},
{398 555, -311 528, 95 627, -14 976, 1273, -56, 1},
{398 619, -311 528, 95 627, -14 976, 1273, -56, 1},
{400 491, -311 880, 95 643, -14 976, 1273, -56, 1},
{387 603, -308 432, 95 347, -14 968, 1273, -56, 1},
{388 899, -308 720, 95 363, -14 968, 1273, -56, 1},
{388 611, -308 688, 95 363, -14 968, 1273, -56, 1},
{390 483, -309 040, 95 379, -14 968, 1273, -56, 1},
{390 195, -309 008, 95 379, -14 968, 1273, -56, 1},
{392 067, -309 360, 95 395, -14 968, 1273, -56, 1},
{381 771, -306 488, 95 131, -14 960, 1273, -56, 1}};

```

A // MatrixForm

```

( 426 699 -320 552 96 571 -15 008 1273 -56 1 )
( 428 155 -320 872 96 587 -15 008 1273 -56 1 )
( 418 499 -318 064 96 323 -15 000 1273 -56 1 )
( 418 563 -318 064 96 323 -15 000 1273 -56 1 )
( 418 275 -318 032 96 323 -15 000 1273 -56 1 )
( 420 307 -318 416 96 339 -15 000 1273 -56 1 )
( 420 371 -318 416 96 339 -15 000 1273 -56 1 )

```

420 019	-318 384	96 339	-15 000	1273	-56	1
420 083	-318 384	96 339	-15 000	1273	-56	1
420 147	-318 384	96 339	-15 000	1273	-56	1
421 827	-318 736	96 355	-15 000	1273	-56	1
421 539	-318 704	96 355	-15 000	1273	-56	1
421 603	-318 704	96 355	-15 000	1273	-56	1
423 059	-319 024	96 371	-15 000	1273	-56	1
410 715	-315 608	96 075	-14 992	1273	-56	1
410 427	-315 576	96 075	-14 992	1273	-56	1
410 139	-315 544	96 075	-14 992	1273	-56	1
412 523	-315 960	96 091	-14 992	1273	-56	1
412 587	-315 960	96 091	-14 992	1273	-56	1
412 171	-315 928	96 091	-14 992	1273	-56	1
412 235	-315 928	96 091	-14 992	1273	-56	1
412 299	-315 928	96 091	-14 992	1273	-56	1
411 947	-315 896	96 091	-14 992	1273	-56	1
412 011	-315 896	96 091	-14 992	1273	-56	1
411 659	-315 864	96 091	-14 992	1273	-56	1
411 723	-315 864	96 091	-14 992	1273	-56	1
414 043	-316 280	96 107	-14 992	1273	-56	1
413 755	-316 248	96 107	-14 992	1273	-56	1
413 819	-316 248	96 107	-14 992	1273	-56	1
413 467	-316 216	96 107	-14 992	1273	-56	1
413 531	-316 216	96 107	-14 992	1273	-56	1
413 595	-316 216	96 107	-14 992	1273	-56	1
413 179	-316 184	96 107	-14 992	1273	-56	1
414 987	-316 536	96 123	-14 992	1273	-56	1
415 051	-316 536	96 123	-14 992	1273	-56	1
402 579	-313 120	95 827	-14 984	1273	-56	1
402 291	-313 088	95 827	-14 984	1273	-56	1
404 739	-313 504	95 843	-14 984	1273	-56	1
404 387	-313 472	95 843	-14 984	1273	-56	1
404 451	-313 472	95 843	-14 984	1273	-56	1
404 099	-313 440	95 843	-14 984	1273	-56	1
404 163	-313 440	95 843	-14 984	1273	-56	1
403 811	-313 408	95 843	-14 984	1273	-56	1
403 875	-313 408	95 843	-14 984	1273	-56	1
403 587	-313 376	95 843	-14 984	1273	-56	1
406 035	-313 792	95 859	-14 984	1273	-56	1
405 683	-313 760	95 859	-14 984	1273	-56	1
405 747	-313 760	95 859	-14 984	1273	-56	1
405 331	-313 728	95 859	-14 984	1273	-56	1
405 395	-313 728	95 859	-14 984	1273	-56	1
405 459	-313 728	95 859	-14 984	1273	-56	1
405 107	-313 696	95 859	-14 984	1273	-56	1
405 171	-313 696	95 859	-14 984	1273	-56	1
407 267	-314 080	95 875	-14 984	1273	-56	1
406 979	-314 048	95 875	-14 984	1273	-56	1
407 043	-314 048	95 875	-14 984	1273	-56	1
406 627	-314 016	95 875	-14 984	1273	-56	1
394 443	-310 632	95 579	-14 976	1273	-56	1
396 315	-310 984	95 595	-14 976	1273	-56	1
396 027	-310 952	95 595	-14 976	1273	-56	1
395 739	-310 920	95 595	-14 976	1273	-56	1
395 451	-310 888	95 595	-14 976	1273	-56	1


```

395 431 -310 888 95 595 -14 976 1273 -56 1
397 611 -311 272 95 611 -14 976 1273 -56 1
397 259 -311 240 95 611 -14 976 1273 -56 1
397 323 -311 240 95 611 -14 976 1273 -56 1
396 971 -311 208 95 611 -14 976 1273 -56 1
397 035 -311 208 95 611 -14 976 1273 -56 1
396 747 -311 176 95 611 -14 976 1273 -56 1
399 195 -311 592 95 627 -14 976 1273 -56 1
398 907 -311 560 95 627 -14 976 1273 -56 1
398 555 -311 528 95 627 -14 976 1273 -56 1
398 619 -311 528 95 627 -14 976 1273 -56 1
400 491 -311 880 95 643 -14 976 1273 -56 1
387 603 -308 432 95 347 -14 968 1273 -56 1
388 899 -308 720 95 363 -14 968 1273 -56 1
388 611 -308 688 95 363 -14 968 1273 -56 1
390 483 -309 040 95 379 -14 968 1273 -56 1
390 195 -309 008 95 379 -14 968 1273 -56 1
392 067 -309 360 95 395 -14 968 1273 -56 1
381 771 -306 488 95 131 -14 960 1273 -56 1

```

```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 636 139, -15 608 024, 4 720 315, -734 960, 62 377, -2744, 49}

```

```

Array[c, 7].Transpose[A]

```

```

{426 699 c[1] - 320 552 c[2] + 96 571 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
428 155 c[1] - 320 872 c[2] + 96 587 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
418 499 c[1] - 318 064 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
418 563 c[1] - 318 064 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
418 275 c[1] - 318 032 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
420 307 c[1] - 318 416 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
420 371 c[1] - 318 416 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
420 019 c[1] - 318 384 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
420 083 c[1] - 318 384 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
420 147 c[1] - 318 384 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
421 827 c[1] - 318 736 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
421 539 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
421 603 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
423 059 c[1] - 319 024 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
410 715 c[1] - 315 608 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
410 427 c[1] - 315 576 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
410 139 c[1] - 315 544 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
412 523 c[1] - 315 960 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
412 587 c[1] - 315 960 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
412 171 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
412 235 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
412 299 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
411 947 c[1] - 315 896 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
412 011 c[1] - 315 896 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
411 659 c[1] - 315 864 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
411 723 c[1] - 315 864 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],

```

[illegible]

```

387 603 c[1] - 308 432 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 899 c[1] - 308 720 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 483 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 195 c[1] - 309 008 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 067 c[1] - 309 360 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 771 c[1] - 306 488 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 636 139 c[1] - 15 608 024 c[2] + 4 720 315 c[3] -
734 960 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 636 139 c[1] - 15 608 024 c[2] + 4 720 315 c[3] -
734 960 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
426 699 c[1] - 320 552 c[2] + 96 571 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 428 155 c[1] - 320 872 c[2] + 96 587 c[3] - 15 008 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 418 499 c[1] - 318 064 c[2] +
96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
418 563 c[1] - 318 064 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 418 275 c[1] - 318 032 c[2] + 96 323 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 420 307 c[1] - 318 416 c[2] +
96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
420 371 c[1] - 318 416 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 420 019 c[1] - 318 384 c[2] + 96 339 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 420 083 c[1] - 318 384 c[2] +
96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
420 147 c[1] - 318 384 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 421 827 c[1] - 318 736 c[2] + 96 355 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 421 539 c[1] - 318 704 c[2] +
96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
421 603 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 423 059 c[1] - 319 024 c[2] + 96 371 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 410 715 c[1] - 315 608 c[2] +
96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
410 427 c[1] - 315 576 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 410 139 c[1] - 315 544 c[2] + 96 075 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 523 c[1] - 315 960 c[2] +
96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
412 587 c[1] - 315 960 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 412 171 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 235 c[1] - 315 928 c[2] +
96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
412 299 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 947 c[1] - 315 896 c[2] + 96 091 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 011 c[1] - 315 896 c[2] +
96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&

```

$$\begin{aligned}
& 411\,659\,c[1] - 315\,864\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 411\,723\,c[1] - 315\,864\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 414\,043\,c[1] - 316\,280\,c[2] + \\
& 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 413\,755\,c[1] - 316\,248\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 413\,819\,c[1] - 316\,248\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 413\,467\,c[1] - 316\,216\,c[2] + \\
& 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 413\,531\,c[1] - 316\,216\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 413\,595\,c[1] - 316\,216\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 413\,179\,c[1] - 316\,184\,c[2] + \\
& 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 414\,987\,c[1] - 316\,536\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 415\,051\,c[1] - 316\,536\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,579\,c[1] - 313\,120\,c[2] + \\
& 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 402\,291\,c[1] - 313\,088\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,739\,c[1] - 313\,504\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 404\,387\,c[1] - 313\,472\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 404\,451\,c[1] - 313\,472\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,099\,c[1] - 313\,440\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 404\,163\,c[1] - 313\,440\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 403\,811\,c[1] - 313\,408\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,875\,c[1] - 313\,408\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 403\,587\,c[1] - 313\,376\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 406\,035\,c[1] - 313\,792\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,683\,c[1] - 313\,760\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,747\,c[1] - 313\,760\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 405\,331\,c[1] - 313\,728\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,395\,c[1] - 313\,728\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,459\,c[1] - 313\,728\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 405\,107\,c[1] - 313\,696\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,171\,c[1] - 313\,696\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,267\,c[1] - 314\,080\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 406\,979\,c[1] - 314\,048\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,043\,c[1] - 314\,048\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 406\,627\,c[1] - 314\,016\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 394\,443\,c[1] - 310\,632\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 396\,315\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 396\,027\,c[1] - 310\,952\,c[2] +
\end{aligned}$$

```

95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
395 739 c[1] - 310 920 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 395 451 c[1] - 310 888 c[2] + 95 595 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 397 611 c[1] - 311 272 c[2] +
95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
397 259 c[1] - 311 240 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 397 323 c[1] - 311 240 c[2] + 95 611 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 396 971 c[1] - 311 208 c[2] +
95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
397 035 c[1] - 311 208 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 396 747 c[1] - 311 176 c[2] + 95 611 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 399 195 c[1] - 311 592 c[2] +
95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
398 907 c[1] - 311 560 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 398 555 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 398 619 c[1] - 311 528 c[2] +
95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
400 491 c[1] - 311 880 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 387 603 c[1] - 308 432 c[2] + 95 347 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 388 899 c[1] - 308 720 c[2] +
95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 390 483 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 390 195 c[1] - 309 008 c[2] +
95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
392 067 c[1] - 309 360 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 381 771 c[1] - 306 488 c[2] + 95 131 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{59 325, 533 922, 5 042 602, 50 603 993, 0, 0, 418 335 562 857}

GCD[59 325, 533 922, 5 042 602, 50 603 993, 0, 0, 418 335 562 857]
1

Reverse[cert]
{418 335 562 857, 0, 0, 50 603 993, 5 042 602, 533 922, 59 325}

cert.g
-26 699 610

```

cert.Transpose[A]

```
{4 106 886, 310 678, 306 470, 4 103 270, 4 103 174, 307 158, 4 103 958, 307 062,
 4 103 862, 7 900 662, 307 750, 307 654, 4 104 454, 308 246, 4 099 750, 4 099 654,
 4 099 558, 4 100 438, 7 897 238, 303 542, 4 100 342, 7 897 142, 4 100 246, 7 897 046,
 4 100 150, 7 896 950, 4 101 030, 4 100 934, 7 897 734, 4 100 838, 7 897 638,
 11 694 438, 4 100 742, 4 101 430, 7 898 230, 4 096 134, 4 096 038, 7 893 718,
 4 096 822, 7 893 622, 4 096 726, 7 893 526, 4 096 630, 7 893 430, 7 893 334,
 11 691 014, 7 894 118, 11 690 918, 4 097 222, 7 894 022, 11 690 822, 7 893 926,
 11 690 726, 11 691 510, 11 691 414, 15 488 214, 7 894 518, 4 092 518, 7 890 006,
 7 889 910, 7 889 814, 7 889 718, 11 687 302, 7 890 406, 11 687 206, 7 890 310,
 11 687 110, 11 687 014, 15 484 694, 15 484 598, 11 687 702, 15 484 502, 19 281 990,
 7 886 198, 11 683 494, 11 683 398, 15 480 886, 15 480 790, 19 278 278, 15 477 078}
```

chi = listdim17[[28]]

$$(-9 + x)^{12} (5 + x)^{32} (113 - 22x + x^2) (-892 + 289x - 30x^2 + x^3)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {426 123, -320 488, 96 571, -15 008, 1273, -56, 1},
  {427 931, -320 840, 96 587, -15 008, 1273, -56, 1},
  {427 995, -320 840, 96 587, -15 008, 1273, -56, 1},
  {417 987, -318 000, 96 323, -15 000, 1273, -56, 1},
  {419 795, -318 352, 96 339, -15 000, 1273, -56, 1},
  {419 859, -318 352, 96 339, -15 000, 1273, -56, 1},
  {421 667, -318 704, 96 355, -15 000, 1273, -56, 1},
  {409 851, -315 512, 96 075, -14 992, 1273, -56, 1},
  {411 659, -315 864, 96 091, -14 992, 1273, -56, 1},
  {411 723, -315 864, 96 091, -14 992, 1273, -56, 1},
  {411 435, -315 832, 96 091, -14 992, 1273, -56, 1},
  {413 531, -316 216, 96 107, -14 992, 1273, -56, 1},
  {413 595, -316 216, 96 107, -14 992, 1273, -56, 1},
  {413 243, -316 184, 96 107, -14 992, 1273, -56, 1},
  {415 115, -316 536, 96 123, -14 992, 1273, -56, 1},
  {401 715, -313 024, 95 827, -14 984, 1273, -56, 1},
  {403 523, -313 376, 95 843, -14 984, 1273, -56, 1},
  {403 587, -313 376, 95 843, -14 984, 1273, -56, 1},
  {403 299, -313 344, 95 843, -14 984, 1273, -56, 1},
  {405 459, -313 728, 95 859, -14 984, 1273, -56, 1},
  {405 107, -313 696, 95 859, -14 984, 1273, -56, 1},
  {405 171, -313 696, 95 859, -14 984, 1273, -56, 1},
  {404 819, -313 664, 95 859, -14 984, 1273, -56, 1},
  {407 043, -314 048, 95 875, -14 984, 1273, -56, 1},
  {393 579, -310 536, 95 579, -14 976, 1273, -56, 1},
  {395 451, -310 888, 95 595, -14 976, 1273, -56, 1},
  {395 163, -310 856, 95 595, -14 976, 1273, -56, 1},
  {394 875, -310 824, 95 595, -14 976, 1273, -56, 1},
  {397 035, -311 208, 95 611, -14 976, 1273, -56, 1},
  {396 747, -311 176, 95 611, -14 976, 1273, -56, 1},
  {385 443, -308 048, 95 331, -14 968, 1273, -56, 1},
  {387 027, -308 368, 95 347, -14 968, 1273, -56, 1},
  {386 739, -308 336, 95 347, -14 968, 1273, -56, 1},
  {388 611, -308 688, 95 363, -14 968, 1273, -56, 1},
  {378 603, -305 848, 95 099, -14 960, 1273, -56, 1} }
```

```

A = {{426 123, -320 488, 96 571, -15 008, 1273, -56, 1},
      {427 931, -320 840, 96 587, -15 008, 1273, -56, 1},
      {427 995, -320 840, 96 587, -15 008, 1273, -56, 1},
      {417 987, -318 000, 96 323, -15 000, 1273, -56, 1},
      {419 795, -318 352, 96 339, -15 000, 1273, -56, 1},
      {419 859, -318 352, 96 339, -15 000, 1273, -56, 1},
      {421 667, -318 704, 96 355, -15 000, 1273, -56, 1},
      {409 851, -315 512, 96 075, -14 992, 1273, -56, 1},
      {411 659, -315 864, 96 091, -14 992, 1273, -56, 1},
      {411 723, -315 864, 96 091, -14 992, 1273, -56, 1},
      {411 435, -315 832, 96 091, -14 992, 1273, -56, 1},
      {413 531, -316 216, 96 107, -14 992, 1273, -56, 1},
      {413 595, -316 216, 96 107, -14 992, 1273, -56, 1},
      {413 243, -316 184, 96 107, -14 992, 1273, -56, 1},
      {415 115, -316 536, 96 123, -14 992, 1273, -56, 1},
      {401 715, -313 024, 95 827, -14 984, 1273, -56, 1},
      {403 523, -313 376, 95 843, -14 984, 1273, -56, 1},
      {403 587, -313 376, 95 843, -14 984, 1273, -56, 1},
      {403 299, -313 344, 95 843, -14 984, 1273, -56, 1},
      {405 459, -313 728, 95 859, -14 984, 1273, -56, 1},
      {405 107, -313 696, 95 859, -14 984, 1273, -56, 1},
      {405 171, -313 696, 95 859, -14 984, 1273, -56, 1},
      {404 819, -313 664, 95 859, -14 984, 1273, -56, 1},
      {407 043, -314 048, 95 875, -14 984, 1273, -56, 1},
      {393 579, -310 536, 95 579, -14 976, 1273, -56, 1},
      {395 451, -310 888, 95 595, -14 976, 1273, -56, 1},
      {395 163, -310 856, 95 595, -14 976, 1273, -56, 1},
      {394 875, -310 824, 95 595, -14 976, 1273, -56, 1},
      {397 035, -311 208, 95 611, -14 976, 1273, -56, 1},
      {396 747, -311 176, 95 611, -14 976, 1273, -56, 1},
      {385 443, -308 048, 95 331, -14 968, 1273, -56, 1},
      {387 027, -308 368, 95 347, -14 968, 1273, -56, 1},
      {386 739, -308 336, 95 347, -14 968, 1273, -56, 1},
      {388 611, -308 688, 95 363, -14 968, 1273, -56, 1},
      {378 603, -305 848, 95 099, -14 960, 1273, -56, 1}};

```


A // MatrixForm

```
( 426 123 -320 488 96 571 -15 008 1273 -56 1 )
( 427 931 -320 840 96 587 -15 008 1273 -56 1 )
( 427 995 -320 840 96 587 -15 008 1273 -56 1 )
( 417 987 -318 000 96 323 -15 000 1273 -56 1 )
( 419 795 -318 352 96 339 -15 000 1273 -56 1 )
( 419 859 -318 352 96 339 -15 000 1273 -56 1 )
( 421 667 -318 704 96 355 -15 000 1273 -56 1 )
( 409 851 -315 512 96 075 -14 992 1273 -56 1 )
( 411 659 -315 864 96 091 -14 992 1273 -56 1 )
( 411 723 -315 864 96 091 -14 992 1273 -56 1 )
( 411 435 -315 832 96 091 -14 992 1273 -56 1 )
( 413 531 -316 216 96 107 -14 992 1273 -56 1 )
( 413 595 -316 216 96 107 -14 992 1273 -56 1 )
( 413 243 -316 184 96 107 -14 992 1273 -56 1 )
( 415 115 -316 536 96 123 -14 992 1273 -56 1 )
( 401 715 -313 024 95 827 -14 984 1273 -56 1 )
( 403 523 -313 376 95 843 -14 984 1273 -56 1 )
( 403 587 -313 376 95 843 -14 984 1273 -56 1 )
( 403 299 -313 344 95 843 -14 984 1273 -56 1 )
( 405 459 -313 728 95 859 -14 984 1273 -56 1 )
( 405 107 -313 696 95 859 -14 984 1273 -56 1 )
( 405 171 -313 696 95 859 -14 984 1273 -56 1 )
( 404 819 -313 664 95 859 -14 984 1273 -56 1 )
( 407 043 -314 048 95 875 -14 984 1273 -56 1 )
( 393 579 -310 536 95 579 -14 976 1273 -56 1 )
( 395 451 -310 888 95 595 -14 976 1273 -56 1 )
( 395 163 -310 856 95 595 -14 976 1273 -56 1 )
( 394 875 -310 824 95 595 -14 976 1273 -56 1 )
( 397 035 -311 208 95 611 -14 976 1273 -56 1 )
( 396 747 -311 176 95 611 -14 976 1273 -56 1 )
( 385 443 -308 048 95 331 -14 968 1273 -56 1 )
( 387 027 -308 368 95 347 -14 968 1273 -56 1 )
( 386 739 -308 336 95 347 -14 968 1273 -56 1 )
( 388 611 -308 688 95 363 -14 968 1273 -56 1 )
( 378 603 -305 848 95 099 -14 960 1273 -56 1 )
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{20 628 843, -15 606 616, 4 720 315, -734 960, 62 377, -2744, 49}
```

Array[c, 7].Transpose[A]

```
{426 123 c[1] - 320 488 c[2] + 96 571 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 427 931 c[1] - 320 840 c[2] + 96 587 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 427 995 c[1] - 320 840 c[2] + 96 587 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 987 c[1] - 318 000 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 419 795 c[1] - 318 352 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 419 859 c[1] - 318 352 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 421 667 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 851 c[1] - 315 512 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 659 c[1] - 315 864 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 723 c[1] - 315 864 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 435 c[1] - 315 832 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 531 c[1] - 316 216 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 595 c[1] - 316 216 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 243 c[1] - 316 184 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 115 c[1] - 316 536 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 401 715 c[1] - 313 024 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 523 c[1] - 313 376 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 587 c[1] - 313 376 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 299 c[1] - 313 344 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 405 459 c[1] - 313 728 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 405 107 c[1] - 313 696 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 405 171 c[1] - 313 696 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 819 c[1] - 313 664 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 043 c[1] - 314 048 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 393 579 c[1] - 310 536 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 395 451 c[1] - 310 888 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 395 163 c[1] - 310 856 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 394 875 c[1] - 310 824 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 035 c[1] - 311 208 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 396 747 c[1] - 311 176 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 385 443 c[1] - 308 048 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 387 027 c[1] - 308 368 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 386 739 c[1] - 308 336 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 378 603 c[1] - 305 848 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7]}
```

Array[c, 7].g

```
20 628 843 c[1] - 15 606 616 c[2] + 4 720 315 c[3] -
 734 960 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]
```

cert =

```
Flatten[Array[c, 7] /. FindInstance[20 628 843 c[1] - 15 606 616 c[2] + 4 720 315 c[3] -
 734 960 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
 426 123 c[1] - 320 488 c[2] + 96 571 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
 0 && 427 931 c[1] - 320 840 c[2] + 96 587 c[3] - 15 008 c[4] +
 1273 c[5] - 56 c[6] + c[7] ≥ 0 && 427 995 c[1] - 320 840 c[2] +
```

```

96 587 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
417 987 c[1] - 318 000 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 419 795 c[1] - 318 352 c[2] + 96 339 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 419 859 c[1] - 318 352 c[2] +
96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
421 667 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 409 851 c[1] - 315 512 c[2] + 96 075 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 659 c[1] - 315 864 c[2] +
96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
411 723 c[1] - 315 864 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 435 c[1] - 315 832 c[2] + 96 091 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 413 531 c[1] - 316 216 c[2] +
96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
413 595 c[1] - 316 216 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 413 243 c[1] - 316 184 c[2] + 96 107 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 115 c[1] - 316 536 c[2] +
96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
401 715 c[1] - 313 024 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 403 523 c[1] - 313 376 c[2] + 95 843 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 403 587 c[1] - 313 376 c[2] +
95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
403 299 c[1] - 313 344 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 405 459 c[1] - 313 728 c[2] + 95 859 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 405 107 c[1] - 313 696 c[2] +
95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
405 171 c[1] - 313 696 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 404 819 c[1] - 313 664 c[2] + 95 859 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 407 043 c[1] - 314 048 c[2] +
95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
393 579 c[1] - 310 536 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 395 451 c[1] - 310 888 c[2] + 95 595 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 395 163 c[1] - 310 856 c[2] +
95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
394 875 c[1] - 310 824 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 397 035 c[1] - 311 208 c[2] + 95 611 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 396 747 c[1] - 311 176 c[2] +
95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
385 443 c[1] - 308 048 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 387 027 c[1] - 308 368 c[2] + 95 347 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 386 739 c[1] - 308 336 c[2] +
95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 378 603 c[1] - 305 848 c[2] + 95 099 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{11 738, 105 637, 757 444, 2 951 038, 0, 0, 0}

```

GCD[11 738, 105 637, 757 444, 2 951 038, 0, 0, 0]

1

Reverse[cert]

{0, 0, 0, 2 951 038, 757 444, 105 637, 11 738}

cert.g

-15 348 878

cert.Transpose[A]

{4 387 138, 544 322, 1 295 554, 7 473 818, 3 631 002, 4 382 234, 539 418,
10 560 498, 6 717 682, 7 468 914, 7 468 754, 3 626 098, 4 377 330, 3 625 938,
534 354, 13 647 178, 9 804 362, 10 555 594, 10 555 434, 7 464 010, 6 712 618,
7 463 850, 6 712 458, 4 372 266, 16 733 858, 13 642 274, 13 642 114, 13 641 954,
10 550 530, 10 550 370, 19 820 538, 16 728 794, 16 728 634, 13 637 050, 19 815 314}

chi = listdim17[[29]]

$(-11 + x)^2 (-9 + x)^{12} (5 + x)^{32} (-824 + 281 x - 30 x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-38817, 25589, -6450, 778, -45, 1}, {-37737, 25397, -6442, 778, -45, 1},
  {-37881, 25413, -6442, 778, -45, 1}, {-38025, 25429, -6442, 778, -45, 1},
  {-38169, 25445, -6442, 778, -45, 1}, {-38313, 25461, -6442, 778, -45, 1},
  {-36801, 25221, -6434, 778, -45, 1}, {-36945, 25237, -6434, 778, -45, 1},
  {-37089, 25253, -6434, 778, -45, 1}, {-37233, 25269, -6434, 778, -45, 1},
  {-37377, 25285, -6434, 778, -45, 1}, {-37521, 25301, -6434, 778, -45, 1},
  {-37697, 25317, -6434, 778, -45, 1}, {-35865, 25045, -6426, 778, -45, 1},
  {-36009, 25061, -6426, 778, -45, 1}, {-36153, 25077, -6426, 778, -45, 1},
  {-36297, 25093, -6426, 778, -45, 1}, {-36441, 25109, -6426, 778, -45, 1},
  {-36585, 25125, -6426, 778, -45, 1}, {-36729, 25141, -6426, 778, -45, 1},
  {-35073, 24885, -6418, 778, -45, 1}, {-35217, 24901, -6418, 778, -45, 1},
  {-35361, 24917, -6418, 778, -45, 1}, {-35505, 24933, -6418, 778, -45, 1},
  {-35649, 24949, -6418, 778, -45, 1}, {-35793, 24965, -6418, 778, -45, 1},
  {-35937, 24981, -6418, 778, -45, 1}, {-34425, 24741, -6410, 778, -45, 1},
  {-34569, 24757, -6410, 778, -45, 1}, {-34713, 24773, -6410, 778, -45, 1},
  {-34857, 24789, -6410, 778, -45, 1}, {-35001, 24805, -6410, 778, -45, 1},
  {-35145, 24821, -6410, 778, -45, 1}, {-33777, 24597, -6402, 778, -45, 1},
  {-33921, 24613, -6402, 778, -45, 1}, {-34065, 24629, -6402, 778, -45, 1},
  {-34209, 24645, -6402, 778, -45, 1}, {-34353, 24661, -6402, 778, -45, 1},
  {-33129, 24453, -6394, 778, -45, 1}, {-33273, 24469, -6394, 778, -45, 1},
  {-33417, 24485, -6394, 778, -45, 1}, {-33561, 24501, -6394, 778, -45, 1},
  {-32481, 24309, -6386, 778, -45, 1}, {-32625, 24325, -6386, 778, -45, 1},
  {-32769, 24341, -6386, 778, -45, 1}, {-31833, 24165, -6378, 778, -45, 1},
  {-31977, 24181, -6378, 778, -45, 1}, {-31185, 24021, -6370, 778, -45, 1} }
```

```

A = {{-38 817, 25 589, -6450, 778, -45, 1}, {-37 737, 25 397, -6442, 778, -45, 1},
      {-37 881, 25 413, -6442, 778, -45, 1}, {-38 025, 25 429, -6442, 778, -45, 1},
      {-38 169, 25 445, -6442, 778, -45, 1}, {-38 313, 25 461, -6442, 778, -45, 1},
      {-36 801, 25 221, -6434, 778, -45, 1}, {-36 945, 25 237, -6434, 778, -45, 1},
      {-37 089, 25 253, -6434, 778, -45, 1}, {-37 233, 25 269, -6434, 778, -45, 1},
      {-37 377, 25 285, -6434, 778, -45, 1}, {-37 521, 25 301, -6434, 778, -45, 1},
      {-37 697, 25 317, -6434, 778, -45, 1}, {-35 865, 25 045, -6426, 778, -45, 1},
      {-36 009, 25 061, -6426, 778, -45, 1}, {-36 153, 25 077, -6426, 778, -45, 1},
      {-36 297, 25 093, -6426, 778, -45, 1}, {-36 441, 25 109, -6426, 778, -45, 1},
      {-36 585, 25 125, -6426, 778, -45, 1}, {-36 729, 25 141, -6426, 778, -45, 1},
      {-35 073, 24 885, -6418, 778, -45, 1}, {-35 217, 24 901, -6418, 778, -45, 1},
      {-35 361, 24 917, -6418, 778, -45, 1}, {-35 505, 24 933, -6418, 778, -45, 1},
      {-35 649, 24 949, -6418, 778, -45, 1}, {-35 793, 24 965, -6418, 778, -45, 1},
      {-35 937, 24 981, -6418, 778, -45, 1}, {-34 425, 24 741, -6410, 778, -45, 1},
      {-34 569, 24 757, -6410, 778, -45, 1}, {-34 713, 24 773, -6410, 778, -45, 1},
      {-34 857, 24 789, -6410, 778, -45, 1}, {-35 001, 24 805, -6410, 778, -45, 1},
      {-35 145, 24 821, -6410, 778, -45, 1}, {-33 777, 24 597, -6402, 778, -45, 1},
      {-33 921, 24 613, -6402, 778, -45, 1}, {-34 065, 24 629, -6402, 778, -45, 1},
      {-34 209, 24 645, -6402, 778, -45, 1}, {-34 353, 24 661, -6402, 778, -45, 1},
      {-33 129, 24 453, -6394, 778, -45, 1}, {-33 273, 24 469, -6394, 778, -45, 1},
      {-33 417, 24 485, -6394, 778, -45, 1}, {-33 561, 24 501, -6394, 778, -45, 1},
      {-32 481, 24 309, -6386, 778, -45, 1}, {-32 625, 24 325, -6386, 778, -45, 1},
      {-32 769, 24 341, -6386, 778, -45, 1}, {-31 833, 24 165, -6378, 778, -45, 1},
      {-31 977, 24 181, -6378, 778, -45, 1}, {-31 185, 24 021, -6370, 778, -45, 1}};

```

A // MatrixForm

$$\begin{pmatrix} -38817 & 25589 & -6450 & 778 & -45 & 1 \\ -37737 & 25397 & -6442 & 778 & -45 & 1 \\ -37881 & 25413 & -6442 & 778 & -45 & 1 \\ -38025 & 25429 & -6442 & 778 & -45 & 1 \\ -38169 & 25445 & -6442 & 778 & -45 & 1 \\ -38313 & 25461 & -6442 & 778 & -45 & 1 \\ -36801 & 25221 & -6434 & 778 & -45 & 1 \\ -36945 & 25237 & -6434 & 778 & -45 & 1 \\ -37089 & 25253 & -6434 & 778 & -45 & 1 \\ -37233 & 25269 & -6434 & 778 & -45 & 1 \\ -37377 & 25285 & -6434 & 778 & -45 & 1 \\ -37521 & 25301 & -6434 & 778 & -45 & 1 \\ -37697 & 25317 & -6434 & 778 & -45 & 1 \\ -35865 & 25045 & -6426 & 778 & -45 & 1 \\ -36009 & 25061 & -6426 & 778 & -45 & 1 \\ -36153 & 25077 & -6426 & 778 & -45 & 1 \\ -36297 & 25093 & -6426 & 778 & -45 & 1 \\ -36441 & 25109 & -6426 & 778 & -45 & 1 \\ -36585 & 25125 & -6426 & 778 & -45 & 1 \\ -36729 & 25141 & -6426 & 778 & -45 & 1 \\ -35073 & 24885 & -6418 & 778 & -45 & 1 \\ -35217 & 24901 & -6418 & 778 & -45 & 1 \\ -35361 & 24917 & -6418 & 778 & -45 & 1 \\ -35505 & 24933 & -6418 & 778 & -45 & 1 \\ -35649 & 24949 & -6418 & 778 & -45 & 1 \\ -35793 & 24965 & -6418 & 778 & -45 & 1 \\ -35937 & 24981 & -6418 & 778 & -45 & 1 \\ -34425 & 24741 & -6410 & 778 & -45 & 1 \\ -34569 & 24757 & -6410 & 778 & -45 & 1 \\ -34713 & 24773 & -6410 & 778 & -45 & 1 \\ -34857 & 24789 & -6410 & 778 & -45 & 1 \\ -35001 & 24805 & -6410 & 778 & -45 & 1 \\ -35145 & 24821 & -6410 & 778 & -45 & 1 \\ -33777 & 24597 & -6402 & 778 & -45 & 1 \\ -33921 & 24613 & -6402 & 778 & -45 & 1 \\ -34065 & 24629 & -6402 & 778 & -45 & 1 \\ -34209 & 24645 & -6402 & 778 & -45 & 1 \\ -34353 & 24661 & -6402 & 778 & -45 & 1 \\ -33129 & 24453 & -6394 & 778 & -45 & 1 \\ -33273 & 24469 & -6394 & 778 & -45 & 1 \\ -33417 & 24485 & -6394 & 778 & -45 & 1 \\ -33561 & 24501 & -6394 & 778 & -45 & 1 \\ -32481 & 24309 & -6386 & 778 & -45 & 1 \\ -32625 & 24325 & -6386 & 778 & -45 & 1 \\ -32769 & 24341 & -6386 & 778 & -45 & 1 \\ -31833 & 24165 & -6378 & 778 & -45 & 1 \\ -31977 & 24181 & -6378 & 778 & -45 & 1 \\ -31185 & 24021 & -6370 & 778 & -45 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1853337, 1242757, -315434, 38122, -2205, 49}

Array[c, 6].Transpose[A]

```
{ -38 817 c[1] + 25 589 c[2] - 6450 c[3] + 778 c[4] - 45 c[5] + c[6],
  -37 737 c[1] + 25 397 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6],
  -37 881 c[1] + 25 413 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6],
  -38 025 c[1] + 25 429 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6],
  -38 169 c[1] + 25 445 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6],
  -38 313 c[1] + 25 461 c[2] - 6442 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 801 c[1] + 25 221 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 945 c[1] + 25 237 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
  -37 089 c[1] + 25 253 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
  -37 233 c[1] + 25 269 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
  -37 377 c[1] + 25 285 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
  -37 521 c[1] + 25 301 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
  -37 697 c[1] + 25 317 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 865 c[1] + 25 045 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 009 c[1] + 25 061 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 153 c[1] + 25 077 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 297 c[1] + 25 093 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 441 c[1] + 25 109 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 585 c[1] + 25 125 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 729 c[1] + 25 141 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 073 c[1] + 24 885 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 217 c[1] + 24 901 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 361 c[1] + 24 917 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 505 c[1] + 24 933 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 649 c[1] + 24 949 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 793 c[1] + 24 965 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 937 c[1] + 24 981 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 425 c[1] + 24 741 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 569 c[1] + 24 757 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 713 c[1] + 24 773 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 857 c[1] + 24 789 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 001 c[1] + 24 805 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 145 c[1] + 24 821 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 777 c[1] + 24 597 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 921 c[1] + 24 613 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 065 c[1] + 24 629 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 209 c[1] + 24 645 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 353 c[1] + 24 661 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 129 c[1] + 24 453 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 273 c[1] + 24 469 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 417 c[1] + 24 485 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 561 c[1] + 24 501 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 481 c[1] + 24 309 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 625 c[1] + 24 325 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 769 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6],
  -31 833 c[1] + 24 165 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6],
```


$-31\,977\,c[1] + 24\,181\,c[2] - 6378\,c[3] + 778\,c[4] - 45\,c[5] + c[6],$
 $-31\,185\,c[1] + 24\,021\,c[2] - 6370\,c[3] + 778\,c[4] - 45\,c[5] + c[6]\}$

Array[c, 6].g

$-1\,853\,337\,c[1] + 1\,242\,757\,c[2] - 315\,434\,c[3] + 38\,122\,c[4] - 2205\,c[5] + 49\,c[6]$

cert = Flatten[Array[c, 6] /. FindInstance[

$-1\,853\,337\,c[1] + 1\,242\,757\,c[2] - 315\,434\,c[3] + 38\,122\,c[4] - 2205\,c[5] + 49\,c[6] < 0 \&\&$
 $-38\,817\,c[1] + 25\,589\,c[2] - 6450\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-37\,737\,c[1] + 25\,397\,c[2] - 6442\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-37\,881\,c[1] + 25\,413\,c[2] - 6442\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-38\,025\,c[1] + 25\,429\,c[2] - 6442\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-38\,169\,c[1] + 25\,445\,c[2] - 6442\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-38\,313\,c[1] + 25\,461\,c[2] - 6442\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,801\,c[1] + 25\,221\,c[2] - 6434\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,945\,c[1] + 25\,237\,c[2] - 6434\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-37\,089\,c[1] + 25\,253\,c[2] - 6434\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-37\,233\,c[1] + 25\,269\,c[2] - 6434\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-37\,377\,c[1] + 25\,285\,c[2] - 6434\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-37\,521\,c[1] + 25\,301\,c[2] - 6434\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-37\,697\,c[1] + 25\,317\,c[2] - 6434\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,865\,c[1] + 25\,045\,c[2] - 6426\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,009\,c[1] + 25\,061\,c[2] - 6426\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,153\,c[1] + 25\,077\,c[2] - 6426\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,297\,c[1] + 25\,093\,c[2] - 6426\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,441\,c[1] + 25\,109\,c[2] - 6426\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,585\,c[1] + 25\,125\,c[2] - 6426\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,729\,c[1] + 25\,141\,c[2] - 6426\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,073\,c[1] + 24\,885\,c[2] - 6418\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,217\,c[1] + 24\,901\,c[2] - 6418\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,361\,c[1] + 24\,917\,c[2] - 6418\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,505\,c[1] + 24\,933\,c[2] - 6418\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,649\,c[1] + 24\,949\,c[2] - 6418\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,793\,c[1] + 24\,965\,c[2] - 6418\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,937\,c[1] + 24\,981\,c[2] - 6418\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,425\,c[1] + 24\,741\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,569\,c[1] + 24\,757\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,713\,c[1] + 24\,773\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,857\,c[1] + 24\,789\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,001\,c[1] + 24\,805\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,145\,c[1] + 24\,821\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,777\,c[1] + 24\,597\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,921\,c[1] + 24\,613\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,065\,c[1] + 24\,629\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,209\,c[1] + 24\,645\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,353\,c[1] + 24\,661\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,129\,c[1] + 24\,453\,c[2] - 6394\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$

```

- 33 273 c[1] + 24 469 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
- 33 417 c[1] + 24 485 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
- 33 561 c[1] + 24 501 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
- 32 481 c[1] + 24 309 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
- 32 625 c[1] + 24 325 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
- 32 769 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
- 31 833 c[1] + 24 165 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
- 31 977 c[1] + 24 181 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
- 31 185 c[1] + 24 021 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{11 798, 109 558, 1 036 582, 0, 0, 4 340 474 448}

GCD[11 798, 109 558, 1 036 582, 0, 0, 4 340 474 448]
2

cert = cert / 2
{5899, 54 779, 518 291, 0, 0, 2 170 237 224}

Reverse[cert]
{2 170 237 224, 0, 0, 518 291, 54 779, 5899}

cert.g
-828 578

cert.Transpose[A]
{18 622, 18 302, 45 310, 72 318, 99 326, 126 334, 44 990, 71 998, 99 006, 126 014, 153 022,
180 030, 18 270, 71 678, 98 686, 125 694, 152 702, 179 710, 206 718, 233 726, 125 374,
152 382, 179 390, 206 398, 233 406, 260 414, 287 422, 206 078, 233 086, 260 094,
287 102, 314 110, 341 118, 286 782, 313 790, 340 798, 367 806, 394 814, 367 486,
394 494, 421 502, 448 510, 448 190, 475 198, 502 206, 528 894, 555 902, 609 598}

chi = listdim17[[30]]
(-11 + x)2 (-9 + x)11 (-7 + x)2 (5 + x)32 (152 - 25 x + x2)

```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-50127, 31353, -7474, 854, -47, 1}, {-48807, 31145, -7466, 854, -47, 1},
  {-49015, 31161, -7466, 854, -47, 1}, {-48983, 31161, -7466, 854, -47, 1},
  {-49159, 31177, -7466, 854, -47, 1}, {-49335, 31193, -7466, 854, -47, 1},
  {-49511, 31209, -7466, 854, -47, 1}, {-47871, 30969, -7458, 854, -47, 1},
  {-48047, 30985, -7458, 854, -47, 1}, {-48015, 30985, -7458, 854, -47, 1},
  {-48191, 31001, -7458, 854, -47, 1}, {-48367, 31017, -7458, 854, -47, 1},
  {-48543, 31033, -7458, 854, -47, 1}, {-48719, 31049, -7458, 854, -47, 1},
  {-47079, 30809, -7450, 854, -47, 1}, {-47223, 30825, -7450, 854, -47, 1},
  {-47399, 30841, -7450, 854, -47, 1}, {-47575, 30857, -7450, 854, -47, 1},
  {-47751, 30873, -7450, 854, -47, 1}, {-46287, 30649, -7442, 854, -47, 1},
  {-46431, 30665, -7442, 854, -47, 1}, {-46607, 30681, -7442, 854, -47, 1},
  {-46783, 30697, -7442, 854, -47, 1}, {-45639, 30505, -7434, 854, -47, 1},
  {-45815, 30521, -7434, 854, -47, 1}, {-44847, 30345, -7426, 854, -47, 1},
  {-45023, 30361, -7426, 854, -47, 1}, {-44055, 30185, -7418, 854, -47, 1}}
```

```
A = { {-50127, 31353, -7474, 854, -47, 1}, {-48807, 31145, -7466, 854, -47, 1},
  {-49015, 31161, -7466, 854, -47, 1}, {-48983, 31161, -7466, 854, -47, 1},
  {-49159, 31177, -7466, 854, -47, 1}, {-49335, 31193, -7466, 854, -47, 1},
  {-49511, 31209, -7466, 854, -47, 1}, {-47871, 30969, -7458, 854, -47, 1},
  {-48047, 30985, -7458, 854, -47, 1}, {-48015, 30985, -7458, 854, -47, 1},
  {-48191, 31001, -7458, 854, -47, 1}, {-48367, 31017, -7458, 854, -47, 1},
  {-48543, 31033, -7458, 854, -47, 1}, {-48719, 31049, -7458, 854, -47, 1},
  {-47079, 30809, -7450, 854, -47, 1}, {-47223, 30825, -7450, 854, -47, 1},
  {-47399, 30841, -7450, 854, -47, 1}, {-47575, 30857, -7450, 854, -47, 1},
  {-47751, 30873, -7450, 854, -47, 1}, {-46287, 30649, -7442, 854, -47, 1},
  {-46431, 30665, -7442, 854, -47, 1}, {-46607, 30681, -7442, 854, -47, 1},
  {-46783, 30697, -7442, 854, -47, 1}, {-45639, 30505, -7434, 854, -47, 1},
  {-45815, 30521, -7434, 854, -47, 1}, {-44847, 30345, -7426, 854, -47, 1},
  {-45023, 30361, -7426, 854, -47, 1}, {-44055, 30185, -7418, 854, -47, 1}};
```

A // MatrixForm

$$\begin{pmatrix} -50127 & 31353 & -7474 & 854 & -47 & 1 \\ -48807 & 31145 & -7466 & 854 & -47 & 1 \\ -49015 & 31161 & -7466 & 854 & -47 & 1 \\ -48983 & 31161 & -7466 & 854 & -47 & 1 \\ -49159 & 31177 & -7466 & 854 & -47 & 1 \\ -49335 & 31193 & -7466 & 854 & -47 & 1 \\ -49511 & 31209 & -7466 & 854 & -47 & 1 \\ -47871 & 30969 & -7458 & 854 & -47 & 1 \\ -48047 & 30985 & -7458 & 854 & -47 & 1 \\ -48015 & 30985 & -7458 & 854 & -47 & 1 \\ -48191 & 31001 & -7458 & 854 & -47 & 1 \\ -48367 & 31017 & -7458 & 854 & -47 & 1 \\ -48543 & 31033 & -7458 & 854 & -47 & 1 \\ -48719 & 31049 & -7458 & 854 & -47 & 1 \\ -47079 & 30809 & -7450 & 854 & -47 & 1 \\ -47223 & 30825 & -7450 & 854 & -47 & 1 \\ -47399 & 30841 & -7450 & 854 & -47 & 1 \\ -47575 & 30857 & -7450 & 854 & -47 & 1 \\ -47751 & 30873 & -7450 & 854 & -47 & 1 \\ -46287 & 30649 & -7442 & 854 & -47 & 1 \\ -46431 & 30665 & -7442 & 854 & -47 & 1 \\ -46607 & 30681 & -7442 & 854 & -47 & 1 \\ -46783 & 30697 & -7442 & 854 & -47 & 1 \\ -45639 & 30505 & -7434 & 854 & -47 & 1 \\ -45815 & 30521 & -7434 & 854 & -47 & 1 \\ -44847 & 30345 & -7426 & 854 & -47 & 1 \\ -45023 & 30361 & -7426 & 854 & -47 & 1 \\ -44055 & 30185 & -7418 & 854 & -47 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-2394167, 1523833, -365610, 41846, -2303, 49}

Array[c, 6].Transpose[A]

```
{ -50 127 c[1] + 31 353 c[2] - 7474 c[3] + 854 c[4] - 47 c[5] + c[6],
  -48 807 c[1] + 31 145 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6],
  -49 015 c[1] + 31 161 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6],
  -48 983 c[1] + 31 161 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6],
  -49 159 c[1] + 31 177 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6],
  -49 335 c[1] + 31 193 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6],
  -49 511 c[1] + 31 209 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6],
  -47 871 c[1] + 30 969 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6],
  -48 047 c[1] + 30 985 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6],
  -48 015 c[1] + 30 985 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6],
  -48 191 c[1] + 31 001 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6],
  -48 367 c[1] + 31 017 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6],
  -48 543 c[1] + 31 033 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6],
  -48 719 c[1] + 31 049 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6],
  -47 079 c[1] + 30 809 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6],
  -47 223 c[1] + 30 825 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6],
  -47 399 c[1] + 30 841 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6],
  -47 575 c[1] + 30 857 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6],
  -47 751 c[1] + 30 873 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6],
  -46 287 c[1] + 30 649 c[2] - 7442 c[3] + 854 c[4] - 47 c[5] + c[6],
  -46 431 c[1] + 30 665 c[2] - 7442 c[3] + 854 c[4] - 47 c[5] + c[6],
  -46 607 c[1] + 30 681 c[2] - 7442 c[3] + 854 c[4] - 47 c[5] + c[6],
  -46 783 c[1] + 30 697 c[2] - 7442 c[3] + 854 c[4] - 47 c[5] + c[6],
  -45 639 c[1] + 30 505 c[2] - 7434 c[3] + 854 c[4] - 47 c[5] + c[6],
  -45 815 c[1] + 30 521 c[2] - 7434 c[3] + 854 c[4] - 47 c[5] + c[6],
  -44 847 c[1] + 30 345 c[2] - 7426 c[3] + 854 c[4] - 47 c[5] + c[6],
  -45 023 c[1] + 30 361 c[2] - 7426 c[3] + 854 c[4] - 47 c[5] + c[6],
  -44 055 c[1] + 30 185 c[2] - 7418 c[3] + 854 c[4] - 47 c[5] + c[6] }
```

Array[c, 6].g

```
-2 394 167 c[1] + 1 523 833 c[2] - 365 610 c[3] + 41 846 c[4] - 2303 c[5] + 49 c[6]
```

```

cert = Flatten[Array[c, 6] /. FindInstance[
  -2394167 c[1] + 1523833 c[2] - 365610 c[3] + 41846 c[4] - 2303 c[5] + 49 c[6] < 0 &&
  -50127 c[1] + 31353 c[2] - 7474 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -48807 c[1] + 31145 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -49015 c[1] + 31161 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -48983 c[1] + 31161 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -49159 c[1] + 31177 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -49335 c[1] + 31193 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -49511 c[1] + 31209 c[2] - 7466 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -47871 c[1] + 30969 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -48047 c[1] + 30985 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -48015 c[1] + 30985 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -48191 c[1] + 31001 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -48367 c[1] + 31017 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -48543 c[1] + 31033 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -48719 c[1] + 31049 c[2] - 7458 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -47079 c[1] + 30809 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -47223 c[1] + 30825 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -47399 c[1] + 30841 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -47575 c[1] + 30857 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -47751 c[1] + 30873 c[2] - 7450 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -46287 c[1] + 30649 c[2] - 7442 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -46431 c[1] + 30665 c[2] - 7442 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -46607 c[1] + 30681 c[2] - 7442 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -46783 c[1] + 30697 c[2] - 7442 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -45639 c[1] + 30505 c[2] - 7434 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -45815 c[1] + 30521 c[2] - 7434 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -44847 c[1] + 30345 c[2] - 7426 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -45023 c[1] + 30361 c[2] - 7426 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0 &&
  -44055 c[1] + 30185 c[2] - 7418 c[3] + 854 c[4] - 47 c[5] + c[6] ≥ 0,
  Array[c, 6], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[31]]
```

$$(-11 + x) (-9 + x)^{11} (5 + x)^{32} (-81896 + 44331x - 9414x^2 + 980x^3 - 50x^4 + x^5)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-3858019, 3315955, -1189947, 231643, -26465, 1777, -65, 1},
  {-3771691, 3281091, -1184763, 231307, -26457, 1777, -65, 1},
  {-3772395, 3281155, -1184763, 231307, -26457, 1777, -65, 1},
  {-3769227, 3280515, -1184731, 231307, -26457, 1777, -65, 1},
  {-3785947, 3285555, -1185227, 231323, -26457, 1777, -65, 1},
  {-3786651, 3285619, -1185227, 231323, -26457, 1777, -65, 1},
  {-3782779, 3284915, -1185195, 231323, -26457, 1777, -65, 1},
  {-3783483, 3284979, -1185195, 231323, -26457, 1777, -65, 1},
  {-3780315, 3284339, -1185163, 231323, -26457, 1777, -65, 1},
  {-3797035, 3289379, -1185659, 231339, -26457, 1777, -65, 1},
  {-3666051, 3240611, -1179051, 230955, -26449, 1777, -65, 1},
  {-3689235, 3246931, -1179611, 230971, -26449, 1777, -65, 1},
  {-3686067, 3246291, -1179579, 230971, -26449, 1777, -65, 1},
  {-3686643, 3246355, -1179579, 230971, -26449, 1777, -65, 1},
  {-3682899, 3245651, -1179547, 230971, -26449, 1777, -65, 1},
  {-3683475, 3245715, -1179547, 230971, -26449, 1777, -65, 1},
  {-3679731, 3245011, -1179515, 230971, -26449, 1777, -65, 1},
  {-3680307, 3245075, -1179515, 230971, -26449, 1777, -65, 1},
  {-3706659, 3252035, -1180107, 230987, -26449, 1777, -65, 1},
  {-3703491, 3251395, -1180075, 230987, -26449, 1777, -65, 1},
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  {-3696451, 3250051, -1180011, 230987, -26449, 1777, -65, 1},
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  {-3697731, 3250179, -1180011, 230987, -26449, 1777, -65, 1},
  {-3693987, 3249475, -1179979, 230987, -26449, 1777, -65, 1},
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  {-3710707, 3254515, -1180475, 231003, -26449, 1777, -65, 1},
  {-3711411, 3254579, -1180475, 231003, -26449, 1777, -65, 1},
  {-3708243, 3253939, -1180443, 231003, -26449, 1777, -65, 1},
  {-3705075, 3253299, -1180411, 231003, -26449, 1777, -65, 1},
  {-3728131, 3259619, -1180971, 231019, -26449, 1777, -65, 1},
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  {-3725667, 3259043, -1180939, 231019, -26449, 1777, -65, 1},
  {-3721795, 3258339, -1180907, 231019, -26449, 1777, -65, 1},
  {-3722499, 3258403, -1180907, 231019, -26449, 1777, -65, 1},
  {-3739219, 3263443, -1181403, 231035, -26449, 1777, -65, 1},
  {-3736051, 3262803, -1181371, 231035, -26449, 1777, -65, 1},
  {-3596571, 3210787, -1174363, 230635, -26441, 1777, -65, 1},
  {-3593403, 3210147, -1174331, 230635, -26441, 1777, -65, 1},
  {-3590811, 3209571, -1174299, 230635, -26441, 1777, -65, 1},
  {-3610827, 3215251, -1174827, 230651, -26441, 1777, -65, 1},
  {-3607659, 3214611, -1174795, 230651, -26441, 1777, -65, 1},
  {-3604491, 3213971, -1174763, 230651, -26441, 1777, -65, 1},
  {-3605067, 3214035, -1174763, 230651, -26441, 1777, -65, 1},
  {-3625083, 3219715, -1175291, 230667, -26441, 1777, -65, 1},
```

```

{-3 621 915, 3 219 075, -1 175 259, 230 667, -26 441, 1777, -65, 1},
{-3 622 491, 3 219 139, -1 175 259, 230 667, -26 441, 1777, -65, 1},
{-3 618 747, 3 218 435, -1 175 227, 230 667, -26 441, 1777, -65, 1},
{-3 642 507, 3 224 819, -1 175 787, 230 683, -26 441, 1777, -65, 1},
{-3 639 339, 3 224 179, -1 175 755, 230 683, -26 441, 1777, -65, 1},
{-3 636 171, 3 223 539, -1 175 723, 230 683, -26 441, 1777, -65, 1},
{-3 633 003, 3 222 899, -1 175 691, 230 683, -26 441, 1777, -65, 1},
{-3 629 835, 3 222 259, -1 175 659, 230 683, -26 441, 1777, -65, 1},
{-3 656 763, 3 229 283, -1 176 251, 230 699, -26 441, 1777, -65, 1},
{-3 653 595, 3 228 643, -1 176 219, 230 699, -26 441, 1777, -65, 1},
{-3 650 427, 3 228 003, -1 176 187, 230 699, -26 441, 1777, -65, 1},
{-3 646 555, 3 227 299, -1 176 155, 230 699, -26 441, 1777, -65, 1},
{-3 647 259, 3 227 363, -1 176 155, 230 699, -26 441, 1777, -65, 1},
{-3 644 091, 3 226 723, -1 176 123, 230 699, -26 441, 1777, -65, 1},
{-3 667 851, 3 233 107, -1 176 683, 230 715, -26 441, 1777, -65, 1},
{-3 663 979, 3 232 403, -1 176 651, 230 715, -26 441, 1777, -65, 1},
{-3 664 683, 3 232 467, -1 176 651, 230 715, -26 441, 1777, -65, 1},
{-3 660 811, 3 231 763, -1 176 619, 230 715, -26 441, 1777, -65, 1},
{-3 661 515, 3 231 827, -1 176 619, 230 715, -26 441, 1777, -65, 1},
{-3 657 643, 3 231 123, -1 176 587, 230 715, -26 441, 1777, -65, 1},
{-3 678 235, 3 236 867, -1 177 115, 230 731, -26 441, 1777, -65, 1},
{-3 532 419, 3 183 571, -1 170 043, 230 331, -26 433, 1777, -65, 1},
{-3 529 251, 3 182 931, -1 170 011, 230 331, -26 433, 1777, -65, 1},
{-3 546 675, 3 188 035, -1 170 507, 230 347, -26 433, 1777, -65, 1},
{-3 543 507, 3 187 395, -1 170 475, 230 347, -26 433, 1777, -65, 1},
{-3 544 083, 3 187 459, -1 170 475, 230 347, -26 433, 1777, -65, 1},
{-3 560 931, 3 192 499, -1 170 971, 230 363, -26 433, 1777, -65, 1},
{-3 557 763, 3 191 859, -1 170 939, 230 363, -26 433, 1777, -65, 1},
{-3 554 595, 3 191 219, -1 170 907, 230 363, -26 433, 1777, -65, 1},
{-3 578 355, 3 197 603, -1 171 467, 230 379, -26 433, 1777, -65, 1},
{-3 575 187, 3 196 963, -1 171 435, 230 379, -26 433, 1777, -65, 1},
{-3 572 019, 3 196 323, -1 171 403, 230 379, -26 433, 1777, -65, 1},
{-3 568 851, 3 195 683, -1 171 371, 230 379, -26 433, 1777, -65, 1},
{-3 565 683, 3 195 043, -1 171 339, 230 379, -26 433, 1777, -65, 1},
{-3 592 611, 3 202 067, -1 171 931, 230 395, -26 433, 1777, -65, 1},
{-3 589 443, 3 201 427, -1 171 899, 230 395, -26 433, 1777, -65, 1},
{-3 586 275, 3 200 787, -1 171 867, 230 395, -26 433, 1777, -65, 1},
{-3 582 403, 3 200 083, -1 171 835, 230 395, -26 433, 1777, -65, 1},
{-3 606 867, 3 206 531, -1 172 395, 230 411, -26 433, 1777, -65, 1},
{-3 603 699, 3 205 891, -1 172 363, 230 411, -26 433, 1777, -65, 1},
{-3 599 827, 3 205 187, -1 172 331, 230 411, -26 433, 1777, -65, 1},
{-3 468 267, 3 156 355, -1 165 723, 230 027, -26 425, 1777, -65, 1},
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-3 782 779 c[1] + 3 284 915 c[2] - 1 185 195 c[3] + 231 323 c[4] - 26 457 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 783 483 c[1] + 3 284 979 c[2] -
  1 185 195 c[3] + 231 323 c[4] - 26 457 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 780 315 c[1] + 3 284 339 c[2] - 1 185 163 c[3] + 231 323 c[4] - 26 457 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 797 035 c[1] + 3 289 379 c[2] -
  1 185 659 c[3] + 231 339 c[4] - 26 457 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 666 051 c[1] + 3 240 611 c[2] - 1 179 051 c[3] + 230 955 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 689 235 c[1] + 3 246 931 c[2] -
  1 179 611 c[3] + 230 971 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 686 067 c[1] + 3 246 291 c[2] - 1 179 579 c[3] + 230 971 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 686 643 c[1] + 3 246 355 c[2] -
  1 179 579 c[3] + 230 971 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 682 899 c[1] + 3 245 651 c[2] - 1 179 547 c[3] + 230 971 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 683 475 c[1] + 3 245 715 c[2] -
  1 179 547 c[3] + 230 971 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 679 731 c[1] + 3 245 011 c[2] - 1 179 515 c[3] + 230 971 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 680 307 c[1] + 3 245 075 c[2] -
  1 179 515 c[3] + 230 971 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 706 659 c[1] + 3 252 035 c[2] - 1 180 107 c[3] + 230 987 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 703 491 c[1] + 3 251 395 c[2] -
  1 180 075 c[3] + 230 987 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 700 323 c[1] + 3 250 755 c[2] - 1 180 043 c[3] + 230 987 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 700 899 c[1] + 3 250 819 c[2] -
  1 180 043 c[3] + 230 987 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 696 451 c[1] + 3 250 051 c[2] - 1 180 011 c[3] + 230 987 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 697 155 c[1] + 3 250 115 c[2] -
  1 180 011 c[3] + 230 987 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 697 731 c[1] + 3 250 179 c[2] - 1 180 011 c[3] + 230 987 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 693 987 c[1] + 3 249 475 c[2] -
  1 179 979 c[3] + 230 987 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 714 579 c[1] + 3 255 219 c[2] - 1 180 507 c[3] + 231 003 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 710 707 c[1] + 3 254 515 c[2] -
  1 180 475 c[3] + 231 003 c[4] - 26 449 c[5] + 1777 c[6] - 65 c[7] + c[8],
-3 711 411 c[1] + 3 254 579 c[2] - 1 180 475 c[3] + 231 003 c[4] - 26 449 c[5] +
  1777 c[6] - 65 c[7] + c[8], -3 708 243 c[1] + 3 253 939 c[2] - 1 180 443 c[3] +
```

$$\begin{aligned}
& 231\,003\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], -3\,705\,075\,c[1] + \\
& 3\,253\,299\,c[2] - 1\,180\,411\,c[3] + 231\,003\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,728\,131\,c[1] + 3\,259\,619\,c[2] - 1\,180\,971\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,724\,963\,c[1] + 3\,258\,979\,c[2] - \\
& 1\,180\,939\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,725\,667\,c[1] + 3\,259\,043\,c[2] - 1\,180\,939\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,721\,795\,c[1] + 3\,258\,339\,c[2] - \\
& 1\,180\,907\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,722\,499\,c[1] + 3\,258\,403\,c[2] - 1\,180\,907\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,739\,219\,c[1] + 3\,263\,443\,c[2] - \\
& 1\,181\,403\,c[3] + 231\,035\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,736\,051\,c[1] + 3\,262\,803\,c[2] - 1\,181\,371\,c[3] + 231\,035\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,596\,571\,c[1] + 3\,210\,787\,c[2] - \\
& 1\,174\,363\,c[3] + 230\,635\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,593\,403\,c[1] + 3\,210\,147\,c[2] - 1\,174\,331\,c[3] + 230\,635\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,590\,811\,c[1] + 3\,209\,571\,c[2] - \\
& 1\,174\,299\,c[3] + 230\,635\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,610\,827\,c[1] + 3\,215\,251\,c[2] - 1\,174\,827\,c[3] + 230\,651\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,607\,659\,c[1] + 3\,214\,611\,c[2] - \\
& 1\,174\,795\,c[3] + 230\,651\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,604\,491\,c[1] + 3\,213\,971\,c[2] - 1\,174\,763\,c[3] + 230\,651\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,605\,067\,c[1] + 3\,214\,035\,c[2] - \\
& 1\,174\,763\,c[3] + 230\,651\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,625\,083\,c[1] + 3\,219\,715\,c[2] - 1\,175\,291\,c[3] + 230\,667\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,621\,915\,c[1] + 3\,219\,075\,c[2] - \\
& 1\,175\,259\,c[3] + 230\,667\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,622\,491\,c[1] + 3\,219\,139\,c[2] - 1\,175\,259\,c[3] + 230\,667\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,618\,747\,c[1] + 3\,218\,435\,c[2] - \\
& 1\,175\,227\,c[3] + 230\,667\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,642\,507\,c[1] + 3\,224\,819\,c[2] - 1\,175\,787\,c[3] + 230\,683\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,639\,339\,c[1] + 3\,224\,179\,c[2] - \\
& 1\,175\,755\,c[3] + 230\,683\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,636\,171\,c[1] + 3\,223\,539\,c[2] - 1\,175\,723\,c[3] + 230\,683\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,633\,003\,c[1] + 3\,222\,899\,c[2] - \\
& 1\,175\,691\,c[3] + 230\,683\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,629\,835\,c[1] + 3\,222\,259\,c[2] - 1\,175\,659\,c[3] + 230\,683\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,656\,763\,c[1] + 3\,229\,283\,c[2] - \\
& 1\,176\,251\,c[3] + 230\,699\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,653\,595\,c[1] + 3\,228\,643\,c[2] - 1\,176\,219\,c[3] + 230\,699\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,650\,427\,c[1] + 3\,228\,003\,c[2] - \\
& 1\,176\,187\,c[3] + 230\,699\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,646\,555\,c[1] + 3\,227\,299\,c[2] - 1\,176\,155\,c[3] + 230\,699\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,647\,259\,c[1] + 3\,227\,363\,c[2] - \\
& 1\,176\,155\,c[3] + 230\,699\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,644\,091\,c[1] + 3\,226\,723\,c[2] - 1\,176\,123\,c[3] + 230\,699\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,667\,851\,c[1] + 3\,233\,107\,c[2] - \\
& 1\,176\,683\,c[3] + 230\,715\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8],
\end{aligned}$$

$$\begin{aligned}
& -3\,663\,979\,c[1] + 3\,232\,403\,c[2] - 1\,176\,651\,c[3] + 230\,715\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,664\,683\,c[1] + 3\,232\,467\,c[2] - \\
& 1\,176\,651\,c[3] + 230\,715\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,660\,811\,c[1] + 3\,231\,763\,c[2] - 1\,176\,619\,c[3] + 230\,715\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,661\,515\,c[1] + 3\,231\,827\,c[2] - \\
& 1\,176\,619\,c[3] + 230\,715\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,657\,643\,c[1] + 3\,231\,123\,c[2] - 1\,176\,587\,c[3] + 230\,715\,c[4] - 26\,441\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,678\,235\,c[1] + 3\,236\,867\,c[2] - \\
& 1\,177\,115\,c[3] + 230\,731\,c[4] - 26\,441\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,532\,419\,c[1] + 3\,183\,571\,c[2] - 1\,170\,043\,c[3] + 230\,331\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,529\,251\,c[1] + 3\,182\,931\,c[2] - \\
& 1\,170\,011\,c[3] + 230\,331\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,546\,675\,c[1] + 3\,188\,035\,c[2] - 1\,170\,507\,c[3] + 230\,347\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,543\,507\,c[1] + 3\,187\,395\,c[2] - \\
& 1\,170\,475\,c[3] + 230\,347\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,544\,083\,c[1] + 3\,187\,459\,c[2] - 1\,170\,475\,c[3] + 230\,347\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,560\,931\,c[1] + 3\,192\,499\,c[2] - \\
& 1\,170\,971\,c[3] + 230\,363\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,557\,763\,c[1] + 3\,191\,859\,c[2] - 1\,170\,939\,c[3] + 230\,363\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,554\,595\,c[1] + 3\,191\,219\,c[2] - \\
& 1\,170\,907\,c[3] + 230\,363\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,578\,355\,c[1] + 3\,197\,603\,c[2] - 1\,171\,467\,c[3] + 230\,379\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,575\,187\,c[1] + 3\,196\,963\,c[2] - \\
& 1\,171\,435\,c[3] + 230\,379\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,572\,019\,c[1] + 3\,196\,323\,c[2] - 1\,171\,403\,c[3] + 230\,379\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,568\,851\,c[1] + 3\,195\,683\,c[2] - \\
& 1\,171\,371\,c[3] + 230\,379\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,565\,683\,c[1] + 3\,195\,043\,c[2] - 1\,171\,339\,c[3] + 230\,379\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,592\,611\,c[1] + 3\,202\,067\,c[2] - \\
& 1\,171\,931\,c[3] + 230\,395\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,589\,443\,c[1] + 3\,201\,427\,c[2] - 1\,171\,899\,c[3] + 230\,395\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,586\,275\,c[1] + 3\,200\,787\,c[2] - \\
& 1\,171\,867\,c[3] + 230\,395\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,582\,403\,c[1] + 3\,200\,083\,c[2] - 1\,171\,835\,c[3] + 230\,395\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,606\,867\,c[1] + 3\,206\,531\,c[2] - \\
& 1\,172\,395\,c[3] + 230\,411\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,603\,699\,c[1] + 3\,205\,891\,c[2] - 1\,172\,363\,c[3] + 230\,411\,c[4] - 26\,433\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,599\,827\,c[1] + 3\,205\,187\,c[2] - \\
& 1\,172\,331\,c[3] + 230\,411\,c[4] - 26\,433\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,468\,267\,c[1] + 3\,156\,355\,c[2] - 1\,165\,723\,c[3] + 230\,027\,c[4] - 26\,425\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,482\,523\,c[1] + 3\,160\,819\,c[2] - \\
& 1\,166\,187\,c[3] + 230\,043\,c[4] - 26\,425\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,479\,355\,c[1] + 3\,160\,179\,c[2] - 1\,166\,155\,c[3] + 230\,043\,c[4] - 26\,425\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,499\,947\,c[1] + 3\,165\,923\,c[2] - \\
& 1\,166\,683\,c[3] + 230\,059\,c[4] - 26\,425\,c[5] + 1777\,c[6] - 65\,c[7] + c[8], \\
& -3\,496\,779\,c[1] + 3\,165\,283\,c[2] - 1\,166\,651\,c[3] + 230\,059\,c[4] - 26\,425\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8], -3\,493\,611\,c[1] + 3\,164\,643\,c[2] -
\end{aligned}$$


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1 166 619 c[3] + 230 059 c[4] - 26 425 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 490 443 c[1] + 3 164 003 c[2] - 1 166 587 c[3] + 230 059 c[4] - 26 425 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 514 203 c[1] + 3 170 387 c[2] -
1 167 147 c[3] + 230 075 c[4] - 26 425 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 511 035 c[1] + 3 169 747 c[2] - 1 167 115 c[3] + 230 075 c[4] - 26 425 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 507 867 c[1] + 3 169 107 c[2] -
1 167 083 c[3] + 230 075 c[4] - 26 425 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 528 459 c[1] + 3 174 851 c[2] - 1 167 611 c[3] + 230 091 c[4] - 26 425 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 525 291 c[1] + 3 174 211 c[2] -
1 167 579 c[3] + 230 091 c[4] - 26 425 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 521 419 c[1] + 3 173 507 c[2] - 1 167 547 c[3] + 230 091 c[4] - 26 425 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 545 883 c[1] + 3 179 955 c[2] -
1 168 107 c[3] + 230 107 c[4] - 26 425 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 542 715 c[1] + 3 179 315 c[2] - 1 168 075 c[3] + 230 107 c[4] - 26 425 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 404 115 c[1] + 3 129 139 c[2] -
1 161 403 c[3] + 229 723 c[4] - 26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 418 371 c[1] + 3 133 603 c[2] - 1 161 867 c[3] + 229 739 c[4] - 26 417 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 415 203 c[1] + 3 132 963 c[2] -
1 161 835 c[3] + 229 739 c[4] - 26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 435 795 c[1] + 3 138 707 c[2] - 1 162 363 c[3] + 229 755 c[4] - 26 417 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 432 627 c[1] + 3 138 067 c[2] -
1 162 331 c[3] + 229 755 c[4] - 26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 429 459 c[1] + 3 137 427 c[2] - 1 162 299 c[3] + 229 755 c[4] - 26 417 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 450 051 c[1] + 3 143 171 c[2] -
1 162 827 c[3] + 229 771 c[4] - 26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 446 883 c[1] + 3 142 531 c[2] - 1 162 795 c[3] + 229 771 c[4] - 26 417 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 354 219 c[1] + 3 106 387 c[2] -
1 157 547 c[3] + 229 435 c[4] - 26 409 c[5] + 1777 c[6] - 65 c[7] + c[8] ,
-3 371 643 c[1] + 3 111 491 c[2] - 1 158 043 c[3] + 229 451 c[4] - 26 409 c[5] +
1777 c[6] - 65 c[7] + c[8] , -3 293 235 c[1] + 3 079 811 c[2] -
1 153 259 c[3] + 229 131 c[4] - 26 401 c[5] + 1777 c[6] - 65 c[7] + c[8] }

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Array[c, 8].g

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-184 270 283 c[1] + 160 407 427 c[2] - 57 973 723 c[3] +
11 326 955 c[4] - 1 296 169 c[5] + 87 073 c[6] - 3185 c[7] + 49 c[8]

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cert = Flatten[

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Array[c, 8] /. FindInstance[-184 270 283 c[1] + 160 407 427 c[2] - 57 973 723 c[3] +
11 326 955 c[4] - 1 296 169 c[5] + 87 073 c[6] - 3185 c[7] + 49 c[8] < 0 &&
-3 858 019 c[1] + 3 315 955 c[2] - 1 189 947 c[3] + 231 643 c[4] - 26 465 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 771 691 c[1] + 3 281 091 c[2] -
1 184 763 c[3] + 231 307 c[4] - 26 457 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 772 395 c[1] + 3 281 155 c[2] - 1 184 763 c[3] + 231 307 c[4] - 26 457 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 769 227 c[1] + 3 280 515 c[2] -
1 184 731 c[3] + 231 307 c[4] - 26 457 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
-3 785 947 c[1] + 3 285 555 c[2] - 1 185 227 c[3] + 231 323 c[4] - 26 457 c[5] +
1777 c[6] - 65 c[7] + c[8] ≥ 0 && -3 786 651 c[1] + 3 285 619 c[2] -

```

$$\begin{aligned}
& 1\,185\,227\,c[3] + 231\,323\,c[4] - 26\,457\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,782\,779\,c[1] + 3\,284\,915\,c[2] - 1\,185\,195\,c[3] + 231\,323\,c[4] - 26\,457\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,783\,483\,c[1] + 3\,284\,979\,c[2] - \\
& 1\,185\,195\,c[3] + 231\,323\,c[4] - 26\,457\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,780\,315\,c[1] + 3\,284\,339\,c[2] - 1\,185\,163\,c[3] + 231\,323\,c[4] - 26\,457\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,797\,035\,c[1] + 3\,289\,379\,c[2] - \\
& 1\,185\,659\,c[3] + 231\,339\,c[4] - 26\,457\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,666\,051\,c[1] + 3\,240\,611\,c[2] - 1\,179\,051\,c[3] + 230\,955\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,689\,235\,c[1] + 3\,246\,931\,c[2] - \\
& 1\,179\,611\,c[3] + 230\,971\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,686\,067\,c[1] + 3\,246\,291\,c[2] - 1\,179\,579\,c[3] + 230\,971\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,686\,643\,c[1] + 3\,246\,355\,c[2] - \\
& 1\,179\,579\,c[3] + 230\,971\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,682\,899\,c[1] + 3\,245\,651\,c[2] - 1\,179\,547\,c[3] + 230\,971\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,683\,475\,c[1] + 3\,245\,715\,c[2] - \\
& 1\,179\,547\,c[3] + 230\,971\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,679\,731\,c[1] + 3\,245\,011\,c[2] - 1\,179\,515\,c[3] + 230\,971\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,680\,307\,c[1] + 3\,245\,075\,c[2] - \\
& 1\,179\,515\,c[3] + 230\,971\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,706\,659\,c[1] + 3\,252\,035\,c[2] - 1\,180\,107\,c[3] + 230\,987\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,703\,491\,c[1] + 3\,251\,395\,c[2] - \\
& 1\,180\,075\,c[3] + 230\,987\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,700\,323\,c[1] + 3\,250\,755\,c[2] - 1\,180\,043\,c[3] + 230\,987\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,700\,899\,c[1] + 3\,250\,819\,c[2] - \\
& 1\,180\,043\,c[3] + 230\,987\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,696\,451\,c[1] + 3\,250\,051\,c[2] - 1\,180\,011\,c[3] + 230\,987\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,697\,155\,c[1] + 3\,250\,115\,c[2] - \\
& 1\,180\,011\,c[3] + 230\,987\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,697\,731\,c[1] + 3\,250\,179\,c[2] - 1\,180\,011\,c[3] + 230\,987\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,693\,987\,c[1] + 3\,249\,475\,c[2] - \\
& 1\,179\,979\,c[3] + 230\,987\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,714\,579\,c[1] + 3\,255\,219\,c[2] - 1\,180\,507\,c[3] + 231\,003\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,710\,707\,c[1] + 3\,254\,515\,c[2] - \\
& 1\,180\,475\,c[3] + 231\,003\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,711\,411\,c[1] + 3\,254\,579\,c[2] - 1\,180\,475\,c[3] + 231\,003\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,708\,243\,c[1] + 3\,253\,939\,c[2] - \\
& 1\,180\,443\,c[3] + 231\,003\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,705\,075\,c[1] + 3\,253\,299\,c[2] - 1\,180\,411\,c[3] + 231\,003\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,728\,131\,c[1] + 3\,259\,619\,c[2] - \\
& 1\,180\,971\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,724\,963\,c[1] + 3\,258\,979\,c[2] - 1\,180\,939\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,725\,667\,c[1] + 3\,259\,043\,c[2] - \\
& 1\,180\,939\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,721\,795\,c[1] + 3\,258\,339\,c[2] - 1\,180\,907\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + \\
& 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& -3\,722\,499\,c[1] + 3\,258\,403\,c[2] - \\
& 1\,180\,907\,c[3] + 231\,019\,c[4] - 26\,449\,c[5] + 1777\,c[6] - 65\,c[7] + c[8] \geq 0 \&\& \\
& -3\,739\,219\,c[1] + 3\,263\,443\,c[2] - 1\,181\,403\,c[3] + 231\,035\,c[4] - 26\,449\,c[5] +
\end{aligned}$$

$$\begin{aligned}
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3736051 c[1] + 3262803 c[2] - \\
& 1181371 c[3] + 231035 c[4] - 26449 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3596571 c[1] + 3210787 c[2] - 1174363 c[3] + 230635 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3593403 c[1] + 3210147 c[2] - \\
& 1174331 c[3] + 230635 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3590811 c[1] + 3209571 c[2] - 1174299 c[3] + 230635 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3610827 c[1] + 3215251 c[2] - \\
& 1174827 c[3] + 230651 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3607659 c[1] + 3214611 c[2] - 1174795 c[3] + 230651 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3604491 c[1] + 3213971 c[2] - \\
& 1174763 c[3] + 230651 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3605067 c[1] + 3214035 c[2] - 1174763 c[3] + 230651 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3625083 c[1] + 3219715 c[2] - \\
& 1175291 c[3] + 230667 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3621915 c[1] + 3219075 c[2] - 1175259 c[3] + 230667 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3622491 c[1] + 3219139 c[2] - \\
& 1175259 c[3] + 230667 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3618747 c[1] + 3218435 c[2] - 1175227 c[3] + 230667 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3642507 c[1] + 3224819 c[2] - \\
& 1175787 c[3] + 230683 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3639339 c[1] + 3224179 c[2] - 1175755 c[3] + 230683 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3636171 c[1] + 3223539 c[2] - \\
& 1175723 c[3] + 230683 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3633003 c[1] + 3222899 c[2] - 1175691 c[3] + 230683 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3629835 c[1] + 3222259 c[2] - \\
& 1175659 c[3] + 230683 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3656763 c[1] + 3229283 c[2] - 1176251 c[3] + 230699 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3653595 c[1] + 3228643 c[2] - \\
& 1176219 c[3] + 230699 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3650427 c[1] + 3228003 c[2] - 1176187 c[3] + 230699 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3646555 c[1] + 3227299 c[2] - \\
& 1176155 c[3] + 230699 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3647259 c[1] + 3227363 c[2] - 1176155 c[3] + 230699 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3644091 c[1] + 3226723 c[2] - \\
& 1176123 c[3] + 230699 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3667851 c[1] + 3233107 c[2] - 1176683 c[3] + 230715 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3663979 c[1] + 3232403 c[2] - \\
& 1176651 c[3] + 230715 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3664683 c[1] + 3232467 c[2] - 1176651 c[3] + 230715 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3660811 c[1] + 3231763 c[2] - \\
& 1176619 c[3] + 230715 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3661515 c[1] + 3231827 c[2] - 1176619 c[3] + 230715 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3657643 c[1] + 3231123 c[2] - \\
& 1176587 c[3] + 230715 c[4] - 26441 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \& \\
& - 3678235 c[1] + 3236867 c[2] - 1177115 c[3] + 230731 c[4] - 26441 c[5] + \\
& 1777 c[6] - 65 c[7] + c[8] \geq 0 \& - 3532419 c[1] + 3183571 c[2] - \\
& 1170043 c[3] + 230331 c[4] - 26433 c[5] + 1777 c[6] - 65 c[7] + c[8] \geq 0 \&
\end{aligned}$$

$$\begin{aligned}
& -3529251c[1] + 3182931c[2] - 1170011c[3] + 230331c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3546675c[1] + 3188035c[2] - \\
& \quad 1170507c[3] + 230347c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3543507c[1] + 3187395c[2] - 1170475c[3] + 230347c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3544083c[1] + 3187459c[2] - \\
& \quad 1170475c[3] + 230347c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3560931c[1] + 3192499c[2] - 1170971c[3] + 230363c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3557763c[1] + 3191859c[2] - \\
& \quad 1170939c[3] + 230363c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3554595c[1] + 3191219c[2] - 1170907c[3] + 230363c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3578355c[1] + 3197603c[2] - \\
& \quad 1171467c[3] + 230379c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3575187c[1] + 3196963c[2] - 1171435c[3] + 230379c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3572019c[1] + 3196323c[2] - \\
& \quad 1171403c[3] + 230379c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3568851c[1] + 3195683c[2] - 1171371c[3] + 230379c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3565683c[1] + 3195043c[2] - \\
& \quad 1171339c[3] + 230379c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3592611c[1] + 3202067c[2] - 1171931c[3] + 230395c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3589443c[1] + 3201427c[2] - \\
& \quad 1171899c[3] + 230395c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3586275c[1] + 3200787c[2] - 1171867c[3] + 230395c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3582403c[1] + 3200083c[2] - \\
& \quad 1171835c[3] + 230395c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3606867c[1] + 3206531c[2] - 1172395c[3] + 230411c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3603699c[1] + 3205891c[2] - \\
& \quad 1172363c[3] + 230411c[4] - 26433c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3599827c[1] + 3205187c[2] - 1172331c[3] + 230411c[4] - 26433c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3468267c[1] + 3156355c[2] - \\
& \quad 1165723c[3] + 230027c[4] - 26425c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3482523c[1] + 3160819c[2] - 1166187c[3] + 230043c[4] - 26425c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3479355c[1] + 3160179c[2] - \\
& \quad 1166155c[3] + 230043c[4] - 26425c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3499947c[1] + 3165923c[2] - 1166683c[3] + 230059c[4] - 26425c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3496779c[1] + 3165283c[2] - \\
& \quad 1166651c[3] + 230059c[4] - 26425c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3493611c[1] + 3164643c[2] - 1166619c[3] + 230059c[4] - 26425c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3490443c[1] + 3164003c[2] - \\
& \quad 1166587c[3] + 230059c[4] - 26425c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3514203c[1] + 3170387c[2] - 1167147c[3] + 230075c[4] - 26425c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3511035c[1] + 3169747c[2] - \\
& \quad 1167115c[3] + 230075c[4] - 26425c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3507867c[1] + 3169107c[2] - 1167083c[3] + 230075c[4] - 26425c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3528459c[1] + 3174851c[2] - \\
& \quad 1167611c[3] + 230091c[4] - 26425c[5] + 1777c[6] - 65c[7] + c[8] \geq 0 \&\& \\
& -3525291c[1] + 3174211c[2] - 1167579c[3] + 230091c[4] - 26425c[5] + \\
& \quad 1777c[6] - 65c[7] + c[8] \geq 0 \&\& -3521419c[1] + 3173507c[2] -
\end{aligned}$$

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1 167 547 c[3] + 230 091 c[4] - 26 425 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 545 883 c[1] + 3 179 955 c[2] - 1 168 107 c[3] + 230 107 c[4] -
26 425 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 542 715 c[1] + 3 179 315 c[2] - 1 168 075 c[3] + 230 107 c[4] -
26 425 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 404 115 c[1] + 3 129 139 c[2] - 1 161 403 c[3] + 229 723 c[4] -
26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 418 371 c[1] + 3 133 603 c[2] - 1 161 867 c[3] + 229 739 c[4] -
26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 415 203 c[1] + 3 132 963 c[2] - 1 161 835 c[3] + 229 739 c[4] -
26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 435 795 c[1] + 3 138 707 c[2] - 1 162 363 c[3] + 229 755 c[4] -
26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 432 627 c[1] + 3 138 067 c[2] - 1 162 331 c[3] + 229 755 c[4] -
26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 429 459 c[1] + 3 137 427 c[2] - 1 162 299 c[3] + 229 755 c[4] -
26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 450 051 c[1] + 3 143 171 c[2] - 1 162 827 c[3] + 229 771 c[4] -
26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 446 883 c[1] + 3 142 531 c[2] - 1 162 795 c[3] + 229 771 c[4] -
26 417 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 354 219 c[1] + 3 106 387 c[2] - 1 157 547 c[3] + 229 435 c[4] -
26 409 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 371 643 c[1] + 3 111 491 c[2] - 1 158 043 c[3] + 229 451 c[4] -
26 409 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0 &&
- 3 293 235 c[1] + 3 079 811 c[2] - 1 153 259 c[3] + 229 131 c[4] -
26 401 c[5] + 1777 c[6] - 65 c[7] + c[8] ≥ 0, Array[c, 8], Integers]]
{-79 085, -608 687, -4 344 437, -26 628 634, -102 473 516, 0, 0, 0}

GCD[-79 085, -608 687, -4 344 437, -26 628 634, -102 473 516, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, -102 473 516, -26 628 634, -4 344 437, -608 687, -79 085}

cert.g
-57 227 609

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413 963	-316 120	96 091	-14 992	1273	-56	1
414 027	-316 120	96 091	-14 992	1273	-56	1
413 611	-316 088	96 091	-14 992	1273	-56	1
413 675	-316 088	96 091	-14 992	1273	-56	1
415 547	-316 440	96 107	-14 992	1273	-56	1
415 611	-316 440	96 107	-14 992	1273	-56	1
415 195	-316 408	96 107	-14 992	1273	-56	1
416 779	-316 728	96 123	-14 992	1273	-56	1
397 107	-311 936	95 763	-14 984	1273	-56	1
399 267	-312 320	95 779	-14 984	1273	-56	1
398 979	-312 288	95 779	-14 984	1273	-56	1
398 691	-312 256	95 779	-14 984	1273	-56	1
400 851	-312 640	95 795	-14 984	1273	-56	1
400 499	-312 608	95 795	-14 984	1273	-56	1
400 563	-312 608	95 795	-14 984	1273	-56	1
400 211	-312 576	95 795	-14 984	1273	-56	1
400 275	-312 576	95 795	-14 984	1273	-56	1
402 435	-312 960	95 811	-14 984	1273	-56	1
402 083	-312 928	95 811	-14 984	1273	-56	1
402 147	-312 928	95 811	-14 984	1273	-56	1
401 795	-312 896	95 811	-14 984	1273	-56	1
401 859	-312 896	95 811	-14 984	1273	-56	1
404 019	-313 280	95 827	-14 984	1273	-56	1
403 667	-313 248	95 827	-14 984	1273	-56	1
403 731	-313 248	95 827	-14 984	1273	-56	1
403 379	-313 216	95 827	-14 984	1273	-56	1
405 603	-313 600	95 843	-14 984	1273	-56	1
405 251	-313 568	95 843	-14 984	1273	-56	1
405 315	-313 568	95 843	-14 984	1273	-56	1
404 899	-313 536	95 843	-14 984	1273	-56	1
404 963	-313 536	95 843	-14 984	1273	-56	1
407 187	-313 920	95 859	-14 984	1273	-56	1
406 835	-313 888	95 859	-14 984	1273	-56	1
406 483	-313 856	95 859	-14 984	1273	-56	1
408 771	-314 240	95 875	-14 984	1273	-56	1
408 419	-314 208	95 875	-14 984	1273	-56	1
408 067	-314 176	95 875	-14 984	1273	-56	1
388 971	-309 448	95 515	-14 976	1273	-56	1

388 683	-309 416	95 515	-14 976	1273	-56	1
390 555	-309 768	95 531	-14 976	1273	-56	1
390 267	-309 736	95 531	-14 976	1273	-56	1
389 979	-309 704	95 531	-14 976	1273	-56	1
392 139	-310 088	95 547	-14 976	1273	-56	1
391 851	-310 056	95 547	-14 976	1273	-56	1
391 563	-310 024	95 547	-14 976	1273	-56	1
393 723	-310 408	95 563	-14 976	1273	-56	1
393 371	-310 376	95 563	-14 976	1273	-56	1
393 435	-310 376	95 563	-14 976	1273	-56	1
395 307	-310 728	95 579	-14 976	1273	-56	1
394 955	-310 696	95 579	-14 976	1273	-56	1
395 019	-310 696	95 579	-14 976	1273	-56	1
394 667	-310 664	95 579	-14 976	1273	-56	1
396 891	-311 048	95 595	-14 976	1273	-56	1
396 539	-311 016	95 595	-14 976	1273	-56	1
396 603	-311 016	95 595	-14 976	1273	-56	1
398 475	-311 368	95 611	-14 976	1273	-56	1
398 123	-311 336	95 611	-14 976	1273	-56	1
397 771	-311 304	95 611	-14 976	1273	-56	1
400 059	-311 688	95 627	-14 976	1273	-56	1
399 707	-311 656	95 627	-14 976	1273	-56	1
401 643	-312 008	95 643	-14 976	1273	-56	1
381 843	-307 216	95 283	-14 968	1273	-56	1
383 427	-307 536	95 299	-14 968	1273	-56	1
383 139	-307 504	95 299	-14 968	1273	-56	1
382 851	-307 472	95 299	-14 968	1273	-56	1
385 011	-307 856	95 315	-14 968	1273	-56	1
384 723	-307 824	95 315	-14 968	1273	-56	1
386 595	-308 176	95 331	-14 968	1273	-56	1
386 243	-308 144	95 331	-14 968	1273	-56	1
386 307	-308 144	95 331	-14 968	1273	-56	1
388 179	-308 496	95 347	-14 968	1273	-56	1
387 827	-308 464	95 347	-14 968	1273	-56	1
387 891	-308 464	95 347	-14 968	1273	-56	1
389 763	-308 816	95 363	-14 968	1273	-56	1
389 411	-308 784	95 363	-14 968	1273	-56	1
391 347	-309 136	95 379	-14 968	1273	-56	1
390 995	-309 104	95 379	-14 968	1273	-56	1
374 715	-304 984	95 051	-14 960	1273	-56	1
376 299	-305 304	95 067	-14 960	1273	-56	1
376 011	-305 272	95 067	-14 960	1273	-56	1
377 883	-305 624	95 083	-14 960	1273	-56	1
377 595	-305 592	95 083	-14 960	1273	-56	1
379 467	-305 944	95 099	-14 960	1273	-56	1
379 115	-305 912	95 099	-14 960	1273	-56	1
381 051	-306 264	95 115	-14 960	1273	-56	1
380 699	-306 232	95 115	-14 960	1273	-56	1
382 635	-306 584	95 131	-14 960	1273	-56	1
367 587	-302 752	94 819	-14 952	1273	-56	1
369 171	-303 072	94 835	-14 952	1273	-56	1
368 883	-303 040	94 835	-14 952	1273	-56	1
370 755	-303 392	94 851	-14 952	1273	-56	1
372 339	-303 712	94 867	-14 952	1273	-56	1
373 923	-304 032	94 883	-14 952	1273	-56	1

$$\begin{pmatrix} 362\,043 & -300\,840 & 94\,603 & -14\,944 & 1273 & -56 & 1 \\ 363\,627 & -301\,160 & 94\,619 & -14\,944 & 1273 & -56 & 1 \\ 354\,915 & -298\,608 & 94\,371 & -14\,936 & 1273 & -56 & 1 \end{pmatrix}$$

`g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]`

`{20 465 523, -15 546 576, 4 713 971, -734 776, 62 377, -2744, 49}`

`Array[c, 7].Transpose[A]`

```
{418 867 c[1] - 317 968 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 931 c[1] - 317 968 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 421 091 c[1] - 318 352 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 420 739 c[1] - 318 320 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 420 803 c[1] - 318 320 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 420 867 c[1] - 318 320 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 420 451 c[1] - 318 288 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 422 035 c[1] - 318 608 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 115 c[1] - 314 776 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 409 275 c[1] - 315 160 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 923 c[1] - 315 128 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 987 c[1] - 315 128 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 635 c[1] - 315 096 c[2] + 96 043 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 147 c[1] - 315 512 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 795 c[1] - 315 480 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 859 c[1] - 315 480 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 507 c[1] - 315 448 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 571 c[1] - 315 448 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 219 c[1] - 315 416 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 731 c[1] - 315 832 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 379 c[1] - 315 800 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 443 c[1] - 315 800 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 027 c[1] - 315 768 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 091 c[1] - 315 768 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 739 c[1] - 315 736 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 315 c[1] - 316 152 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 963 c[1] - 316 120 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 027 c[1] - 316 120 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 611 c[1] - 316 088 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 675 c[1] - 316 088 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 547 c[1] - 316 440 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 611 c[1] - 316 440 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 195 c[1] - 316 408 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 779 c[1] - 316 728 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 107 c[1] - 311 936 c[2] + 95 763 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 399 267 c[1] - 312 320 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 398 979 c[1] - 312 288 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 398 691 c[1] - 312 256 c[2] + 95 779 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 400 851 c[1] - 312 640 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
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[illegible]

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401 643 c[1] - 312 008 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
381 843 c[1] - 307 216 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
383 427 c[1] - 307 536 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
383 139 c[1] - 307 504 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
385 011 c[1] - 307 856 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
386 595 c[1] - 308 176 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
386 243 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
386 307 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
388 179 c[1] - 308 496 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
387 827 c[1] - 308 464 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
387 891 c[1] - 308 464 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
389 763 c[1] - 308 816 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
389 411 c[1] - 308 784 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
391 347 c[1] - 309 136 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
390 995 c[1] - 309 104 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
374 715 c[1] - 304 984 c[2] + 95 051 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
376 299 c[1] - 305 304 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
376 011 c[1] - 305 272 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
377 883 c[1] - 305 624 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
379 467 c[1] - 305 944 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
379 115 c[1] - 305 912 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
381 051 c[1] - 306 264 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
380 699 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
382 635 c[1] - 306 584 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
367 587 c[1] - 302 752 c[2] + 94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
369 171 c[1] - 303 072 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
370 755 c[1] - 303 392 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
372 339 c[1] - 303 712 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
373 923 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
362 043 c[1] - 300 840 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
363 627 c[1] - 301 160 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
354 915 c[1] - 298 608 c[2] + 94 371 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] }

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Array[c, 7].g

```

20 465 523 c[1] - 15 546 576 c[2] + 4 713 971 c[3] -
734 776 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

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cert =

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Flatten[Array[c, 7] /. FindInstance[20 465 523 c[1] - 15 546 576 c[2] + 4 713 971 c[3] -
734 776 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
418 867 c[1] - 317 968 c[2] + 96 307 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 418 931 c[1] - 317 968 c[2] + 96 307 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 421 091 c[1] - 318 352 c[2] +

```


$$\begin{aligned}
& 96\,323\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 420\,739\,c[1] - 318\,320\,c[2] + 96\,323\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 420\,803\,c[1] - 318\,320\,c[2] + 96\,323\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 420\,867\,c[1] - 318\,320\,c[2] + \\
& 96\,323\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 420\,451\,c[1] - 318\,288\,c[2] + 96\,323\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 422\,035\,c[1] - 318\,608\,c[2] + 96\,339\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,115\,c[1] - 314\,776\,c[2] + \\
& 96\,027\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 409\,275\,c[1] - 315\,160\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 408\,923\,c[1] - 315\,128\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,987\,c[1] - 315\,128\,c[2] + \\
& 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 408\,635\,c[1] - 315\,096\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 411\,147\,c[1] - 315\,512\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 410\,795\,c[1] - 315\,480\,c[2] + \\
& 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 410\,859\,c[1] - 315\,480\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 410\,507\,c[1] - 315\,448\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 410\,571\,c[1] - 315\,448\,c[2] + \\
& 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 410\,219\,c[1] - 315\,416\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 412\,731\,c[1] - 315\,832\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 412\,379\,c[1] - 315\,800\,c[2] + \\
& 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 412\,443\,c[1] - 315\,800\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 412\,027\,c[1] - 315\,768\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 412\,091\,c[1] - 315\,768\,c[2] + \\
& 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 411\,739\,c[1] - 315\,736\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 414\,315\,c[1] - 316\,152\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 413\,963\,c[1] - 316\,120\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 414\,027\,c[1] - 316\,120\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 413\,611\,c[1] - 316\,088\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 413\,675\,c[1] - 316\,088\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 415\,547\,c[1] - 316\,440\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 415\,611\,c[1] - 316\,440\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 415\,195\,c[1] - 316\,408\,c[2] + \\
& 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 416\,779\,c[1] - 316\,728\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,107\,c[1] - 311\,936\,c[2] + 95\,763\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,267\,c[1] - 312\,320\,c[2] + \\
& 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 398\,979\,c[1] - 312\,288\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,691\,c[1] - 312\,256\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 400851 c[1] - 312640 c[2] + \\
& 95795 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 400499 c[1] - 312608 c[2] + 95795 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 400563 c[1] - 312608 c[2] + 95795 c[3] - 14984 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 400211 c[1] - 312576 c[2] + \\
& 95795 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 400275 c[1] - 312576 c[2] + 95795 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 402435 c[1] - 312960 c[2] + 95811 c[3] - 14984 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 402083 c[1] - 312928 c[2] + \\
& 95811 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 402147 c[1] - 312928 c[2] + 95811 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 401795 c[1] - 312896 c[2] + 95811 c[3] - 14984 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 401859 c[1] - 312896 c[2] + \\
& 95811 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 404019 c[1] - 313280 c[2] + 95827 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 403667 c[1] - 313248 c[2] + 95827 c[3] - 14984 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 403731 c[1] - 313248 c[2] + \\
& 95827 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 403379 c[1] - 313216 c[2] + 95827 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 405603 c[1] - 313600 c[2] + 95843 c[3] - 14984 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 405251 c[1] - 313568 c[2] + \\
& 95843 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 405315 c[1] - 313568 c[2] + 95843 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 404899 c[1] - 313536 c[2] + 95843 c[3] - 14984 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 404963 c[1] - 313536 c[2] + \\
& 95843 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 407187 c[1] - 313920 c[2] + 95859 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 406835 c[1] - 313888 c[2] + 95859 c[3] - 14984 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 406483 c[1] - 313856 c[2] + \\
& 95859 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 408771 c[1] - 314240 c[2] + 95875 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 408419 c[1] - 314208 c[2] + 95875 c[3] - 14984 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 408067 c[1] - 314176 c[2] + \\
& 95875 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 388971 c[1] - 309448 c[2] + 95515 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 388683 c[1] - 309416 c[2] + 95515 c[3] - 14976 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 390555 c[1] - 309768 c[2] + \\
& 95531 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 390267 c[1] - 309736 c[2] + 95531 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 389979 c[1] - 309704 c[2] + 95531 c[3] - 14976 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 392139 c[1] - 310088 c[2] + \\
& 95547 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 391851 c[1] - 310056 c[2] + 95547 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 391563 c[1] - 310024 c[2] + 95547 c[3] - 14976 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 393723 c[1] - 310408 c[2] + \\
& 95563 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 393371 c[1] - 310376 c[2] + 95563 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq
\end{aligned}$$

$$\begin{aligned}
& 0 \ \&\& 393\,435\,c[1] - 310\,376\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 395\,307\,c[1] - 310\,728\,c[2] + \\
& 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 394\,955\,c[1] - 310\,696\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 395\,019\,c[1] - 310\,696\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 394\,667\,c[1] - 310\,664\,c[2] + \\
& 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 396\,891\,c[1] - 311\,048\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 396\,539\,c[1] - 311\,016\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 396\,603\,c[1] - 311\,016\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 398\,475\,c[1] - 311\,368\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 398\,123\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 397\,771\,c[1] - 311\,304\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 400\,059\,c[1] - 311\,688\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 399\,707\,c[1] - 311\,656\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 401\,643\,c[1] - 312\,008\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 381\,843\,c[1] - 307\,216\,c[2] + 95\,283\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 383\,427\,c[1] - 307\,536\,c[2] + 95\,299\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 383\,139\,c[1] - 307\,504\,c[2] + \\
& 95\,299\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 382\,851\,c[1] - 307\,472\,c[2] + 95\,299\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 385\,011\,c[1] - 307\,856\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 384\,723\,c[1] - 307\,824\,c[2] + \\
& 95\,315\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 386\,595\,c[1] - 308\,176\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 386\,243\,c[1] - 308\,144\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 386\,307\,c[1] - 308\,144\,c[2] + \\
& 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 388\,179\,c[1] - 308\,496\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 387\,827\,c[1] - 308\,464\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 387\,891\,c[1] - 308\,464\,c[2] + \\
& 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 389\,763\,c[1] - 308\,816\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 389\,411\,c[1] - 308\,784\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 391\,347\,c[1] - 309\,136\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 390\,995\,c[1] - 309\,104\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 374\,715\,c[1] - 304\,984\,c[2] + 95\,051\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 376\,299\,c[1] - 305\,304\,c[2] + \\
& 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 376\,011\,c[1] - 305\,272\,c[2] + 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 377\,883\,c[1] - 305\,624\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 377\,595\,c[1] - 305\,592\,c[2] + \\
& 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\&
\end{aligned}$$

```

379 467 c[1] - 305 944 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 379 115 c[1] - 305 912 c[2] + 95 099 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 381 051 c[1] - 306 264 c[2] +
95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
380 699 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 382 635 c[1] - 306 584 c[2] + 95 131 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 367 587 c[1] - 302 752 c[2] +
94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
369 171 c[1] - 303 072 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 370 755 c[1] - 303 392 c[2] +
94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
372 339 c[1] - 303 712 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 373 923 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 362 043 c[1] - 300 840 c[2] +
94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
363 627 c[1] - 301 160 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 354 915 c[1] - 298 608 c[2] + 94 371 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{19 051, 137 248, 841 889, 3 027 878, 0, 0, 0}

```

```
GCD[19 051, 137 248, 841 889, 3 027 878, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 3 027 878, 841 889, 137 248, 19 051}
```

```
cert.g
```

```
-19 538 284
```

```
cert.Transpose[A]
```

```

{997 076, 2 216 340, 4 133 492, 1 819 476, 3 038 740, 4 258 004, 724 724, 452 372,
3 699 444, 5 616 596, 3 302 580, 4 521 844, 2 207 828, 6 438 996, 4 124 980, 5 344 244,
3 030 228, 4 249 492, 1 935 476, 6 166 644, 3 852 628, 5 071 892, 1 538 612, 2 757 876,
443 860, 5 894 292, 3 580 276, 4 799 540, 1 266 260, 2 485 524, 3 307 924, 4 527 188,
993 908, 721 556, 4 785 684, 6 702 836, 5 608 084, 4 513 332, 6 430 484, 4 116 468,
5 335 732, 3 021 716, 4 240 980, 6 158 132, 3 844 116, 5 063 380, 2 749 364, 3 968 628,
5 885 780, 3 571 764, 4 791 028, 2 477 012, 5 613 428, 3 299 412, 4 518 676, 985 396,
2 204 660, 5 341 076, 3 027 060, 713 044, 5 068 724, 2 754 708, 440 692, 6 694 324,
5 599 572, 6 421 972, 5 327 220, 4 232 468, 6 149 620, 5 054 868, 3 960 116, 5 877 268,
3 563 252, 4 782 516, 5 604 916, 3 290 900, 4 510 164, 2 196 148, 5 332 564,
3 018 548, 4 237 812, 5 060 212, 2 746 196, 432 180, 4 787 860, 2 473 844, 4 515 508,
6 141 108, 5 868 756, 4 774 004, 3 679 252, 5 596 404, 4 501 652, 5 324 052,
3 010 036, 4 229 300, 5 051 700, 2 737 684, 3 956 948, 4 779 348, 2 465 332,
4 506 996, 2 192 980, 5 587 892, 5 315 540, 4 220 788, 5 043 188, 3 948 436,
4 770 836, 2 456 820, 4 498 484, 2 184 468, 4 226 132, 5 034 676, 4 762 324,
3 667 572, 4 489 972, 4 217 620, 3 945 268, 4 209 108, 3 936 756, 3 655 892}

```

chi = listdim17[[33]]

$$(-9 + x)^{12} (5 + x)^{32} (-100\,024 + 52\,161 x - 10\,636 x^2 + 1062 x^3 - 52 x^4 + x^5)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {416547, -317552, 96291, -15000, 1273, -56, 1},
  {418419, -317904, 96307, -15000, 1273, -56, 1},
  {420579, -318288, 96323, -15000, 1273, -56, 1},
  {420291, -318256, 96323, -15000, 1273, -56, 1},
  {420003, -318224, 96323, -15000, 1273, -56, 1},
  {421875, -318576, 96339, -15000, 1273, -56, 1},
  {406539, -314712, 96027, -14992, 1273, -56, 1},
  {408699, -315096, 96043, -14992, 1273, -56, 1},
  {408411, -315064, 96043, -14992, 1273, -56, 1},
  {408123, -315032, 96043, -14992, 1273, -56, 1},
  {407835, -315000, 96043, -14992, 1273, -56, 1},
  {410571, -315448, 96059, -14992, 1273, -56, 1},
  {410283, -315416, 96059, -14992, 1273, -56, 1},
  {409995, -315384, 96059, -14992, 1273, -56, 1},
  {409707, -315352, 96059, -14992, 1273, -56, 1},
  {412155, -315768, 96075, -14992, 1273, -56, 1},
  {411867, -315736, 96075, -14992, 1273, -56, 1},
  {411579, -315704, 96075, -14992, 1273, -56, 1},
  {413739, -316088, 96091, -14992, 1273, -56, 1},
  {413451, -316056, 96091, -14992, 1273, -56, 1},
  {413163, -316024, 96091, -14992, 1273, -56, 1},
  {415035, -316376, 96107, -14992, 1273, -56, 1},
  {416619, -316696, 96123, -14992, 1273, -56, 1},
  {398691, -312256, 95779, -14984, 1273, -56, 1},
  {398403, -312224, 95779, -14984, 1273, -56, 1},
  {398115, -312192, 95779, -14984, 1273, -56, 1},
  {400563, -312608, 95795, -14984, 1273, -56, 1},
  {400275, -312576, 95795, -14984, 1273, -56, 1},
  {399987, -312544, 95795, -14984, 1273, -56, 1},
  {399699, -312512, 95795, -14984, 1273, -56, 1},
  {399411, -312480, 95795, -14984, 1273, -56, 1},
  {402147, -312928, 95811, -14984, 1273, -56, 1},
  {401859, -312896, 95811, -14984, 1273, -56, 1},
  {401571, -312864, 95811, -14984, 1273, -56, 1},
  {401283, -312832, 95811, -14984, 1273, -56, 1},
  {400995, -312800, 95811, -14984, 1273, -56, 1},
  {403443, -313216, 95827, -14984, 1273, -56, 1},
```

```

{403 155, -313 184, 95 827, -14 984, 1273, -56, 1},
{402 867, -313 152, 95 827, -14 984, 1273, -56, 1},
{405 027, -313 536, 95 843, -14 984, 1273, -56, 1},
{404 739, -313 504, 95 843, -14 984, 1273, -56, 1},
{406 323, -313 824, 95 859, -14 984, 1273, -56, 1},
{388 683, -309 416, 95 515, -14 976, 1273, -56, 1},
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 $400\,995\,c[1] - 312\,800\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,443\,c[1] - 313\,216\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,155\,c[1] - 313\,184\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $402\,867\,c[1] - 313\,152\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,027\,c[1] - 313\,536\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,739\,c[1] - 313\,504\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,323\,c[1] - 313\,824\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $388\,683\,c[1] - 309\,416\,c[2] + 95\,515\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $390\,267\,c[1] - 309\,736\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $389\,979\,c[1] - 309\,704\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $389\,691\,c[1] - 309\,672\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $391\,851\,c[1] - 310\,056\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $391\,563\,c[1] - 310\,024\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $391\,275\,c[1] - 309\,992\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $390\,987\,c[1] - 309\,960\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $393\,435\,c[1] - 310\,376\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $393\,147\,c[1] - 310\,344\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $392\,859\,c[1] - 310\,312\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $392\,571\,c[1] - 310\,280\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,731\,c[1] - 310\,664\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,443\,c[1] - 310\,632\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,155\,c[1] - 310\,600\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,315\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,027\,c[1] - 310\,952\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$

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397 899 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 259 c[1] - 306 896 c[2] + 95 267 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 139 c[1] - 307 504 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 435 c[1] - 307 792 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 147 c[1] - 307 760 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 859 c[1] - 307 728 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 019 c[1] - 308 112 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
385 731 c[1] - 308 080 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 603 c[1] - 308 432 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 315 c[1] - 308 400 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 187 c[1] - 308 752 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
373 131 c[1] - 304 664 c[2] + 95 035 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
374 427 c[1] - 304 952 c[2] + 95 051 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
376 011 c[1] - 305 272 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
375 723 c[1] - 305 240 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 019 c[1] - 305 528 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
367 299 c[1] - 302 720 c[2] + 94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
368 595 c[1] - 303 008 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
370 179 c[1] - 303 328 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
360 171 c[1] - 300 488 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
353 043 c[1] - 298 256 c[2] + 94 355 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] }

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`Array[c, 7].g`

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20 458 227 c[1] - 15 545 168 c[2] + 4 713 971 c[3] -
734 776 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

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`cert =`

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Flatten[Array[c, 7] /. FindInstance[20 458 227 c[1] - 15 545 168 c[2] + 4 713 971 c[3] -
734 776 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
416 547 c[1] - 317 552 c[2] + 96 291 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 418 419 c[1] - 317 904 c[2] + 96 307 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 420 579 c[1] - 318 288 c[2] +
96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
420 291 c[1] - 318 256 c[2] + 96 323 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 420 003 c[1] - 318 224 c[2] + 96 323 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 421 875 c[1] - 318 576 c[2] +
96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
406 539 c[1] - 314 712 c[2] + 96 027 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 408 699 c[1] - 315 096 c[2] + 96 043 c[3] - 14 992 c[4] +

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$$\begin{aligned}
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,411\,c[1] - 315\,064\,c[2] + \\
& 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 408\,123\,c[1] - 315\,032\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,835\,c[1] - 315\,000\,c[2] + 96\,043\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 410\,571\,c[1] - 315\,448\,c[2] + \\
& 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 410\,283\,c[1] - 315\,416\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 409\,995\,c[1] - 315\,384\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 409\,707\,c[1] - 315\,352\,c[2] + \\
& 96\,059\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 412\,155\,c[1] - 315\,768\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 411\,867\,c[1] - 315\,736\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 411\,579\,c[1] - 315\,704\,c[2] + \\
& 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 413\,739\,c[1] - 316\,088\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 413\,451\,c[1] - 316\,056\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 413\,163\,c[1] - 316\,024\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 415\,035\,c[1] - 316\,376\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 416\,619\,c[1] - 316\,696\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 398\,691\,c[1] - 312\,256\,c[2] + \\
& 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 398\,403\,c[1] - 312\,224\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,115\,c[1] - 312\,192\,c[2] + 95\,779\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,563\,c[1] - 312\,608\,c[2] + \\
& 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 400\,275\,c[1] - 312\,576\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,987\,c[1] - 312\,544\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,699\,c[1] - 312\,512\,c[2] + \\
& 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,411\,c[1] - 312\,480\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,147\,c[1] - 312\,928\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 401\,859\,c[1] - 312\,896\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 401\,571\,c[1] - 312\,864\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 401\,283\,c[1] - 312\,832\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,995\,c[1] - 312\,800\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 403\,443\,c[1] - 313\,216\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,155\,c[1] - 313\,184\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,867\,c[1] - 313\,152\,c[2] + \\
& 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 405\,027\,c[1] - 313\,536\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,739\,c[1] - 313\,504\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 406\,323\,c[1] - 313\,824\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 388\,683\,c[1] - 309\,416\,c[2] + 95\,515\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq
\end{aligned}$$

$$\begin{aligned}
& 0 \ \&\& 390\,267\,c[1] - 309\,736\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 389\,979\,c[1] - 309\,704\,c[2] + \\
& 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 389\,691\,c[1] - 309\,672\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 391\,851\,c[1] - 310\,056\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 391\,563\,c[1] - 310\,024\,c[2] + \\
& 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 391\,275\,c[1] - 309\,992\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 390\,987\,c[1] - 309\,960\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 393\,435\,c[1] - 310\,376\,c[2] + \\
& 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 393\,147\,c[1] - 310\,344\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 392\,859\,c[1] - 310\,312\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 392\,571\,c[1] - 310\,280\,c[2] + \\
& 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 394\,731\,c[1] - 310\,664\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 394\,443\,c[1] - 310\,632\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 394\,155\,c[1] - 310\,600\,c[2] + \\
& 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 396\,315\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 396\,027\,c[1] - 310\,952\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 397\,899\,c[1] - 311\,304\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 380\,259\,c[1] - 306\,896\,c[2] + 95\,267\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 381\,555\,c[1] - 307\,184\,c[2] + 95\,283\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 383\,139\,c[1] - 307\,504\,c[2] + \\
& 95\,299\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 382\,851\,c[1] - 307\,472\,c[2] + 95\,299\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 384\,723\,c[1] - 307\,824\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 384\,435\,c[1] - 307\,792\,c[2] + \\
& 95\,315\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 384\,147\,c[1] - 307\,760\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 383\,859\,c[1] - 307\,728\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 386\,019\,c[1] - 308\,112\,c[2] + \\
& 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 385\,731\,c[1] - 308\,080\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 387\,603\,c[1] - 308\,432\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 387\,315\,c[1] - 308\,400\,c[2] + \\
& 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 389\,187\,c[1] - 308\,752\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 373\,131\,c[1] - 304\,664\,c[2] + 95\,035\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 374\,427\,c[1] - 304\,952\,c[2] + \\
& 95\,051\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 376\,011\,c[1] - 305\,272\,c[2] + 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 375\,723\,c[1] - 305\,240\,c[2] + 95\,067\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 377\,595\,c[1] - 305\,592\,c[2] + \\
& 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\&
\end{aligned}$$

```

377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 377 019 c[1] - 305 528 c[2] + 95 083 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 378 891 c[1] - 305 880 c[2] +
95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 367 299 c[1] - 302 720 c[2] + 94 819 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 368 883 c[1] - 303 040 c[2] +
94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
368 595 c[1] - 303 008 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 370 179 c[1] - 303 328 c[2] + 94 851 c[3] -
14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
360 171 c[1] - 300 488 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 353 043 c[1] - 298 256 c[2] + 94 355 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{20 564, 150 950, 942 309, 3 424 439, 0, 0, 0}

```

```
GCD[20 564, 150 950, 942 309, 3 424 439, 0, 0, 0]
```

```
1
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```
Reverse[cert]
```

```
{0, 0, 0, 3 424 439, 942 309, 150 950, 20 564}
```

```
cert.g
```

```
-18 421 197
```

```
cert.Transpose[A]
```

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{689 027, 1 127 379, 2 657 763, 1 565 731, 473 699, 912 051, 2 208 451, 3 738 835,
2 646 803, 1 554 771, 462 739, 4 177 187, 3 085 155, 1 993 123, 901 091, 3 523 507,
2 431 475, 1 339 443, 2 869 827, 1 777 795, 685 763, 1 124 115, 470 435, 5 258 259,
4 166 227, 3 074 195, 5 696 611, 4 604 579, 3 512 547, 2 420 515, 1 328 483, 5 042 931,
3 950 899, 2 858 867, 1 766 835, 674 803, 3 297 219, 2 205 187, 1 113 155, 2 643 539,
1 551 507, 897 827, 6 777 683, 6 124 003, 5 031 971, 3 939 939, 5 470 323, 4 378 291,
3 286 259, 2 194 227, 4 816 643, 3 724 611, 2 632 579, 1 540 547, 3 070 931, 1 978 899,
886 867, 2 417 251, 1 325 219, 1 763 571, 7 643 427, 5 897 715, 5 244 035, 4 152 003,
4 590 355, 3 498 323, 2 406 291, 1 314 259, 2 844 643, 1 752 611, 2 190 963, 1 098 931,
1 537 283, 6 763 459, 5 017 747, 4 364 067, 3 272 035, 3 710 387, 2 618 355, 1 526 323,
1 964 675, 1 310 995, 4 137 779, 3 484 099, 2 392 067, 1 738 387, 3 257 811, 2 377 843}

```

```
chi = listdim17[[34]]
```

```
(-11 + x) (-9 + x)12 (-7 + x) (5 + x)32 (-1304 + 373 x - 34 x2 + x3)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
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A // MatrixForm

```

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  412 683 -315 992 96 091 -14 992 1273 -56 1
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  412 811 -315 992 96 091 -14 992 1273 -56 1
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406 483	-313 856	95 859	-14 984	1273	-56	1
406 131	-313 824	95 859	-14 984	1273	-56	1
406 195	-313 824	95 859	-14 984	1273	-56	1
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405 971	-313 792	95 859	-14 984	1273	-56	1
406 035	-313 792	95 859	-14 984	1273	-56	1
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407 715	-314 144	95 875	-14 984	1273	-56	1
407 363	-314 112	95 875	-14 984	1273	-56	1
407 427	-314 112	95 875	-14 984	1273	-56	1
407 491	-314 112	95 875	-14 984	1273	-56	1
407 139	-314 080	95 875	-14 984	1273	-56	1
408 947	-314 432	95 891	-14 984	1273	-56	1
408 595	-314 400	95 891	-14 984	1273	-56	1
395 307	-310 728	95 579	-14 976	1273	-56	1
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396 891	-311 048	95 595	-14 976	1273	-56	1
396 539	-311 016	95 595	-14 976	1273	-56	1
396 603	-311 016	95 595	-14 976	1273	-56	1
396 315	-310 984	95 595	-14 976	1273	-56	1
398 475	-311 368	95 611	-14 976	1273	-56	1
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400 939	-311 944	95 643	-14 976	1273	-56	1
400 587	-311 912	95 643	-14 976	1273	-56	1
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402 171	-312 232	95 659	-14 976	1273	-56	1
389 763	-308 816	95 363	-14 968	1273	-56	1
389 475	-308 784	95 363	-14 968	1273	-56	1
391 347	-309 136	95 379	-14 968	1273	-56	1
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392 579	-309 424	95 395	-14 968	1273	-56	1
392 643	-309 424	95 395	-14 968	1273	-56	1
392 227	-309 392	95 395	-14 968	1273	-56	1
392 291	-309 392	95 395	-14 968	1273	-56	1
394 163	-309 744	95 411	-14 968	1273	-56	1

$$\begin{pmatrix} 393\,811 & -309\,712 & 95\,411 & -14\,968 & 1273 & -56 & 1 \\ 384\,219 & -306\,904 & 95\,147 & -14\,960 & 1273 & -56 & 1 \\ 383\,931 & -306\,872 & 95\,147 & -14\,960 & 1273 & -56 & 1 \\ 385\,803 & -307\,224 & 95\,163 & -14\,960 & 1273 & -56 & 1 \\ 385\,451 & -307\,192 & 95\,163 & -14\,960 & 1273 & -56 & 1 \end{pmatrix}$$

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{20 544 339, -15 569 488, 4 715 411, -734 776, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```
{422 275 c[1] - 318 800 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 731 c[1] - 319 120 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 291 c[1] - 315 672 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 939 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 683 c[1] - 315 992 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 747 c[1] - 315 992 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 811 c[1] - 315 992 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 459 c[1] - 315 960 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 491 c[1] - 316 344 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 203 c[1] - 316 312 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 267 c[1] - 316 312 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 979 c[1] - 316 280 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 723 c[1] - 316 632 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 435 c[1] - 316 600 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 499 c[1] - 316 600 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 955 c[1] - 316 920 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 155 c[1] - 313 184 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 402 867 c[1] - 313 152 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 899 c[1] - 313 536 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 963 c[1] - 313 536 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 405 027 c[1] - 313 536 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 611 c[1] - 313 504 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 675 c[1] - 313 504 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 739 c[1] - 313 504 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 387 c[1] - 313 472 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 451 c[1] - 313 472 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 406 483 c[1] - 313 856 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 406 131 c[1] - 313 824 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 406 195 c[1] - 313 824 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 406 259 c[1] - 313 824 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 405 843 c[1] - 313 792 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 405 907 c[1] - 313 792 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 405 971 c[1] - 313 792 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 406 035 c[1] - 313 792 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 405 619 c[1] - 313 760 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 715 c[1] - 314 144 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 363 c[1] - 314 112 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 427 c[1] - 314 112 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
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407 491 c[1] - 314 112 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
407 139 c[1] - 314 080 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
408 947 c[1] - 314 432 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
408 595 c[1] - 314 400 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
395 307 c[1] - 310 728 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
395 019 c[1] - 310 696 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
396 891 c[1] - 311 048 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
396 539 c[1] - 311 016 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
396 603 c[1] - 311 016 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
396 315 c[1] - 310 984 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 475 c[1] - 311 368 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 123 c[1] - 311 336 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 187 c[1] - 311 336 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
397 771 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
397 835 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
397 899 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
397 547 c[1] - 311 272 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
397 611 c[1] - 311 272 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 707 c[1] - 311 656 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 355 c[1] - 311 624 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 419 c[1] - 311 624 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 483 c[1] - 311 624 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 067 c[1] - 311 592 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 131 c[1] - 311 592 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 939 c[1] - 311 944 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 587 c[1] - 311 912 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 651 c[1] - 311 912 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
402 171 c[1] - 312 232 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 763 c[1] - 308 816 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 475 c[1] - 308 784 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 347 c[1] - 309 136 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 995 c[1] - 309 104 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 059 c[1] - 309 104 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 771 c[1] - 309 072 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 931 c[1] - 309 456 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 579 c[1] - 309 424 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 643 c[1] - 309 424 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 227 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 291 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
394 163 c[1] - 309 744 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
393 811 c[1] - 309 712 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 219 c[1] - 306 904 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 931 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
385 803 c[1] - 307 224 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
385 451 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] }

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Array[c, 7].g

$$20\,544\,339\,c[1] - 15\,569\,488\,c[2] + 4\,715\,411\,c[3] - \\ 734\,776\,c[4] + 62\,377\,c[5] - 2\,744\,c[6] + 49\,c[7]$$

cert =

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Flatten[Array[c, 7] /. FindInstance[20 544 339 c[1] - 15 569 488 c[2] + 4 715 411 c[3] -
  734 776 c[4] + 62 377 c[5] - 2 744 c[6] + 49 c[7] < 0 &&
  422 275 c[1] - 318 800 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 423 731 c[1] - 319 120 c[2] + 96 371 c[3] - 15 000 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 291 c[1] - 315 672 c[2] +
  96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  410 939 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 412 683 c[1] - 315 992 c[2] + 96 091 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 747 c[1] - 315 992 c[2] +
  96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  412 811 c[1] - 315 992 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 412 459 c[1] - 315 960 c[2] + 96 091 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 414 491 c[1] - 316 344 c[2] +
  96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  414 203 c[1] - 316 312 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 414 267 c[1] - 316 312 c[2] + 96 107 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 413 979 c[1] - 316 280 c[2] +
  96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  415 723 c[1] - 316 632 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 415 435 c[1] - 316 600 c[2] + 96 123 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 499 c[1] - 316 600 c[2] +
  96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  416 955 c[1] - 316 920 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 403 155 c[1] - 313 184 c[2] + 95 827 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 402 867 c[1] - 313 152 c[2] +
  95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  404 899 c[1] - 313 536 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 404 963 c[1] - 313 536 c[2] + 95 843 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 405 027 c[1] - 313 536 c[2] +
  95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  404 611 c[1] - 313 504 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 404 675 c[1] - 313 504 c[2] + 95 843 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 404 739 c[1] - 313 504 c[2] +
  95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  404 387 c[1] - 313 472 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 404 451 c[1] - 313 472 c[2] + 95 843 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 406 483 c[1] - 313 856 c[2] +
  95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  406 131 c[1] - 313 824 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 406 195 c[1] - 313 824 c[2] + 95 859 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 406 259 c[1] - 313 824 c[2] +
  95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  405 843 c[1] - 313 792 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
```

$$\begin{aligned}
& 0 \&\& 405\,907\,c[1] - 313\,792\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,971\,c[1] - 313\,792\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
406\,035\,c[1] - 313\,792\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,619\,c[1] - 313\,760\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,715\,c[1] - 314\,144\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
407\,363\,c[1] - 314\,112\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,427\,c[1] - 314\,112\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,491\,c[1] - 314\,112\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
407\,139\,c[1] - 314\,080\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 408\,947\,c[1] - 314\,432\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,595\,c[1] - 314\,400\,c[2] + \\
& 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
395\,307\,c[1] - 310\,728\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 395\,019\,c[1] - 310\,696\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 396\,891\,c[1] - 311\,048\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
396\,539\,c[1] - 311\,016\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 396\,603\,c[1] - 311\,016\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 396\,315\,c[1] - 310\,984\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
398\,475\,c[1] - 311\,368\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,123\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 398\,187\,c[1] - 311\,336\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
397\,771\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,835\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,899\,c[1] - 311\,304\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
397\,547\,c[1] - 311\,272\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,611\,c[1] - 311\,272\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,707\,c[1] - 311\,656\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
399\,355\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,419\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,483\,c[1] - 311\,624\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
399\,067\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,131\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,939\,c[1] - 311\,944\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
400\,587\,c[1] - 311\,912\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,651\,c[1] - 311\,912\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,171\,c[1] - 312\,232\,c[2] + \\
& 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&
\end{aligned}$$


```

389 763 c[1] - 308 816 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 389 475 c[1] - 308 784 c[2] + 95 363 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 391 347 c[1] - 309 136 c[2] +
95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
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95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
392 931 c[1] - 309 456 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 392 579 c[1] - 309 424 c[2] + 95 395 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 392 643 c[1] - 309 424 c[2] +
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0 && 392 291 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] +
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393 811 c[1] - 309 712 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 384 219 c[1] - 306 904 c[2] + 95 147 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 383 931 c[1] - 306 872 c[2] +
95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
385 803 c[1] - 307 224 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 385 451 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
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Reverse[cert]
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cert.g
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cert.Transpose[A]
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chi = listdim17[[35]]
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$$(-9 + x)^{12} (5 + x)^{32} (-100\,376 + 52\,193\,x - 10\,636\,x^2 + 1062\,x^3 - 52\,x^4 + x^5)$$

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CoefficientList[feasibleinterlacingpolylist[chi], x]
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405 459	-313 728	95 859	-14 984	1273	-56	1
407 843	-314 144	95 875	-14 984	1273	-56	1
407 907	-314 144	95 875	-14 984	1273	-56	1
407 491	-314 112	95 875	-14 984	1273	-56	1
407 555	-314 112	95 875	-14 984	1273	-56	1
407 619	-314 112	95 875	-14 984	1273	-56	1
407 139	-314 080	95 875	-14 984	1273	-56	1
407 203	-314 080	95 875	-14 984	1273	-56	1
407 267	-314 080	95 875	-14 984	1273	-56	1
407 331	-314 080	95 875	-14 984	1273	-56	1
406 851	-314 048	95 875	-14 984	1273	-56	1
406 915	-314 048	95 875	-14 984	1273	-56	1
409 075	-314 432	95 891	-14 984	1273	-56	1
408 787	-314 400	95 891	-14 984	1273	-56	1
394 443	-310 632	95 579	-14 976	1273	-56	1
394 155	-310 600	95 579	-14 976	1273	-56	1
396 251	-310 984	95 595	-14 976	1273	-56	1
396 315	-310 984	95 595	-14 976	1273	-56	1
395 963	-310 952	95 595	-14 976	1273	-56	1
396 027	-310 952	95 595	-14 976	1273	-56	1
395 675	-310 920	95 595	-14 976	1273	-56	1
395 739	-310 920	95 595	-14 976	1273	-56	1
395 451	-310 888	95 595	-14 976	1273	-56	1
395 163	-310 856	95 595	-14 976	1273	-56	1
398 187	-311 336	95 611	-14 976	1273	-56	1
397 899	-311 304	95 611	-14 976	1273	-56	1
397 547	-311 272	95 611	-14 976	1273	-56	1
397 611	-311 272	95 611	-14 976	1273	-56	1
397 195	-311 240	95 611	-14 976	1273	-56	1
397 259	-311 240	95 611	-14 976	1273	-56	1
397 323	-311 240	95 611	-14 976	1273	-56	1
396 971	-311 208	95 611	-14 976	1273	-56	1
397 035	-311 208	95 611	-14 976	1273	-56	1
399 483	-311 624	95 627	-14 976	1273	-56	1
399 131	-311 592	95 627	-14 976	1273	-56	1
399 195	-311 592	95 627	-14 976	1273	-56	1
398 779	-311 560	95 627	-14 976	1273	-56	1
398 843	-311 560	95 627	-14 976	1273	-56	1
398 907	-311 560	95 627	-14 976	1273	-56	1
398 491	-311 528	95 627	-14 976	1273	-56	1
398 555	-311 528	95 627	-14 976	1273	-56	1
401 067	-311 944	95 643	-14 976	1273	-56	1
400 715	-311 912	95 643	-14 976	1273	-56	1
400 779	-311 912	95 643	-14 976	1273	-56	1
400 363	-311 880	95 643	-14 976	1273	-56	1
400 427	-311 880	95 643	-14 976	1273	-56	1
402 299	-312 232	95 659	-14 976	1273	-56	1
386 307	-308 144	95 331	-14 968	1273	-56	1
387 891	-308 464	95 347	-14 968	1273	-56	1
387 603	-308 432	95 347	-14 968	1273	-56	1
387 315	-308 400	95 347	-14 968	1273	-56	1
389 475	-308 784	95 363	-14 968	1273	-56	1
389 187	-308 752	95 363	-14 968	1273	-56	1
388 835	-308 720	95 363	-14 968	1273	-56	1
388 899	-308 720	95 363	-14 968	1273	-56	1

388 611	-308 688	95 363	-14 968	1273	-56	1
390 771	-309 072	95 379	-14 968	1273	-56	1
390 419	-309 040	95 379	-14 968	1273	-56	1
390 483	-309 040	95 379	-14 968	1273	-56	1
390 131	-309 008	95 379	-14 968	1273	-56	1
392 355	-309 392	95 395	-14 968	1273	-56	1
392 003	-309 360	95 395	-14 968	1273	-56	1
380 763	-306 232	95 115	-14 960	1273	-56	1
380 475	-306 200	95 115	-14 960	1273	-56	1
382 059	-306 520	95 131	-14 960	1273	-56	1
373 635	-304 000	94 883	-14 952	1273	-56	1

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 537 043, -15 568 080, 4 715 411, -734 776, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```
{420 307 c[1] - 318 416 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 420 371 c[1] - 318 416 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 422 115 c[1] - 318 768 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 421 827 c[1] - 318 736 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 571 c[1] - 319 088 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 423 347 c[1] - 319 056 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 427 c[1] - 315 576 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 587 c[1] - 315 960 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 171 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 235 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 299 c[1] - 315 928 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 947 c[1] - 315 896 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 395 c[1] - 316 312 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 979 c[1] - 316 280 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 043 c[1] - 316 280 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 107 c[1] - 316 280 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 171 c[1] - 316 280 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 691 c[1] - 316 248 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 755 c[1] - 316 248 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 819 c[1] - 316 248 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 883 c[1] - 316 248 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 467 c[1] - 316 216 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 563 c[1] - 316 600 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 627 c[1] - 316 600 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 211 c[1] - 316 568 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 275 c[1] - 316 568 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 339 c[1] - 316 568 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 795 c[1] - 316 888 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 402 291 c[1] - 313 088 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 387 c[1] - 313 472 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 451 c[1] - 313 472 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 035 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 099 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
```

[illegible]

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397 035 c[1] - 311 208 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 483 c[1] - 311 624 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 131 c[1] - 311 592 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
399 195 c[1] - 311 592 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 779 c[1] - 311 560 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 843 c[1] - 311 560 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 907 c[1] - 311 560 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 491 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 555 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
401 067 c[1] - 311 944 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 715 c[1] - 311 912 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 779 c[1] - 311 912 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 363 c[1] - 311 880 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
400 427 c[1] - 311 880 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
402 299 c[1] - 312 232 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 307 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 891 c[1] - 308 464 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 603 c[1] - 308 432 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 315 c[1] - 308 400 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 475 c[1] - 308 784 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 187 c[1] - 308 752 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 835 c[1] - 308 720 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 899 c[1] - 308 720 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 771 c[1] - 309 072 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 419 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 483 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 131 c[1] - 309 008 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 355 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 003 c[1] - 309 360 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 763 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 059 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
373 635 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 537 043 c[1] - 15 568 080 c[2] + 4 715 411 c[3] -
734 776 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 537 043 c[1] - 15 568 080 c[2] + 4 715 411 c[3] -
734 776 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
420 307 c[1] - 318 416 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 420 371 c[1] - 318 416 c[2] + 96 339 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 422 115 c[1] - 318 768 c[2] +
96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
421 827 c[1] - 318 736 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥

```

$$\begin{aligned}
& 0 \ \&\& 423\,571\,c[1] - 319\,088\,c[2] + 96\,371\,c[3] - 15\,000\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 423\,347\,c[1] - 319\,056\,c[2] + \\
& 96\,371\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
410\,427\,c[1] - 315\,576\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 412\,587\,c[1] - 315\,960\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 412\,171\,c[1] - 315\,928\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
412\,235\,c[1] - 315\,928\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 412\,299\,c[1] - 315\,928\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 411\,947\,c[1] - 315\,896\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
414\,395\,c[1] - 316\,312\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 413\,979\,c[1] - 316\,280\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 414\,043\,c[1] - 316\,280\,c[2] + \\
& 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
414\,107\,c[1] - 316\,280\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 414\,171\,c[1] - 316\,280\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 413\,691\,c[1] - 316\,248\,c[2] + \\
& 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
413\,755\,c[1] - 316\,248\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 413\,819\,c[1] - 316\,248\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 413\,883\,c[1] - 316\,248\,c[2] + \\
& 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
413\,467\,c[1] - 316\,216\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 415\,563\,c[1] - 316\,600\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 415\,627\,c[1] - 316\,600\,c[2] + \\
& 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
415\,211\,c[1] - 316\,568\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 415\,275\,c[1] - 316\,568\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 415\,339\,c[1] - 316\,568\,c[2] + \\
& 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
416\,795\,c[1] - 316\,888\,c[2] + 96\,139\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 402\,291\,c[1] - 313\,088\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 404\,387\,c[1] - 313\,472\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
404\,451\,c[1] - 313\,472\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 404\,035\,c[1] - 313\,440\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 404\,099\,c[1] - 313\,440\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
404\,163\,c[1] - 313\,440\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 403\,811\,c[1] - 313\,408\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 403\,875\,c[1] - 313\,408\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
403\,587\,c[1] - 313\,376\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \ \&\& 406\,611\,c[1] - 313\,856\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 406\,259\,c[1] - 313\,824\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\&
\end{aligned}$$

$$\begin{aligned}
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,611\,c[1] - 311\,272\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,195\,c[1] - 311\,240\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,259\,c[1] - 311\,240\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,323\,c[1] - 311\,240\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 396\,971\,c[1] - 311\,208\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,035\,c[1] - 311\,208\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,483\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,131\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,195\,c[1] - 311\,592\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 398\,779\,c[1] - 311\,560\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,843\,c[1] - 311\,560\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 398\,907\,c[1] - 311\,560\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 398\,491\,c[1] - 311\,528\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,555\,c[1] - 311\,528\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 401\,067\,c[1] - 311\,944\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 400\,715\,c[1] - 311\,912\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,779\,c[1] - 311\,912\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,363\,c[1] - 311\,880\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 400\,427\,c[1] - 311\,880\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,299\,c[1] - 312\,232\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 386\,307\,c[1] - 308\,144\,c[2] + \\
& 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 387\,891\,c[1] - 308\,464\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 387\,603\,c[1] - 308\,432\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 387\,315\,c[1] - 308\,400\,c[2] + \\
& 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 389\,475\,c[1] - 308\,784\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 389\,187\,c[1] - 308\,752\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 388\,835\,c[1] - 308\,720\,c[2] + \\
& 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 388\,899\,c[1] - 308\,720\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 388\,611\,c[1] - 308\,688\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,771\,c[1] - 309\,072\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 390\,419\,c[1] - 309\,040\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 390\,483\,c[1] - 309\,040\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,131\,c[1] - 309\,008\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 392\,355\,c[1] - 309\,392\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 392\,003\,c[1] - 309\,360\,c[2] + 95\,395\,c[3] -
\end{aligned}$$

```

14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
380 763 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 380 475 c[1] - 306 200 c[2] + 95 115 c[3] -
14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
382 059 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 373 635 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6], c[7]}

```

```
GCD[]
```

```
Reverse[cert]
```

```
cert.g
```

```
cert.Transpose[A]
```

```
chi = listdim17[[36]]
```

```
(-9 + x)12 (5 + x)32 (113 - 22 x + x2) (-888 + 289 x - 30 x2 + x3)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
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{371 763, -303 648, 94 867, -14 952, 1273, -56, 1}};
```

```
A // MatrixForm
```

```
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421 603 -318 704 96 355 -15 000 1273 -56 1
421 667 -318 704 96 355 -15 000 1273 -56 1
421 731 -318 704 96 355 -15 000 1273 -56 1
423 411 -319 056 96 371 -15 000 1273 -56 1
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413 243 -316 184 96 107 -14 992 1273 -56 1
415 339 -316 568 96 123 -14 992 1273 -56 1
415 403 -316 568 96 123 -14 992 1273 -56 1
415 467 -316 568 96 123 -14 992 1273 -56 1
415 051 -316 536 96 123 -14 992 1273 -56 1
415 115 -316 536 96 123 -14 992 1273 -56 1
416 923 -316 888 96 139 -14 992 1273 -56 1
401 715 -313 024 95 827 -14 984 1273 -56 1
403 523 -313 376 95 843 -14 984 1273 -56 1
403 587 -313 376 95 843 -14 984 1273 -56 1
403 299 -313 344 95 843 -14 984 1273 -56 1
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405 395 -313 728 95 859 -14 984 1273 -56 1
405 459 -313 728 95 859 -14 984 1273 -56 1
405 107 -313 696 95 859 -14 984 1273 -56 1
405 171 -313 696 95 859 -14 984 1273 -56 1
404 819 -313 664 95 859 -14 984 1273 -56 1 )
```

407 619	-314 112	95 875	-14 984	1273	-56	1
407 267	-314 080	95 875	-14 984	1273	-56	1
407 331	-314 080	95 875	-14 984	1273	-56	1
406 979	-314 048	95 875	-14 984	1273	-56	1
407 043	-314 048	95 875	-14 984	1273	-56	1
406 627	-314 016	95 875	-14 984	1273	-56	1
409 203	-314 432	95 891	-14 984	1273	-56	1
408 915	-314 400	95 891	-14 984	1273	-56	1
393 579	-310 536	95 579	-14 976	1273	-56	1
395 387	-310 888	95 595	-14 976	1273	-56	1
395 451	-310 888	95 595	-14 976	1273	-56	1
395 163	-310 856	95 595	-14 976	1273	-56	1
394 875	-310 824	95 595	-14 976	1273	-56	1
397 323	-311 240	95 611	-14 976	1273	-56	1
396 971	-311 208	95 611	-14 976	1273	-56	1
397 035	-311 208	95 611	-14 976	1273	-56	1
396 683	-311 176	95 611	-14 976	1273	-56	1
396 747	-311 176	95 611	-14 976	1273	-56	1
399 195	-311 592	95 627	-14 976	1273	-56	1
398 907	-311 560	95 627	-14 976	1273	-56	1
398 555	-311 528	95 627	-14 976	1273	-56	1
398 619	-311 528	95 627	-14 976	1273	-56	1
400 491	-311 880	95 643	-14 976	1273	-56	1
385 443	-308 048	95 331	-14 968	1273	-56	1
387 315	-308 400	95 347	-14 968	1273	-56	1
387 027	-308 368	95 347	-14 968	1273	-56	1
386 739	-308 336	95 347	-14 968	1273	-56	1
388 899	-308 720	95 363	-14 968	1273	-56	1
388 547	-308 688	95 363	-14 968	1273	-56	1
388 611	-308 688	95 363	-14 968	1273	-56	1
388 323	-308 656	95 363	-14 968	1273	-56	1
390 483	-309 040	95 379	-14 968	1273	-56	1
377 307	-305 560	95 083	-14 960	1273	-56	1
378 891	-305 880	95 099	-14 960	1273	-56	1
378 603	-305 848	95 099	-14 960	1273	-56	1
380 187	-306 168	95 115	-14 960	1273	-56	1
371 763	-303 648	94 867	-14 952	1273	-56	1

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{20 529 747, -15 566 672, 4 715 411, -734 776, 62 377, -2744, 49}

Array[c, 7].Transpose[A]

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419 795 c[1] - 318 352 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
419 859 c[1] - 318 352 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
421 603 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
421 667 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
421 731 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
423 411 c[1] - 319 056 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
409 851 c[1] - 315 512 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
411 659 c[1] - 315 864 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],

$411\,723\,c[1] - 315\,864\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $413\,467\,c[1] - 316\,216\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $413\,531\,c[1] - 316\,216\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $413\,595\,c[1] - 316\,216\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $413\,243\,c[1] - 316\,184\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,339\,c[1] - 316\,568\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,403\,c[1] - 316\,568\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,467\,c[1] - 316\,568\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,051\,c[1] - 316\,536\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $415\,115\,c[1] - 316\,536\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $416\,923\,c[1] - 316\,888\,c[2] + 96\,139\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $401\,715\,c[1] - 313\,024\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,523\,c[1] - 313\,376\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,587\,c[1] - 313\,376\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $403\,299\,c[1] - 313\,344\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,331\,c[1] - 313\,728\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,395\,c[1] - 313\,728\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,459\,c[1] - 313\,728\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,107\,c[1] - 313\,696\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $405\,171\,c[1] - 313\,696\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,819\,c[1] - 313\,664\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,619\,c[1] - 314\,112\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,267\,c[1] - 314\,080\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,331\,c[1] - 314\,080\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,979\,c[1] - 314\,048\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $407\,043\,c[1] - 314\,048\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,627\,c[1] - 314\,016\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $409\,203\,c[1] - 314\,432\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,915\,c[1] - 314\,400\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $393\,579\,c[1] - 310\,536\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $395\,387\,c[1] - 310\,888\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $395\,451\,c[1] - 310\,888\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $395\,163\,c[1] - 310\,856\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,875\,c[1] - 310\,824\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $397\,323\,c[1] - 311\,240\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,971\,c[1] - 311\,208\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $397\,035\,c[1] - 311\,208\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,683\,c[1] - 311\,176\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,747\,c[1] - 311\,176\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $399\,195\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,907\,c[1] - 311\,560\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,555\,c[1] - 311\,528\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,619\,c[1] - 311\,528\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $400\,491\,c[1] - 311\,880\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $385\,443\,c[1] - 308\,048\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $387\,315\,c[1] - 308\,400\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $387\,027\,c[1] - 308\,368\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$

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386 739 c[1] - 308 336 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 899 c[1] - 308 720 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 547 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
388 323 c[1] - 308 656 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 483 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
378 603 c[1] - 305 848 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 187 c[1] - 306 168 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
371 763 c[1] - 303 648 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] }

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Array[c, 7].g

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20 529 747 c[1] - 15 566 672 c[2] + 4 715 411 c[3] -
734 776 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

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cert =

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Flatten[Array[c, 7] /. FindInstance[20 529 747 c[1] - 15 566 672 c[2] + 4 715 411 c[3] -
734 776 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
429 739 c[1] - 321 192 c[2] + 96 603 c[3] - 15 008 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 417 987 c[1] - 318 000 c[2] + 96 323 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 419 795 c[1] - 318 352 c[2] +
96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
419 859 c[1] - 318 352 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 421 603 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 421 667 c[1] - 318 704 c[2] +
96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
421 731 c[1] - 318 704 c[2] + 96 355 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 423 411 c[1] - 319 056 c[2] + 96 371 c[3] - 15 000 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 409 851 c[1] - 315 512 c[2] +
96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
411 659 c[1] - 315 864 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 723 c[1] - 315 864 c[2] + 96 091 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 413 467 c[1] - 316 216 c[2] +
96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
413 531 c[1] - 316 216 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 413 595 c[1] - 316 216 c[2] + 96 107 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 413 243 c[1] - 316 184 c[2] +
96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
415 339 c[1] - 316 568 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 415 403 c[1] - 316 568 c[2] + 96 123 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 467 c[1] - 316 568 c[2] +
96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
415 051 c[1] - 316 536 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 415 115 c[1] - 316 536 c[2] + 96 123 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 416 923 c[1] - 316 888 c[2] +
96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&

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$$\begin{aligned}
& 401\,715\,c[1] - 313\,024\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 403\,523\,c[1] - 313\,376\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 403\,587\,c[1] - 313\,376\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 403\,299\,c[1] - 313\,344\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 405\,331\,c[1] - 313\,728\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 405\,395\,c[1] - 313\,728\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 405\,459\,c[1] - 313\,728\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 405\,107\,c[1] - 313\,696\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 405\,171\,c[1] - 313\,696\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 404\,819\,c[1] - 313\,664\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 407\,619\,c[1] - 314\,112\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 407\,267\,c[1] - 314\,080\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 407\,331\,c[1] - 314\,080\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 406\,979\,c[1] - 314\,048\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 407\,043\,c[1] - 314\,048\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 406\,627\,c[1] - 314\,016\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 409\,203\,c[1] - 314\,432\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 408\,915\,c[1] - 314\,400\,c[2] + \\
& 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 393\,579\,c[1] - 310\,536\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 395\,387\,c[1] - 310\,888\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 395\,451\,c[1] - 310\,888\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 395\,163\,c[1] - 310\,856\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 394\,875\,c[1] - 310\,824\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 397\,323\,c[1] - 311\,240\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 396\,971\,c[1] - 311\,208\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 397\,035\,c[1] - 311\,208\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 396\,683\,c[1] - 311\,176\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 396\,747\,c[1] - 311\,176\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 399\,195\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 398\,907\,c[1] - 311\,560\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 398\,555\,c[1] - 311\,528\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 398\,619\,c[1] - 311\,528\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 400\,491\,c[1] - 311\,880\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 385\,443\,c[1] - 308\,048\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 387\,315\,c[1] - 308\,400\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 387\,027\,c[1] - 308\,368\,c[2] +
\end{aligned}$$

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95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
386 739 c[1] - 308 336 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 388 899 c[1] - 308 720 c[2] + 95 363 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 388 547 c[1] - 308 688 c[2] +
95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 388 323 c[1] - 308 656 c[2] + 95 363 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 390 483 c[1] - 309 040 c[2] +
95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 378 603 c[1] - 305 848 c[2] +
95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
380 187 c[1] - 306 168 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 371 763 c[1] - 303 648 c[2] + 94 867 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{104 149, 802 935, 5 270 911, 19 725 270, 0, 0, 0}

```

```
GCD[104 149, 802 935, 5 270 911, 19 725 270, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 19 725 270, 5 270 911, 802 935, 104 149}
```

```
cert.g
```

```
-16 442 116
```

```
cert.Transpose[A]
```

```

{9 551 764, 30 508 316, 20 511 164, 27 176 700, 10 514 012, 17 179 548,
23 845 084, 516 860, 31 470 564, 21 473 412, 28 138 948, 11 476 260, 18 141 796,
24 807 332, 13 840 804, 8 144 644, 14 810 180, 21 475 716, 3 843 652, 10 509 188,
512 036, 32 432 812, 22 435 660, 29 101 196, 24 800 204, 12 438 508, 19 104 044,
25 769 580, 14 803 052, 21 468 588, 10 502 060, 26 738 956, 15 772 428,
22 437 964, 11 471 436, 18 136 972, 504 908, 19 106 348, 14 805 356, 33 395 060,
23 397 908, 30 063 444, 25 762 452, 21 461 460, 26 731 828, 15 765 300, 22 430 836,
11 464 308, 18 129 844, 23 400 212, 19 099 220, 8 132 692, 14 798 228, 11 466 612,
34 357 308, 31 025 692, 26 724 700, 22 423 708, 23 393 084, 12 426 556, 19 092 092,
14 791 100, 15 760 476, 35 319 556, 27 686 948, 23 385 956, 15 753 348, 12 414 604}

```

```
chi = listdim17[[37]]
```

```
 $(-9 + x)^{10} (-8 + x) (5 + x)^{32} (-1009 + 311 x - 31 x^2 + x^3)^2$ 
```

```

CoefficientList[feasibleinterlacingpolylist[chi], x]
{{-33 939, 22 689, -5810, 718, -43, 1}, {-33 291, 22 545, -5802, 718, -43, 1},
{-32 787, 22 417, -5794, 718, -43, 1}, {-32 139, 22 273, -5786, 718, -43, 1}}

A = {{-33 939, 22 689, -5810, 718, -43, 1}, {-33 291, 22 545, -5802, 718, -43, 1},
{-32 787, 22 417, -5794, 718, -43, 1}, {-32 139, 22 273, -5786, 718, -43, 1}};

A // MatrixForm

$$\begin{pmatrix} -33\,939 & 22\,689 & -5810 & 718 & -43 & 1 \\ -33\,291 & 22\,545 & -5802 & 718 & -43 & 1 \\ -32\,787 & 22\,417 & -5794 & 718 & -43 & 1 \\ -32\,139 & 22\,273 & -5786 & 718 & -43 & 1 \end{pmatrix}$$


g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{-1 651 811, 1 108 625, -284 466, 35 182, -2107, 49}

Array[c, 6].Transpose[A]
{-33 939 c[1] + 22 689 c[2] - 5810 c[3] + 718 c[4] - 43 c[5] + c[6],
-33 291 c[1] + 22 545 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6],
-32 787 c[1] + 22 417 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6],
-32 139 c[1] + 22 273 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6]}

Array[c, 6].g
-1 651 811 c[1] + 1 108 625 c[2] - 284 466 c[3] + 35 182 c[4] - 2107 c[5] + 49 c[6]

cert = Flatten[Array[c, 6] /. FindInstance[
-1 651 811 c[1] + 1 108 625 c[2] - 284 466 c[3] + 35 182 c[4] - 2107 c[5] + 49 c[6] < 0 &&
-33 939 c[1] + 22 689 c[2] - 5810 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
-33 291 c[1] + 22 545 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
-32 787 c[1] + 22 417 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
-32 139 c[1] + 22 273 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{2010, 10 159, 27 926, 0, 0, 0}

GCD[2010, 10 159, 27 926, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 27 926, 10 159, 2010}

cert.g
-1 616 251

cert.Transpose[A]
{30 101, 93 093, 29 189, 92 181}

```


chi = listdim17[[38]]

$$(-9 + x)^{12} (5 + x)^{32} (-99556 + 52073x - 10632x^2 + 1062x^3 - 52x^4 + x^5)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {422163, -318608, 96339, -15000, 1273, -56, 1},
  {409995, -315384, 96059, -14992, 1273, -56, 1},
  {412155, -315768, 96075, -14992, 1273, -56, 1},
  {411867, -315736, 96075, -14992, 1273, -56, 1},
  {411579, -315704, 96075, -14992, 1273, -56, 1},
  {414027, -316120, 96091, -14992, 1273, -56, 1},
  {413739, -316088, 96091, -14992, 1273, -56, 1},
  {413451, -316056, 96091, -14992, 1273, -56, 1},
  {415611, -316440, 96107, -14992, 1273, -56, 1},
  {415323, -316408, 96107, -14992, 1273, -56, 1},
  {416907, -316728, 96123, -14992, 1273, -56, 1},
  {398115, -312192, 95779, -14984, 1273, -56, 1},
  {399987, -312544, 95795, -14984, 1273, -56, 1},
  {399699, -312512, 95795, -14984, 1273, -56, 1},
  {402147, -312928, 95811, -14984, 1273, -56, 1},
  {401859, -312896, 95811, -14984, 1273, -56, 1},
  {401571, -312864, 95811, -14984, 1273, -56, 1},
  {401283, -312832, 95811, -14984, 1273, -56, 1},
  {403731, -313248, 95827, -14984, 1273, -56, 1},
  {403443, -313216, 95827, -14984, 1273, -56, 1},
  {403155, -313184, 95827, -14984, 1273, -56, 1},
  {405315, -313568, 95843, -14984, 1273, -56, 1},
  {405027, -313536, 95843, -14984, 1273, -56, 1},
  {404739, -313504, 95843, -14984, 1273, -56, 1},
  {406899, -313888, 95859, -14984, 1273, -56, 1},
  {406611, -313856, 95859, -14984, 1273, -56, 1},
  {408195, -314176, 95875, -14984, 1273, -56, 1},
  {389979, -309704, 95531, -14976, 1273, -56, 1},
  {389691, -309672, 95531, -14976, 1273, -56, 1},
  {391851, -310056, 95547, -14976, 1273, -56, 1},
  {391563, -310024, 95547, -14976, 1273, -56, 1},
  {391275, -309992, 95547, -14976, 1273, -56, 1},
  {390987, -309960, 95547, -14976, 1273, -56, 1},
  {393435, -310376, 95563, -14976, 1273, -56, 1},
  {393147, -310344, 95563, -14976, 1273, -56, 1},
  {392859, -310312, 95563, -14976, 1273, -56, 1},
  {395019, -310696, 95579, -14976, 1273, -56, 1},
```

```

{394 731, -310 664, 95 579, -14 976, 1273, -56, 1},
{394 443, -310 632, 95 579, -14 976, 1273, -56, 1},
{396 603, -311 016, 95 595, -14 976, 1273, -56, 1},
{396 315, -310 984, 95 595, -14 976, 1273, -56, 1},
{398 187, -311 336, 95 611, -14 976, 1273, -56, 1},
{397 899, -311 304, 95 611, -14 976, 1273, -56, 1},
{381 843, -307 216, 95 283, -14 968, 1273, -56, 1},
{381 555, -307 184, 95 283, -14 968, 1273, -56, 1},
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{384 435, -307 792, 95 315, -14 968, 1273, -56, 1},
{384 147, -307 760, 95 315, -14 968, 1273, -56, 1},
{386 307, -308 144, 95 331, -14 968, 1273, -56, 1},
{386 019, -308 112, 95 331, -14 968, 1273, -56, 1},
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{389 475, -308 784, 95 363, -14 968, 1273, -56, 1},
{391 059, -309 104, 95 379, -14 968, 1273, -56, 1},
{373 131, -304 664, 95 035, -14 960, 1273, -56, 1},
{374 715, -304 984, 95 051, -14 960, 1273, -56, 1},
{374 427, -304 952, 95 051, -14 960, 1273, -56, 1},
{376 011, -305 272, 95 067, -14 960, 1273, -56, 1},
{375 723, -305 240, 95 067, -14 960, 1273, -56, 1},
{377 595, -305 592, 95 083, -14 960, 1273, -56, 1},
{377 307, -305 560, 95 083, -14 960, 1273, -56, 1},
{379 179, -305 912, 95 099, -14 960, 1273, -56, 1},
{378 891, -305 880, 95 099, -14 960, 1273, -56, 1},
{380 763, -306 232, 95 115, -14 960, 1273, -56, 1},
{382 347, -306 552, 95 131, -14 960, 1273, -56, 1},
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{367 299, -302 720, 94 819, -14 952, 1273, -56, 1},
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{368 595, -303 008, 94 835, -14 952, 1273, -56, 1},
{370 467, -303 360, 94 851, -14 952, 1273, -56, 1},
{372 051, -303 680, 94 867, -14 952, 1273, -56, 1},
{360 171, -300 488, 94 587, -14 944, 1273, -56, 1},
{361 755, -300 808, 94 603, -14 944, 1273, -56, 1},
{363 339, -301 128, 94 619, -14 944, 1273, -56, 1},
{353 043, -298 256, 94 355, -14 936, 1273, -56, 1}

```

```

A = {{422 163, -318 608, 96 339, -15 000, 1273, -56, 1},
      {409 995, -315 384, 96 059, -14 992, 1273, -56, 1},
      {412 155, -315 768, 96 075, -14 992, 1273, -56, 1},
      {411 867, -315 736, 96 075, -14 992, 1273, -56, 1},

```

```

{411 579, -315 704, 96 075, -14 992, 1273, -56, 1},
{414 027, -316 120, 96 091, -14 992, 1273, -56, 1},
{413 739, -316 088, 96 091, -14 992, 1273, -56, 1},
{413 451, -316 056, 96 091, -14 992, 1273, -56, 1},
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{415 323, -316 408, 96 107, -14 992, 1273, -56, 1},
{416 907, -316 728, 96 123, -14 992, 1273, -56, 1},
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{401 283, -312 832, 95 811, -14 984, 1273, -56, 1},
{403 731, -313 248, 95 827, -14 984, 1273, -56, 1},
{403 443, -313 216, 95 827, -14 984, 1273, -56, 1},
{403 155, -313 184, 95 827, -14 984, 1273, -56, 1},
{405 315, -313 568, 95 843, -14 984, 1273, -56, 1},
{405 027, -313 536, 95 843, -14 984, 1273, -56, 1},
{404 739, -313 504, 95 843, -14 984, 1273, -56, 1},
{406 899, -313 888, 95 859, -14 984, 1273, -56, 1},
{406 611, -313 856, 95 859, -14 984, 1273, -56, 1},
{408 195, -314 176, 95 875, -14 984, 1273, -56, 1},
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{389 691, -309 672, 95 531, -14 976, 1273, -56, 1},
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{391 563, -310 024, 95 547, -14 976, 1273, -56, 1},
{391 275, -309 992, 95 547, -14 976, 1273, -56, 1},
{390 987, -309 960, 95 547, -14 976, 1273, -56, 1},
{393 435, -310 376, 95 563, -14 976, 1273, -56, 1},
{393 147, -310 344, 95 563, -14 976, 1273, -56, 1},
{392 859, -310 312, 95 563, -14 976, 1273, -56, 1},
{395 019, -310 696, 95 579, -14 976, 1273, -56, 1},
{394 731, -310 664, 95 579, -14 976, 1273, -56, 1},
{394 443, -310 632, 95 579, -14 976, 1273, -56, 1},
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{396 315, -310 984, 95 595, -14 976, 1273, -56, 1},
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{381 843, -307 216, 95 283, -14 968, 1273, -56, 1},
{381 555, -307 184, 95 283, -14 968, 1273, -56, 1},
{383 427, -307 536, 95 299, -14 968, 1273, -56, 1},
{383 139, -307 504, 95 299, -14 968, 1273, -56, 1},
{382 851, -307 472, 95 299, -14 968, 1273, -56, 1},
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{384 435, -307 792, 95 315, -14 968, 1273, -56, 1},
{384 147, -307 760, 95 315, -14 968, 1273, -56, 1},

```

```
{386 307, -308 144, 95 331, -14 968, 1273, -56, 1},
{386 019, -308 112, 95 331, -14 968, 1273, -56, 1},
{385 731, -308 080, 95 331, -14 968, 1273, -56, 1},
{387 891, -308 464, 95 347, -14 968, 1273, -56, 1},
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{389 475, -308 784, 95 363, -14 968, 1273, -56, 1},
{391 059, -309 104, 95 379, -14 968, 1273, -56, 1},
{373 131, -304 664, 95 035, -14 960, 1273, -56, 1},
{374 715, -304 984, 95 051, -14 960, 1273, -56, 1},
{374 427, -304 952, 95 051, -14 960, 1273, -56, 1},
{376 011, -305 272, 95 067, -14 960, 1273, -56, 1},
{375 723, -305 240, 95 067, -14 960, 1273, -56, 1},
{377 595, -305 592, 95 083, -14 960, 1273, -56, 1},
{377 307, -305 560, 95 083, -14 960, 1273, -56, 1},
{379 179, -305 912, 95 099, -14 960, 1273, -56, 1},
{378 891, -305 880, 95 099, -14 960, 1273, -56, 1},
{380 763, -306 232, 95 115, -14 960, 1273, -56, 1},
{382 347, -306 552, 95 131, -14 960, 1273, -56, 1},
{366 003, -302 432, 94 803, -14 952, 1273, -56, 1},
{367 299, -302 720, 94 819, -14 952, 1273, -56, 1},
{368 883, -303 040, 94 835, -14 952, 1273, -56, 1},
{368 595, -303 008, 94 835, -14 952, 1273, -56, 1},
{370 467, -303 360, 94 851, -14 952, 1273, -56, 1},
{372 051, -303 680, 94 867, -14 952, 1273, -56, 1},
{360 171, -300 488, 94 587, -14 944, 1273, -56, 1},
{361 755, -300 808, 94 603, -14 944, 1273, -56, 1},
{363 339, -301 128, 94 619, -14 944, 1273, -56, 1},
{353 043, -298 256, 94 355, -14 936, 1273, -56, 1}};
```

```
A // MatrixForm
```

```
( 422 163 -318 608 96 339 -15 000 1273 -56 1 )
409 995 -315 384 96 059 -14 992 1273 -56 1
412 155 -315 768 96 075 -14 992 1273 -56 1
411 867 -315 736 96 075 -14 992 1273 -56 1
411 579 -315 704 96 075 -14 992 1273 -56 1
414 027 -316 120 96 091 -14 992 1273 -56 1
413 739 -316 088 96 091 -14 992 1273 -56 1
413 451 -316 056 96 091 -14 992 1273 -56 1
415 611 -316 440 96 107 -14 992 1273 -56 1
415 323 -316 408 96 107 -14 992 1273 -56 1
416 907 -316 728 96 123 -14 992 1273 -56 1
398 115 -312 192 95 779 -14 984 1273 -56 1
399 987 -312 544 95 795 -14 984 1273 -56 1
399 699 -312 512 95 795 -14 984 1273 -56 1
402 147 -312 928 95 811 -14 984 1273 -56 1
401 859 -312 896 95 811 -14 984 1273 -56 1
401 571 -312 864 95 811 -14 984 1273 -56 1
401 283 -312 832 95 811 -14 984 1273 -56 1
403 731 -313 248 95 827 -14 984 1273 -56 1
403 443 -313 216 95 827 -14 984 1273 -56 1
403 155 -313 184 95 827 -14 984 1273 -56 1
```

405 315	-313 568	95 843	-14 984	1273	-56	1
405 027	-313 536	95 843	-14 984	1273	-56	1
404 739	-313 504	95 843	-14 984	1273	-56	1
406 899	-313 888	95 859	-14 984	1273	-56	1
406 611	-313 856	95 859	-14 984	1273	-56	1
408 195	-314 176	95 875	-14 984	1273	-56	1
389 979	-309 704	95 531	-14 976	1273	-56	1
389 691	-309 672	95 531	-14 976	1273	-56	1
391 851	-310 056	95 547	-14 976	1273	-56	1
391 563	-310 024	95 547	-14 976	1273	-56	1
391 275	-309 992	95 547	-14 976	1273	-56	1
390 987	-309 960	95 547	-14 976	1273	-56	1
393 435	-310 376	95 563	-14 976	1273	-56	1
393 147	-310 344	95 563	-14 976	1273	-56	1
392 859	-310 312	95 563	-14 976	1273	-56	1
395 019	-310 696	95 579	-14 976	1273	-56	1
394 731	-310 664	95 579	-14 976	1273	-56	1
394 443	-310 632	95 579	-14 976	1273	-56	1
396 603	-311 016	95 595	-14 976	1273	-56	1
396 315	-310 984	95 595	-14 976	1273	-56	1
398 187	-311 336	95 611	-14 976	1273	-56	1
397 899	-311 304	95 611	-14 976	1273	-56	1
381 843	-307 216	95 283	-14 968	1273	-56	1
381 555	-307 184	95 283	-14 968	1273	-56	1
383 427	-307 536	95 299	-14 968	1273	-56	1
383 139	-307 504	95 299	-14 968	1273	-56	1
382 851	-307 472	95 299	-14 968	1273	-56	1
384 723	-307 824	95 315	-14 968	1273	-56	1
384 435	-307 792	95 315	-14 968	1273	-56	1
384 147	-307 760	95 315	-14 968	1273	-56	1
386 307	-308 144	95 331	-14 968	1273	-56	1
386 019	-308 112	95 331	-14 968	1273	-56	1
385 731	-308 080	95 331	-14 968	1273	-56	1
387 891	-308 464	95 347	-14 968	1273	-56	1
387 603	-308 432	95 347	-14 968	1273	-56	1
389 475	-308 784	95 363	-14 968	1273	-56	1
391 059	-309 104	95 379	-14 968	1273	-56	1
373 131	-304 664	95 035	-14 960	1273	-56	1
374 715	-304 984	95 051	-14 960	1273	-56	1
374 427	-304 952	95 051	-14 960	1273	-56	1
376 011	-305 272	95 067	-14 960	1273	-56	1
375 723	-305 240	95 067	-14 960	1273	-56	1
377 595	-305 592	95 083	-14 960	1273	-56	1
377 307	-305 560	95 083	-14 960	1273	-56	1
379 179	-305 912	95 099	-14 960	1273	-56	1
378 891	-305 880	95 099	-14 960	1273	-56	1
380 763	-306 232	95 115	-14 960	1273	-56	1
382 347	-306 552	95 131	-14 960	1273	-56	1
366 003	-302 432	94 803	-14 952	1273	-56	1
367 299	-302 720	94 819	-14 952	1273	-56	1
368 883	-303 040	94 835	-14 952	1273	-56	1
368 595	-303 008	94 835	-14 952	1273	-56	1
370 467	-303 360	94 851	-14 952	1273	-56	1
372 051	-303 680	94 867	-14 952	1273	-56	1

$$\begin{pmatrix} 360171 & -300488 & 94587 & -14944 & 1273 & -56 & 1 \\ 361755 & -300808 & 94603 & -14944 & 1273 & -56 & 1 \\ 363339 & -301128 & 94619 & -14944 & 1273 & -56 & 1 \\ 353043 & -298256 & 94355 & -14936 & 1273 & -56 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20355483, -15504520, 4709067, -734592, 62377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```
{422163 c[1] - 318608 c[2] + 96339 c[3] - 15000 c[4] + 1273 c[5] - 56 c[6] + c[7],
409995 c[1] - 315384 c[2] + 96059 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
412155 c[1] - 315768 c[2] + 96075 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
411867 c[1] - 315736 c[2] + 96075 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
411579 c[1] - 315704 c[2] + 96075 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
414027 c[1] - 316120 c[2] + 96091 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
413739 c[1] - 316088 c[2] + 96091 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
413451 c[1] - 316056 c[2] + 96091 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
415611 c[1] - 316440 c[2] + 96107 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
415323 c[1] - 316408 c[2] + 96107 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
416907 c[1] - 316728 c[2] + 96123 c[3] - 14992 c[4] + 1273 c[5] - 56 c[6] + c[7],
398115 c[1] - 312192 c[2] + 95779 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
399987 c[1] - 312544 c[2] + 95795 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
399699 c[1] - 312512 c[2] + 95795 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
402147 c[1] - 312928 c[2] + 95811 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
401859 c[1] - 312896 c[2] + 95811 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
401571 c[1] - 312864 c[2] + 95811 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
401283 c[1] - 312832 c[2] + 95811 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
403731 c[1] - 313248 c[2] + 95827 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
403443 c[1] - 313216 c[2] + 95827 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
403155 c[1] - 313184 c[2] + 95827 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
405315 c[1] - 313568 c[2] + 95843 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
405027 c[1] - 313536 c[2] + 95843 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
404739 c[1] - 313504 c[2] + 95843 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
406899 c[1] - 313888 c[2] + 95859 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
406611 c[1] - 313856 c[2] + 95859 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
408195 c[1] - 314176 c[2] + 95875 c[3] - 14984 c[4] + 1273 c[5] - 56 c[6] + c[7],
389979 c[1] - 309704 c[2] + 95531 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
389691 c[1] - 309672 c[2] + 95531 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
391851 c[1] - 310056 c[2] + 95547 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
391563 c[1] - 310024 c[2] + 95547 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
391275 c[1] - 309992 c[2] + 95547 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
390987 c[1] - 309960 c[2] + 95547 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
393435 c[1] - 310376 c[2] + 95563 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
393147 c[1] - 310344 c[2] + 95563 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
392859 c[1] - 310312 c[2] + 95563 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
395019 c[1] - 310696 c[2] + 95579 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
394731 c[1] - 310664 c[2] + 95579 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
394443 c[1] - 310632 c[2] + 95579 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7],
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396 603 c[1] - 311 016 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
396 315 c[1] - 310 984 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
398 187 c[1] - 311 336 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
397 899 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 843 c[1] - 307 216 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 427 c[1] - 307 536 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 139 c[1] - 307 504 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 435 c[1] - 307 792 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
384 147 c[1] - 307 760 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 307 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
386 019 c[1] - 308 112 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
385 731 c[1] - 308 080 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 891 c[1] - 308 464 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 603 c[1] - 308 432 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
389 475 c[1] - 308 784 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 059 c[1] - 309 104 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
373 131 c[1] - 304 664 c[2] + 95 035 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
374 715 c[1] - 304 984 c[2] + 95 051 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
374 427 c[1] - 304 952 c[2] + 95 051 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
376 011 c[1] - 305 272 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
375 723 c[1] - 305 240 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
379 179 c[1] - 305 912 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 763 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 347 c[1] - 306 552 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
366 003 c[1] - 302 432 c[2] + 94 803 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
367 299 c[1] - 302 720 c[2] + 94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
368 595 c[1] - 303 008 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
370 467 c[1] - 303 360 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
372 051 c[1] - 303 680 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
360 171 c[1] - 300 488 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
361 755 c[1] - 300 808 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
363 339 c[1] - 301 128 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
353 043 c[1] - 298 256 c[2] + 94 355 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] }

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Array[c, 7].g

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20 355 483 c[1] - 15 504 520 c[2] + 4 709 067 c[3] -
734 592 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

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cert =

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Flatten[Array[c, 7] /. FindInstance[20 355 483 c[1] - 15 504 520 c[2] + 4 709 067 c[3] -

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$$\begin{aligned}
& 734\,592\,c[4] + 62\,377\,c[5] - 2744\,c[6] + 49\,c[7] < 0 \&\& \\
& 422\,163\,c[1] - 318\,608\,c[2] + 96\,339\,c[3] - 15\,000\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 409\,995\,c[1] - 315\,384\,c[2] + 96\,059\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 412\,155\,c[1] - 315\,768\,c[2] + \\
& 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 411\,867\,c[1] - 315\,736\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 411\,579\,c[1] - 315\,704\,c[2] + 96\,075\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 414\,027\,c[1] - 316\,120\,c[2] + \\
& 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 413\,739\,c[1] - 316\,088\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 413\,451\,c[1] - 316\,056\,c[2] + 96\,091\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 415\,611\,c[1] - 316\,440\,c[2] + \\
& 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 415\,323\,c[1] - 316\,408\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 416\,907\,c[1] - 316\,728\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 398\,115\,c[1] - 312\,192\,c[2] + \\
& 95\,779\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,987\,c[1] - 312\,544\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,699\,c[1] - 312\,512\,c[2] + 95\,795\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,147\,c[1] - 312\,928\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 401\,859\,c[1] - 312\,896\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 401\,571\,c[1] - 312\,864\,c[2] + 95\,811\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 401\,283\,c[1] - 312\,832\,c[2] + \\
& 95\,811\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 403\,731\,c[1] - 313\,248\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,443\,c[1] - 313\,216\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 403\,155\,c[1] - 313\,184\,c[2] + \\
& 95\,827\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 405\,315\,c[1] - 313\,568\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,027\,c[1] - 313\,536\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 404\,739\,c[1] - 313\,504\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 406\,899\,c[1] - 313\,888\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 406\,611\,c[1] - 313\,856\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,195\,c[1] - 314\,176\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 389\,979\,c[1] - 309\,704\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 389\,691\,c[1] - 309\,672\,c[2] + 95\,531\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 391\,851\,c[1] - 310\,056\,c[2] + \\
& 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 391\,563\,c[1] - 310\,024\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 391\,275\,c[1] - 309\,992\,c[2] + 95\,547\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,987\,c[1] - 309\,960\,c[2] + \\
& 95\,547\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 393\,435\,c[1] - 310\,376\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 393\,147\,c[1] - 310\,344\,c[2] + 95\,563\,c[3] - 14\,976\,c[4] +
\end{aligned}$$

$$\begin{aligned}
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 392\,859\,c[1] - 310\,312\,c[2] + \\
&95\,563\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&395\,019\,c[1] - 310\,696\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 394\,731\,c[1] - 310\,664\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 394\,443\,c[1] - 310\,632\,c[2] + \\
&95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&396\,603\,c[1] - 311\,016\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 396\,315\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 398\,187\,c[1] - 311\,336\,c[2] + \\
&95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&397\,899\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 381\,843\,c[1] - 307\,216\,c[2] + 95\,283\,c[3] - 14\,968\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 381\,555\,c[1] - 307\,184\,c[2] + \\
&95\,283\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&383\,427\,c[1] - 307\,536\,c[2] + 95\,299\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 383\,139\,c[1] - 307\,504\,c[2] + 95\,299\,c[3] - 14\,968\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 382\,851\,c[1] - 307\,472\,c[2] + \\
&95\,299\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&384\,723\,c[1] - 307\,824\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 384\,435\,c[1] - 307\,792\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 384\,147\,c[1] - 307\,760\,c[2] + \\
&95\,315\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&386\,307\,c[1] - 308\,144\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 386\,019\,c[1] - 308\,112\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 385\,731\,c[1] - 308\,080\,c[2] + \\
&95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&387\,891\,c[1] - 308\,464\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 387\,603\,c[1] - 308\,432\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 389\,475\,c[1] - 308\,784\,c[2] + \\
&95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&391\,059\,c[1] - 309\,104\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 373\,131\,c[1] - 304\,664\,c[2] + 95\,035\,c[3] - 14\,960\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 374\,715\,c[1] - 304\,984\,c[2] + \\
&95\,051\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&374\,427\,c[1] - 304\,952\,c[2] + 95\,051\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 376\,011\,c[1] - 305\,272\,c[2] + 95\,067\,c[3] - 14\,960\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 375\,723\,c[1] - 305\,240\,c[2] + \\
&95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&377\,595\,c[1] - 305\,592\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 377\,307\,c[1] - 305\,560\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 379\,179\,c[1] - 305\,912\,c[2] + \\
&95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&378\,891\,c[1] - 305\,880\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
&0 \ \&\& 380\,763\,c[1] - 306\,232\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + \\
&1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 382\,347\,c[1] - 306\,552\,c[2] + \\
&95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
&366\,003\,c[1] - 302\,432\,c[2] + 94\,803\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq
\end{aligned}$$

```

0 && 367 299 c[1] - 302 720 c[2] + 94 819 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 368 883 c[1] - 303 040 c[2] +
94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
368 595 c[1] - 303 008 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 370 467 c[1] - 303 360 c[2] + 94 851 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 372 051 c[1] - 303 680 c[2] +
94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
360 171 c[1] - 300 488 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 361 755 c[1] - 300 808 c[2] + 94 603 c[3] -
14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
363 339 c[1] - 301 128 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 353 043 c[1] - 298 256 c[2] + 94 355 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{14 105, 103 793, 648 675, 2 358 490, 0, 0, 0}

```

```
GCD[14 105, 103 793, 648 675, 2 358 490, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 2 358 490, 648 675, 103 793, 14 105}
```

```
cert.g
```

```
-20 406 500
```

```
cert.Transpose[A]
```

```

{679 796, 917 708, 1 906 796, 1 165 932, 425 068, 2 155 020, 1 414 156, 673 292,
1 662 380, 921 516, 428 876, 1 896 484, 2 144 708, 1 403 844, 3 133 796, 2 392 932,
1 652 068, 911 204, 2 641 156, 1 900 292, 1 159 428, 2 148 516, 1 407 652, 666 788,
1 655 876, 915 012, 422 372, 3 371 708, 2 630 844, 3 619 932, 2 879 068, 2 138 204,
1 397 340, 3 127 292, 2 386 428, 1 645 564, 2 634 652, 1 893 788, 1 152 924, 2 142 012,
1 401 148, 1 649 372, 908 508, 4 846 932, 4 106 068, 4 354 292, 3 613 428, 2 872 564,
3 120 788, 2 379 924, 1 639 060, 2 628 148, 1 887 284, 1 146 420, 2 135 508, 1 394 644,
1 642 868, 1 150 228, 4 840 428, 4 347 788, 3 606 924, 3 114 284, 2 373 420, 2 621 644,
1 880 780, 2 129 004, 1 388 140, 1 636 364, 1 143 724, 4 341 284, 3 107 780, 2 615 140,
1 874 276, 2 122 500, 1 629 860, 2 608 636, 2 115 996, 1 623 356, 2 109 492}

```

```
chi = listdim17[[39]]
```

```
(-9 + x)12 (5 + x)32 (139 - 24 x + x2) (-716 + 251 x - 28 x2 + x3)
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {421587, -318544, 96339, -15000, 1273, -56, 1},
  {421299, -318512, 96339, -15000, 1273, -56, 1},
  {411579, -315704, 96075, -14992, 1273, -56, 1},
  {411291, -315672, 96075, -14992, 1273, -56, 1},
  {411003, -315640, 96075, -14992, 1273, -56, 1},
  {412875, -315992, 96091, -14992, 1273, -56, 1},
  {412587, -315960, 96091, -14992, 1273, -56, 1},
  {401571, -312864, 95811, -14984, 1273, -56, 1},
  {401283, -312832, 95811, -14984, 1273, -56, 1},
  {402867, -313152, 95827, -14984, 1273, -56, 1},
  {402579, -313120, 95827, -14984, 1273, -56, 1},
  {404163, -313440, 95843, -14984, 1273, -56, 1},
  {391563, -310024, 95547, -14976, 1273, -56, 1},
  {391275, -309992, 95547, -14976, 1273, -56, 1},
  {392859, -310312, 95563, -14976, 1273, -56, 1},
  {394155, -310600, 95579, -14976, 1273, -56, 1},
  {395739, -310920, 95595, -14976, 1273, -56, 1},
  {381555, -307184, 95283, -14968, 1273, -56, 1},
  {382851, -307472, 95299, -14968, 1273, -56, 1},
  {384147, -307760, 95315, -14968, 1273, -56, 1},
  {385731, -308080, 95331, -14968, 1273, -56, 1},
  {385443, -308048, 95331, -14968, 1273, -56, 1},
  {387027, -308368, 95347, -14968, 1273, -56, 1},
  {371547, -304344, 95019, -14960, 1273, -56, 1},
  {372843, -304632, 95035, -14960, 1273, -56, 1},
  {375723, -305240, 95067, -14960, 1273, -56, 1},
  {377019, -305528, 95083, -14960, 1273, -56, 1},
  {365715, -302400, 94803, -14952, 1273, -56, 1},
  {369891, -303296, 94851, -14952, 1273, -56, 1},
  {359883, -300456, 94587, -14944, 1273, -56, 1} }
```

```

A = {{421 587, -318 544, 96 339, -15 000, 1273, -56, 1},
      {421 299, -318 512, 96 339, -15 000, 1273, -56, 1},
      {411 579, -315 704, 96 075, -14 992, 1273, -56, 1},
      {411 291, -315 672, 96 075, -14 992, 1273, -56, 1},
      {411 003, -315 640, 96 075, -14 992, 1273, -56, 1},
      {412 875, -315 992, 96 091, -14 992, 1273, -56, 1},
      {412 587, -315 960, 96 091, -14 992, 1273, -56, 1},
      {401 571, -312 864, 95 811, -14 984, 1273, -56, 1},
      {401 283, -312 832, 95 811, -14 984, 1273, -56, 1},
      {402 867, -313 152, 95 827, -14 984, 1273, -56, 1},
      {402 579, -313 120, 95 827, -14 984, 1273, -56, 1},
      {404 163, -313 440, 95 843, -14 984, 1273, -56, 1},
      {391 563, -310 024, 95 547, -14 976, 1273, -56, 1},
      {391 275, -309 992, 95 547, -14 976, 1273, -56, 1},
      {392 859, -310 312, 95 563, -14 976, 1273, -56, 1},
      {394 155, -310 600, 95 579, -14 976, 1273, -56, 1},
      {395 739, -310 920, 95 595, -14 976, 1273, -56, 1},
      {381 555, -307 184, 95 283, -14 968, 1273, -56, 1},
      {382 851, -307 472, 95 299, -14 968, 1273, -56, 1},
      {384 147, -307 760, 95 315, -14 968, 1273, -56, 1},
      {385 731, -308 080, 95 331, -14 968, 1273, -56, 1},
      {385 443, -308 048, 95 331, -14 968, 1273, -56, 1},
      {387 027, -308 368, 95 347, -14 968, 1273, -56, 1},
      {371 547, -304 344, 95 019, -14 960, 1273, -56, 1},
      {372 843, -304 632, 95 035, -14 960, 1273, -56, 1},
      {375 723, -305 240, 95 067, -14 960, 1273, -56, 1},
      {377 019, -305 528, 95 083, -14 960, 1273, -56, 1},
      {365 715, -302 400, 94 803, -14 952, 1273, -56, 1},
      {369 891, -303 296, 94 851, -14 952, 1273, -56, 1},
      {359 883, -300 456, 94 587, -14 944, 1273, -56, 1}};

```

A // MatrixForm

$$\begin{pmatrix} 421587 & -318544 & 96339 & -15000 & 1273 & -56 & 1 \\ 421299 & -318512 & 96339 & -15000 & 1273 & -56 & 1 \\ 411579 & -315704 & 96075 & -14992 & 1273 & -56 & 1 \\ 411291 & -315672 & 96075 & -14992 & 1273 & -56 & 1 \\ 411003 & -315640 & 96075 & -14992 & 1273 & -56 & 1 \\ 412875 & -315992 & 96091 & -14992 & 1273 & -56 & 1 \\ 412587 & -315960 & 96091 & -14992 & 1273 & -56 & 1 \\ 401571 & -312864 & 95811 & -14984 & 1273 & -56 & 1 \\ 401283 & -312832 & 95811 & -14984 & 1273 & -56 & 1 \\ 402867 & -313152 & 95827 & -14984 & 1273 & -56 & 1 \\ 402579 & -313120 & 95827 & -14984 & 1273 & -56 & 1 \\ 404163 & -313440 & 95843 & -14984 & 1273 & -56 & 1 \\ 391563 & -310024 & 95547 & -14976 & 1273 & -56 & 1 \\ 391275 & -309992 & 95547 & -14976 & 1273 & -56 & 1 \\ 392859 & -310312 & 95563 & -14976 & 1273 & -56 & 1 \\ 394155 & -310600 & 95579 & -14976 & 1273 & -56 & 1 \\ 395739 & -310920 & 95595 & -14976 & 1273 & -56 & 1 \\ 381555 & -307184 & 95283 & -14968 & 1273 & -56 & 1 \\ 382851 & -307472 & 95299 & -14968 & 1273 & -56 & 1 \\ 384147 & -307760 & 95315 & -14968 & 1273 & -56 & 1 \\ 385731 & -308080 & 95331 & -14968 & 1273 & -56 & 1 \\ 385443 & -308048 & 95331 & -14968 & 1273 & -56 & 1 \\ 387027 & -308368 & 95347 & -14968 & 1273 & -56 & 1 \\ 371547 & -304344 & 95019 & -14960 & 1273 & -56 & 1 \\ 372843 & -304632 & 95035 & -14960 & 1273 & -56 & 1 \\ 375723 & -305240 & 95067 & -14960 & 1273 & -56 & 1 \\ 377019 & -305528 & 95083 & -14960 & 1273 & -56 & 1 \\ 365715 & -302400 & 94803 & -14952 & 1273 & -56 & 1 \\ 369891 & -303296 & 94851 & -14952 & 1273 & -56 & 1 \\ 359883 & -300456 & 94587 & -14944 & 1273 & -56 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{20348187, -15503112, 4709067, -734592, 62377, -2744, 49}

Array[c, 7].Transpose[A]

```
{ 421 587 c[1] - 318 544 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  421 299 c[1] - 318 512 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
  411 579 c[1] - 315 704 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  411 291 c[1] - 315 672 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  411 003 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  412 875 c[1] - 315 992 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  412 587 c[1] - 315 960 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
  401 571 c[1] - 312 864 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  401 283 c[1] - 312 832 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  402 867 c[1] - 313 152 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  402 579 c[1] - 313 120 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  404 163 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
  391 563 c[1] - 310 024 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
  391 275 c[1] - 309 992 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
  392 859 c[1] - 310 312 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
  394 155 c[1] - 310 600 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
  395 739 c[1] - 310 920 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
  381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
  382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
  384 147 c[1] - 307 760 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
  385 731 c[1] - 308 080 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
  385 443 c[1] - 308 048 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
  387 027 c[1] - 308 368 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
  371 547 c[1] - 304 344 c[2] + 95 019 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
  372 843 c[1] - 304 632 c[2] + 95 035 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
  375 723 c[1] - 305 240 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
  377 019 c[1] - 305 528 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
  365 715 c[1] - 302 400 c[2] + 94 803 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
  369 891 c[1] - 303 296 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
  359 883 c[1] - 300 456 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7]}
```

Array[c, 7].g

```
20 348 187 c[1] - 15 503 112 c[2] + 4 709 067 c[3] -
  734 592 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]
```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 348 187 c[1] - 15 503 112 c[2] + 4 709 067 c[3] -
  734 592 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 && 421 587 c[1] -
  318 544 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
421 299 c[1] - 318 512 c[2] + 96 339 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 411 579 c[1] - 315 704 c[2] + 96 075 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 291 c[1] - 315 672 c[2] +
  96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
411 003 c[1] - 315 640 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 412 875 c[1] - 315 992 c[2] + 96 091 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 587 c[1] - 315 960 c[2] +
  96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
401 571 c[1] - 312 864 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 401 283 c[1] - 312 832 c[2] + 95 811 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 402 867 c[1] - 313 152 c[2] +
  95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
402 579 c[1] - 313 120 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 404 163 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 391 563 c[1] - 310 024 c[2] +
  95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
391 275 c[1] - 309 992 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 392 859 c[1] - 310 312 c[2] + 95 563 c[3] - 14 976 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 394 155 c[1] - 310 600 c[2] +
  95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
395 739 c[1] - 310 920 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 382 851 c[1] - 307 472 c[2] +
  95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
384 147 c[1] - 307 760 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 385 731 c[1] - 308 080 c[2] + 95 331 c[3] - 14 968 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 385 443 c[1] - 308 048 c[2] +
  95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
387 027 c[1] - 308 368 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 371 547 c[1] - 304 344 c[2] + 95 019 c[3] - 14 960 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 372 843 c[1] - 304 632 c[2] +
  95 035 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
375 723 c[1] - 305 240 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 377 019 c[1] - 305 528 c[2] + 95 083 c[3] - 14 960 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 365 715 c[1] - 302 400 c[2] +
  94 803 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
369 891 c[1] - 303 296 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 359 883 c[1] - 300 456 c[2] + 94 587 c[3] - 14 944 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-1158, -5069, -11 689, 0, 0, 0, 0}

```

```
GCD[-1158, -5069, -11689, 0, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 0, -11689, -5069, -1158}
```

```
cert.g
```

```
-22209981
```

```
cert.Transpose[A]
```

```
{395219, 566515, 674419, 845715, 1017011, 446499, 617795, 953619,
 1124915, 725699, 896995, 497779, 1232819, 1404115, 1004899,
 776979, 377763, 1512019, 1284099, 1056179, 656963, 828259,
 429043, 1791219, 1563299, 936163, 708243, 1215363, 360307, 639507}
```

```
chi = listdim17[[40]]
```

```
 $(-11 + x)^3 (-9 + x)^{10} (-7 + x)^2 (5 + x)^{32} (124 - 23x + x^2)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-40509, 26353, -6550, 782, -45, 1}, {-39573, 26177, -6542, 782, -45, 1},
 {-39717, 26193, -6542, 782, -45, 1}, {-39861, 26209, -6542, 782, -45, 1},
 {-40005, 26225, -6542, 782, -45, 1}, {-40117, 26241, -6542, 782, -45, 1},
 {-38781, 26017, -6534, 782, -45, 1}, {-38925, 26033, -6534, 782, -45, 1},
 {-39069, 26049, -6534, 782, -45, 1}, {-39213, 26065, -6534, 782, -45, 1},
 {-39357, 26081, -6534, 782, -45, 1}, {-39501, 26097, -6534, 782, -45, 1},
 {-38133, 25873, -6526, 782, -45, 1}, {-38277, 25889, -6526, 782, -45, 1},
 {-38421, 25905, -6526, 782, -45, 1}, {-38565, 25921, -6526, 782, -45, 1},
 {-38709, 25937, -6526, 782, -45, 1}, {-37485, 25729, -6518, 782, -45, 1},
 {-37629, 25745, -6518, 782, -45, 1}, {-37773, 25761, -6518, 782, -45, 1},
 {-37917, 25777, -6518, 782, -45, 1}, {-36837, 25585, -6510, 782, -45, 1},
 {-36981, 25601, -6510, 782, -45, 1}, {-37125, 25617, -6510, 782, -45, 1},
 {-36189, 25441, -6502, 782, -45, 1}, {-36333, 25457, -6502, 782, -45, 1}}
```



```
A = {{-40 509, 26 353, -6550, 782, -45, 1}, {-39 573, 26 177, -6542, 782, -45, 1},
      {-39 717, 26 193, -6542, 782, -45, 1}, {-39 861, 26 209, -6542, 782, -45, 1},
      {-40 005, 26 225, -6542, 782, -45, 1}, {-40 117, 26 241, -6542, 782, -45, 1},
      {-38 781, 26 017, -6534, 782, -45, 1}, {-38 925, 26 033, -6534, 782, -45, 1},
      {-39 069, 26 049, -6534, 782, -45, 1}, {-39 213, 26 065, -6534, 782, -45, 1},
      {-39 357, 26 081, -6534, 782, -45, 1}, {-39 501, 26 097, -6534, 782, -45, 1},
      {-38 133, 25 873, -6526, 782, -45, 1}, {-38 277, 25 889, -6526, 782, -45, 1},
      {-38 421, 25 905, -6526, 782, -45, 1}, {-38 565, 25 921, -6526, 782, -45, 1},
      {-38 709, 25 937, -6526, 782, -45, 1}, {-37 485, 25 729, -6518, 782, -45, 1},
      {-37 629, 25 745, -6518, 782, -45, 1}, {-37 773, 25 761, -6518, 782, -45, 1},
      {-37 917, 25 777, -6518, 782, -45, 1}, {-36 837, 25 585, -6510, 782, -45, 1},
      {-36 981, 25 601, -6510, 782, -45, 1}, {-37 125, 25 617, -6510, 782, -45, 1},
      {-36 189, 25 441, -6502, 782, -45, 1}, {-36 333, 25 457, -6502, 782, -45, 1}};
```

```
A // MatrixForm
```

```
(-40 509 26 353 -6550 782 -45 1)
(-39 573 26 177 -6542 782 -45 1)
(-39 717 26 193 -6542 782 -45 1)
(-39 861 26 209 -6542 782 -45 1)
(-40 005 26 225 -6542 782 -45 1)
(-40 117 26 241 -6542 782 -45 1)
(-38 781 26 017 -6534 782 -45 1)
(-38 925 26 033 -6534 782 -45 1)
(-39 069 26 049 -6534 782 -45 1)
(-39 213 26 065 -6534 782 -45 1)
(-39 357 26 081 -6534 782 -45 1)
(-39 501 26 097 -6534 782 -45 1)
(-38 133 25 873 -6526 782 -45 1)
(-38 277 25 889 -6526 782 -45 1)
(-38 421 25 905 -6526 782 -45 1)
(-38 565 25 921 -6526 782 -45 1)
(-38 709 25 937 -6526 782 -45 1)
(-37 485 25 729 -6518 782 -45 1)
(-37 629 25 745 -6518 782 -45 1)
(-37 773 25 761 -6518 782 -45 1)
(-37 917 25 777 -6518 782 -45 1)
(-36 837 25 585 -6510 782 -45 1)
(-36 981 25 601 -6510 782 -45 1)
(-37 125 25 617 -6510 782 -45 1)
(-36 189 25 441 -6502 782 -45 1)
(-36 333 25 457 -6502 782 -45 1)
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1952 789, 1284 177, -320 542, 38 318, -2205, 49}
```

Array[c, 6].Transpose[A]

```
{ -40 509 c[1] + 26 353 c[2] - 6550 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -39 573 c[1] + 26 177 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -39 717 c[1] + 26 193 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -39 861 c[1] + 26 209 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -40 005 c[1] + 26 225 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -40 117 c[1] + 26 241 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 781 c[1] + 26 017 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 925 c[1] + 26 033 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -39 069 c[1] + 26 049 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -39 213 c[1] + 26 065 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -39 357 c[1] + 26 081 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -39 501 c[1] + 26 097 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 133 c[1] + 25 873 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 277 c[1] + 25 889 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 421 c[1] + 25 905 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 565 c[1] + 25 921 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 709 c[1] + 25 937 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -37 485 c[1] + 25 729 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -37 629 c[1] + 25 745 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -37 773 c[1] + 25 761 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -37 917 c[1] + 25 777 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -36 837 c[1] + 25 585 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -36 981 c[1] + 25 601 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -37 125 c[1] + 25 617 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -36 189 c[1] + 25 441 c[2] - 6502 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -36 333 c[1] + 25 457 c[2] - 6502 c[3] + 782 c[4] - 45 c[5] + c[6] }
```

Array[c, 6].g

```
-1 952 789 c[1] + 1 284 177 c[2] - 320 542 c[3] + 38 318 c[4] - 2205 c[5] + 49 c[6]
```

```

cert = Flatten[Array[c, 6] /. FindInstance[
  -1952789 c[1] + 1284177 c[2] - 320542 c[3] + 38318 c[4] - 2205 c[5] + 49 c[6] < 0 &&
  -40509 c[1] + 26353 c[2] - 6550 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -39573 c[1] + 26177 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -39717 c[1] + 26193 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -39861 c[1] + 26209 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -40005 c[1] + 26225 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -40117 c[1] + 26241 c[2] - 6542 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38781 c[1] + 26017 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38925 c[1] + 26033 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -39069 c[1] + 26049 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -39213 c[1] + 26065 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -39357 c[1] + 26081 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -39501 c[1] + 26097 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38133 c[1] + 25873 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38277 c[1] + 25889 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38421 c[1] + 25905 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38565 c[1] + 25921 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38709 c[1] + 25937 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -37485 c[1] + 25729 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -37629 c[1] + 25745 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -37773 c[1] + 25761 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -37917 c[1] + 25777 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -36837 c[1] + 25585 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -36981 c[1] + 25601 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -37125 c[1] + 25617 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -36189 c[1] + 25441 c[2] - 6502 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -36333 c[1] + 25457 c[2] - 6502 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0,
  Array[c, 6], Integers]]
{-17299, -147036, -1228192, 0, 0, -4870391404}

GCD[-17299, -147036, -1228192, 0, 0, -4870391404]
1

Reverse[cert]
{-4870391404, 0, 0, -1228192, -147036, -17299}

cert.g
-1011193

cert.Transpose[A]
{191679, 52615, 191095, 329575, 468055, 52967, 52031, 190511, 328991,
 467471, 605951, 744431, 189927, 328407, 466887, 605367, 743847,
 327823, 466303, 604783, 743263, 465719, 604199, 742679, 603615, 742095}

```

```
chi = listdim17[[41]]
```

```
(-11 + x) (-9 + x)10 (5 + x)32 (734 908 - 480 063 x + 128 957 x2 - 18 230 x3 + 1430 x4 - 59 x5 + x6)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -74, 2362, -42 442, 469 060, -3 260 110, 13 887 430, -33 055 774, 33 524 667},
      {1, -74, 2362, -42 442, 469 060, -3 260 110, 13 887 494, -33 056 926, 33 529 851},
      {1, -74, 2362, -42 442, 469 060, -3 260 078, 13 886 502, -33 046 846, 33 496 155},
      {1, -74, 2362, -42 442, 469 060, -3 260 078, 13 886 566, -33 047 998, 33 501 339},
      {1, -74, 2362, -42 442, 469 060, -3 260 046, 13 885 638, -33 039 198, 33 473 979},
      {1, -74, 2362, -42 442, 469 060, -3 260 014, 13 884 710, -33 030 270, 33 445 467},
      {1, -74, 2362, -42 442, 469 076, -3 260 750, 13 896 934, -33 117 854, 33 675 147},
      {1, -74, 2362, -42 442, 469 076, -3 260 718, 13 896 006, -33 108 926, 33 646 635},
      {1, -74, 2362, -42 442, 469 076, -3 260 718, 13 896 070, -33 110 206, 33 652 971},
      {1, -74, 2362, -42 442, 469 076, -3 260 686, 13 895 142, -33 101 278, 33 624 459},
      {1, -74, 2362, -42 434, 468 652, -3 251 870, 13 804 982, -32 646 742, 32 719 203},
      {1, -74, 2362, -42 434, 468 652, -3 251 806, 13 803 190, -32 630 166, 32 668 515},
      {1, -74, 2362, -42 434, 468 668, -3 252 478, 13 813 622, -32 701 174, 32 847 507},
      {1, -74, 2362, -42 434, 468 668, -3 252 446, 13 812 694, -32 692 246, 32 818 995},
      {1, -74, 2362, -42 434, 468 668, -3 252 414, 13 811 830, -32 684 470, 32 795 667},
      {1, -74, 2362, -42 434, 468 668, -3 252 382, 13 810 902, -32 675 670, 32 768 307},
      {1, -74, 2362, -42 434, 468 684, -3 253 086, 13 822 198, -32 754 326, 32 969 475},
      {1, -74, 2362, -42 434, 468 684, -3 253 086, 13 822 262, -32 755 606, 32 975 811},
      {1, -74, 2362, -42 434, 468 684, -3 253 054, 13 821 334, -32 746 678, 32 947 299},
      {1, -74, 2362, -42 434, 468 700, -3 253 726, 13 831 766, -32 817 686, 33 126 291},
      {1, -74, 2362, -42 434, 468 700, -3 253 694, 13 830 838, -32 808 758, 33 097 779},
      {1, -74, 2362, -42 434, 468 700, -3 253 694, 13 830 902, -32 810 038, 33 104 115},
      {1, -74, 2362, -42 434, 468 700, -3 253 662, 13 829 974, -32 801 110, 33 075 603},
      {1, -74, 2362, -42 434, 468 700, -3 253 630, 13 829 046, -32 792 182, 33 047 091},
      {1, -74, 2362, -42 434, 468 716, -3 254 302, 13 839 478, -32 863 190, 33 226 083},
      {1, -74, 2362, -42 434, 468 716, -3 254 270, 13 838 550, -32 854 262, 33 197 571},
      {1, -74, 2362, -42 434, 468 716, -3 254 270, 13 838 614, -32 855 542, 33 203 907},
      {1, -74, 2362, -42 426, 468 276, -3 244 846, 13 739 814, -32 346 574, 32 170 347},
      {1, -74, 2362, -42 426, 468 276, -3 244 814, 13 738 886, -32 337 646, 32 141 835},
      {1, -74, 2362, -42 426, 468 276, -3 244 750, 13 737 094, -32 321 070, 32 091 147},
      {1, -74, 2362, -42 426, 468 292, -3 245 422, 13 747 526, -32 392 078, 32 270 139},
      {1, -74, 2362, -42 426, 468 292, -3 245 390, 13 746 598, -32 383 150, 32 241 627},
      {1, -74, 2362, -42 426, 468 308, -3 246 030, 13 756 166, -32 446 510, 32 398 443},
      {1, -74, 2362, -42 426, 468 308, -3 245 998, 13 755 238, -32 437 582, 32 369 931},
      {1, -74, 2362, -42 426, 468 324, -3 246 670, 13 765 670, -32 508 590, 32 548 923},
      {1, -74, 2362, -42 426, 468 324, -3 246 638, 13 764 742, -32 499 662, 32 520 411},
      {1, -74, 2362, -42 426, 468 324, -3 246 638, 13 764 806, -32 500 942, 32 526 747},
```

```
{1, -74, 2362, -42 426, 468 340, -3 247 278, 13 774 310, -32 563 022, 32 677 227},
{1, -74, 2362, -42 426, 468 356, -3 247 886, 13 782 886, -32 616 174, 32 799 195},
{1, -74, 2362, -42 418, 467 884, -3 237 182, 13 665 078, -31 983 046, 31 464 675},
{1, -74, 2362, -42 418, 467 900, -3 237 790, 13 673 718, -32 037 478, 31 592 979},
{1, -74, 2362, -42 418, 467 900, -3 237 758, 13 672 790, -32 028 550, 31 564 467},
{1, -74, 2362, -42 418, 467 916, -3 238 398, 13 682 358, -32 091 910, 31 721 283},
{1, -74, 2362, -42 418, 467 916, -3 238 366, 13 681 430, -32 082 982, 31 692 771},
{1, -74, 2362, -42 418, 467 932, -3 239 006, 13 690 934, -32 145 062, 31 843 251},
{1, -74, 2362, -42 418, 467 932, -3 238 974, 13 690 070, -32 137 414, 31 821 075},
{1, -74, 2362, -42 418, 467 948, -3 239 614, 13 699 574, -32 199 494, 31 971 555},
{1, -74, 2362, -42 418, 467 964, -3 240 254, 13 709 142, -32 262 854, 32 128 371},
{1, -74, 2362, -42 410, 467 508, -3 230 126, 13 598 982, -31 673 950, 30 887 307},
{1, -74, 2362, -42 410, 467 524, -3 230 734, 13 607 622, -31 728 382, 31 015 611},
{1, -74, 2362, -42 410, 467 540, -3 231 342, 13 616 262, -31 782 814, 31 143 915},
{1, -74, 2362, -42 410, 467 556, -3 231 950, 13 624 838, -31 835 966, 31 265 883},
{1, -74, 2362, -42 402, 467 148, -3 223 678, 13 541 526, -31 419 286, 30 438 243},
{1, -74, 2362, -42 394, 466 756, -3 216 046, 13 467 718, -31 064 686, 29 761 083}};
```

```
Dimensions[A]
```

```
{54, 9}
```

```
A // MatrixForm
```

```

1 -74 2362 -42 442 469 060 -3 260 110 13 887 430 -33 055 774 33 524 667
1 -74 2362 -42 442 469 060 -3 260 110 13 887 494 -33 056 926 33 529 851
1 -74 2362 -42 442 469 060 -3 260 078 13 886 502 -33 046 846 33 496 155
1 -74 2362 -42 442 469 060 -3 260 078 13 886 566 -33 047 998 33 501 339
1 -74 2362 -42 442 469 060 -3 260 046 13 885 638 -33 039 198 33 473 979
1 -74 2362 -42 442 469 060 -3 260 014 13 884 710 -33 030 270 33 445 467
1 -74 2362 -42 442 469 076 -3 260 750 13 896 934 -33 117 854 33 675 147
1 -74 2362 -42 442 469 076 -3 260 718 13 896 006 -33 108 926 33 646 635
1 -74 2362 -42 442 469 076 -3 260 718 13 896 070 -33 110 206 33 652 971
1 -74 2362 -42 442 469 076 -3 260 686 13 895 142 -33 101 278 33 624 459
1 -74 2362 -42 434 468 652 -3 251 870 13 804 982 -32 646 742 32 719 203
1 -74 2362 -42 434 468 652 -3 251 806 13 803 190 -32 630 166 32 668 515
1 -74 2362 -42 434 468 668 -3 252 478 13 813 622 -32 701 174 32 847 507
1 -74 2362 -42 434 468 668 -3 252 446 13 812 694 -32 692 246 32 818 995
1 -74 2362 -42 434 468 668 -3 252 414 13 811 830 -32 684 470 32 795 667
1 -74 2362 -42 434 468 668 -3 252 382 13 810 902 -32 675 670 32 768 307
1 -74 2362 -42 434 468 684 -3 253 086 13 822 198 -32 754 326 32 969 475
1 -74 2362 -42 434 468 684 -3 253 086 13 822 262 -32 755 606 32 975 811
1 -74 2362 -42 434 468 684 -3 253 054 13 821 334 -32 746 678 32 947 299
1 -74 2362 -42 434 468 700 -3 253 726 13 831 766 -32 817 686 33 126 291
1 -74 2362 -42 434 468 700 -3 253 694 13 830 838 -32 808 758 33 097 779
1 -74 2362 -42 434 468 700 -3 253 694 13 830 902 -32 810 038 33 104 115
1 -74 2362 -42 434 468 700 -3 253 662 13 829 974 -32 801 110 33 075 603
1 -74 2362 -42 434 468 700 -3 253 630 13 829 046 -32 792 182 33 047 091
1 -74 2362 -42 434 468 716 -3 254 302 13 839 478 -32 863 190 33 226 083
1 -74 2362 -42 434 468 716 -3 254 270 13 838 550 -32 854 262 33 197 571
1 -74 2362 -42 434 468 716 -3 254 270 13 838 614 -32 855 542 33 203 907
1 -74 2362 -42 426 468 276 -3 244 846 13 739 814 -32 346 574 32 170 347
1 -74 2362 -42 426 468 276 -3 244 814 13 738 886 -32 337 646 32 141 835
1 -74 2362 -42 426 468 276 -3 244 750 13 737 094 -32 321 070 32 091 147
1 -74 2362 -42 426 468 292 -3 245 422 13 747 526 -32 392 078 32 270 139
1 -74 2362 -42 426 468 292 -3 245 390 13 746 598 -32 383 150 32 241 627
1 -74 2362 -42 426 468 308 -3 246 030 13 756 166 -32 446 510 32 398 443
1 -74 2362 -42 426 468 308 -3 245 998 13 755 238 -32 437 582 32 369 931
1 -74 2362 -42 426 468 324 -3 246 670 13 765 670 -32 508 590 32 548 923
1 -74 2362 -42 426 468 324 -3 246 638 13 764 742 -32 499 662 32 520 411
1 -74 2362 -42 426 468 324 -3 246 638 13 764 806 -32 500 942 32 526 747
1 -74 2362 -42 426 468 340 -3 247 278 13 774 310 -32 563 022 32 677 227
1 -74 2362 -42 426 468 356 -3 247 886 13 782 886 -32 616 174 32 799 195
1 -74 2362 -42 418 467 884 -3 237 182 13 665 078 -31 983 046 31 464 675
1 -74 2362 -42 418 467 900 -3 237 790 13 673 718 -32 037 478 31 592 979
1 -74 2362 -42 418 467 900 -3 237 758 13 672 790 -32 028 550 31 564 467
1 -74 2362 -42 418 467 916 -3 238 398 13 682 358 -32 091 910 31 721 283
1 -74 2362 -42 418 467 916 -3 238 366 13 681 430 -32 082 982 31 692 771
1 -74 2362 -42 418 467 932 -3 239 006 13 690 934 -32 145 062 31 843 251
1 -74 2362 -42 418 467 932 -3 238 974 13 690 070 -32 137 414 31 821 075
1 -74 2362 -42 418 467 948 -3 239 614 13 699 574 -32 199 494 31 971 555
1 -74 2362 -42 418 467 964 -3 240 254 13 709 142 -32 262 854 32 128 371
1 -74 2362 -42 410 467 508 -3 230 126 13 598 982 -31 673 950 30 887 307
1 -74 2362 -42 410 467 524 -3 230 734 13 607 622 -31 728 382 31 015 611
1 -74 2362 -42 410 467 540 -3 231 342 13 616 262 -31 782 814 31 143 915
1 -74 2362 -42 410 467 556 -3 231 950 13 624 838 -31 835 966 31 265 883
1 -74 2362 -42 402 467 148 -3 223 678 13 541 526 -31 419 286 30 438 243
1 -74 2362 -42 394 466 756 -3 216 046 13 467 718 -31 064 686 29 761 083

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse
```

```
{49, -3626, 115 738, -2 079 642, 22 984 980,  
-159 796 910, 681 243 238, -1 624 429 838, 1 653 287 099}
```

```
Array[c, 9].Transpose[A]
```

```
{c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 060 c[5] -  
3 260 110 c[6] + 13 887 430 c[7] - 33 055 774 c[8] + 33 524 667 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 060 c[5] - 3 260 110 c[6] +  
13 887 494 c[7] - 33 056 926 c[8] + 33 529 851 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 060 c[5] - 3 260 078 c[6] +  
13 886 502 c[7] - 33 046 846 c[8] + 33 496 155 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 060 c[5] - 3 260 078 c[6] +  
13 886 566 c[7] - 33 047 998 c[8] + 33 501 339 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 060 c[5] - 3 260 046 c[6] +  
13 885 638 c[7] - 33 039 198 c[8] + 33 473 979 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 060 c[5] - 3 260 014 c[6] +  
13 884 710 c[7] - 33 030 270 c[8] + 33 445 467 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 076 c[5] - 3 260 750 c[6] + 13 896 934 c[7] -  
33 117 854 c[8] + 33 675 147 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] +  
469 076 c[5] - 3 260 718 c[6] + 13 896 006 c[7] - 33 108 926 c[8] + 33 646 635 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 076 c[5] - 3 260 718 c[6] + 13 896 070 c[7] -  
33 110 206 c[8] + 33 652 971 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] +  
469 076 c[5] - 3 260 686 c[6] + 13 895 142 c[7] - 33 101 278 c[8] + 33 624 459 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 652 c[5] - 3 251 870 c[6] + 13 804 982 c[7] -  
32 646 742 c[8] + 32 719 203 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +  
468 652 c[5] - 3 251 806 c[6] + 13 803 190 c[7] - 32 630 166 c[8] + 32 668 515 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 668 c[5] - 3 252 478 c[6] + 13 813 622 c[7] -  
32 701 174 c[8] + 32 847 507 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +  
468 668 c[5] - 3 252 446 c[6] + 13 812 694 c[7] - 32 692 246 c[8] + 32 818 995 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 668 c[5] - 3 252 414 c[6] + 13 811 830 c[7] -  
32 684 470 c[8] + 32 795 667 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +  
468 668 c[5] - 3 252 382 c[6] + 13 810 902 c[7] - 32 675 670 c[8] + 32 768 307 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 684 c[5] - 3 253 086 c[6] + 13 822 198 c[7] -  
32 754 326 c[8] + 32 969 475 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +  
468 684 c[5] - 3 253 086 c[6] + 13 822 262 c[7] - 32 755 606 c[8] + 32 975 811 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 684 c[5] - 3 253 054 c[6] + 13 821 334 c[7] -  
32 746 678 c[8] + 32 947 299 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +  
468 700 c[5] - 3 253 726 c[6] + 13 831 766 c[7] - 32 817 686 c[8] + 33 126 291 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 700 c[5] - 3 253 694 c[6] + 13 830 838 c[7] -  
32 808 758 c[8] + 33 097 779 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +  
468 700 c[5] - 3 253 694 c[6] + 13 830 902 c[7] - 32 810 038 c[8] + 33 104 115 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 700 c[5] - 3 253 662 c[6] + 13 829 974 c[7] -  
32 801 110 c[8] + 33 075 603 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +  
468 700 c[5] - 3 253 630 c[6] + 13 829 046 c[7] - 32 792 182 c[8] + 33 047 091 c[9],  
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 716 c[5] - 3 254 302 c[6] + 13 839 478 c[7] -  
32 863 190 c[8] + 33 226 083 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +  
468 716 c[5] - 3 254 270 c[6] + 13 838 550 c[7] - 32 854 262 c[8] + 33 197 571 c[9],
```

```

c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 716 c[5] - 3 254 270 c[6] + 13 838 614 c[7] -
32 855 542 c[8] + 33 203 907 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 276 c[5] - 3 244 846 c[6] + 13 739 814 c[7] - 32 346 574 c[8] + 32 170 347 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 276 c[5] - 3 244 814 c[6] + 13 738 886 c[7] -
32 337 646 c[8] + 32 141 835 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 276 c[5] - 3 244 750 c[6] + 13 737 094 c[7] - 32 321 070 c[8] + 32 091 147 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 292 c[5] - 3 245 422 c[6] + 13 747 526 c[7] -
32 392 078 c[8] + 32 270 139 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 292 c[5] - 3 245 390 c[6] + 13 746 598 c[7] - 32 383 150 c[8] + 32 241 627 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 308 c[5] - 3 246 030 c[6] + 13 756 166 c[7] -
32 446 510 c[8] + 32 398 443 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 308 c[5] - 3 245 998 c[6] + 13 755 238 c[7] - 32 437 582 c[8] + 32 369 931 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 324 c[5] - 3 246 670 c[6] + 13 765 670 c[7] -
32 508 590 c[8] + 32 548 923 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 324 c[5] - 3 246 638 c[6] + 13 764 742 c[7] - 32 499 662 c[8] + 32 520 411 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 324 c[5] - 3 246 638 c[6] + 13 764 806 c[7] -
32 500 942 c[8] + 32 526 747 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 340 c[5] - 3 247 278 c[6] + 13 774 310 c[7] - 32 563 022 c[8] + 32 677 227 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 356 c[5] - 3 247 886 c[6] + 13 782 886 c[7] -
32 616 174 c[8] + 32 799 195 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 884 c[5] - 3 237 182 c[6] + 13 665 078 c[7] - 31 983 046 c[8] + 31 464 675 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 900 c[5] - 3 237 790 c[6] + 13 673 718 c[7] -
32 037 478 c[8] + 31 592 979 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 900 c[5] - 3 237 758 c[6] + 13 672 790 c[7] - 32 028 550 c[8] + 31 564 467 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 916 c[5] - 3 238 398 c[6] + 13 682 358 c[7] -
32 091 910 c[8] + 31 721 283 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 916 c[5] - 3 238 366 c[6] + 13 681 430 c[7] - 32 082 982 c[8] + 31 692 771 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 932 c[5] - 3 239 006 c[6] + 13 690 934 c[7] -
32 145 062 c[8] + 31 843 251 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 932 c[5] - 3 238 974 c[6] + 13 690 070 c[7] - 32 137 414 c[8] + 31 821 075 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 948 c[5] - 3 239 614 c[6] + 13 699 574 c[7] -
32 199 494 c[8] + 31 971 555 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 964 c[5] - 3 240 254 c[6] + 13 709 142 c[7] - 32 262 854 c[8] + 32 128 371 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 508 c[5] - 3 230 126 c[6] + 13 598 982 c[7] -
31 673 950 c[8] + 30 887 307 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 524 c[5] - 3 230 734 c[6] + 13 607 622 c[7] - 31 728 382 c[8] + 31 015 611 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 540 c[5] - 3 231 342 c[6] + 13 616 262 c[7] -
31 782 814 c[8] + 31 143 915 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 556 c[5] - 3 231 950 c[6] + 13 624 838 c[7] - 31 835 966 c[8] + 31 265 883 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 148 c[5] - 3 223 678 c[6] + 13 541 526 c[7] -
31 419 286 c[8] + 30 438 243 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] +
466 756 c[5] - 3 216 046 c[6] + 13 467 718 c[7] - 31 064 686 c[8] + 29 761 083 c[9] }

```

```
Array[c, 9].g
```

```

49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 642 c[4] + 22 984 980 c[5] -
159 796 910 c[6] + 681 243 238 c[7] - 1 624 429 838 c[8] + 1 653 287 099 c[9]

```

```
cert = Flatten[Array[c, 9] /.
```

```
FindInstance[49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 642 c[4] + 22 984 980 c[5] -
```


$$\begin{aligned}
& 159\,796\,910\,c[6] + 681\,243\,238\,c[7] - 1\,624\,429\,838\,c[8] + 1\,653\,287\,099\,c[9] < 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,060\,c[5] - 3\,260\,110\,c[6] + \\
& 13\,887\,430\,c[7] - 33\,055\,774\,c[8] + 33\,524\,667\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,060\,c[5] - 3\,260\,110\,c[6] + \\
& 13\,887\,494\,c[7] - 33\,056\,926\,c[8] + 33\,529\,851\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,060\,c[5] - 3\,260\,078\,c[6] + \\
& 13\,886\,502\,c[7] - 33\,046\,846\,c[8] + 33\,496\,155\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,060\,c[5] - 3\,260\,078\,c[6] + \\
& 13\,886\,566\,c[7] - 33\,047\,998\,c[8] + 33\,501\,339\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,060\,c[5] - 3\,260\,046\,c[6] + \\
& 13\,885\,638\,c[7] - 33\,039\,198\,c[8] + 33\,473\,979\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,060\,c[5] - 3\,260\,014\,c[6] + \\
& 13\,884\,710\,c[7] - 33\,030\,270\,c[8] + 33\,445\,467\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,076\,c[5] - 3\,260\,750\,c[6] + \\
& 13\,896\,934\,c[7] - 33\,117\,854\,c[8] + 33\,675\,147\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,076\,c[5] - 3\,260\,718\,c[6] + \\
& 13\,896\,006\,c[7] - 33\,108\,926\,c[8] + 33\,646\,635\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,076\,c[5] - 3\,260\,718\,c[6] + \\
& 13\,896\,070\,c[7] - 33\,110\,206\,c[8] + 33\,652\,971\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,076\,c[5] - 3\,260\,686\,c[6] + \\
& 13\,895\,142\,c[7] - 33\,101\,278\,c[8] + 33\,624\,459\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,652\,c[5] - 3\,251\,870\,c[6] + \\
& 13\,804\,982\,c[7] - 32\,646\,742\,c[8] + 32\,719\,203\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,652\,c[5] - 3\,251\,806\,c[6] + \\
& 13\,803\,190\,c[7] - 32\,630\,166\,c[8] + 32\,668\,515\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,668\,c[5] - 3\,252\,478\,c[6] + \\
& 13\,813\,622\,c[7] - 32\,701\,174\,c[8] + 32\,847\,507\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,668\,c[5] - 3\,252\,446\,c[6] + \\
& 13\,812\,694\,c[7] - 32\,692\,246\,c[8] + 32\,818\,995\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,668\,c[5] - 3\,252\,414\,c[6] + \\
& 13\,811\,830\,c[7] - 32\,684\,470\,c[8] + 32\,795\,667\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,668\,c[5] - 3\,252\,382\,c[6] + \\
& 13\,810\,902\,c[7] - 32\,675\,670\,c[8] + 32\,768\,307\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,684\,c[5] - 3\,253\,086\,c[6] + \\
& 13\,822\,198\,c[7] - 32\,754\,326\,c[8] + 32\,969\,475\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,684\,c[5] - 3\,253\,086\,c[6] + \\
& 13\,822\,262\,c[7] - 32\,755\,606\,c[8] + 32\,975\,811\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,684\,c[5] - 3\,253\,054\,c[6] + \\
& 13\,821\,334\,c[7] - 32\,746\,678\,c[8] + 32\,947\,299\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,700\,c[5] - 3\,253\,726\,c[6] + \\
& 13\,831\,766\,c[7] - 32\,817\,686\,c[8] + 33\,126\,291\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,700\,c[5] - 3\,253\,694\,c[6] + \\
& 13\,830\,838\,c[7] - 32\,808\,758\,c[8] + 33\,097\,779\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,700\,c[5] - 3\,253\,694\,c[6] + \\
& 13\,830\,902\,c[7] - 32\,810\,038\,c[8] + 33\,104\,115\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,700\,c[5] - 3\,253\,662\,c[6] + \\
& 13\,829\,974\,c[7] - 32\,801\,110\,c[8] + 33\,075\,603\,c[9] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,700 c[5] - 3\,253\,630 c[6] + \\
& \quad 13\,829\,046 c[7] - 32\,792\,182 c[8] + 33\,047\,091 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,302 c[6] + \\
& \quad 13\,839\,478 c[7] - 32\,863\,190 c[8] + 33\,226\,083 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,270 c[6] + \\
& \quad 13\,838\,550 c[7] - 32\,854\,262 c[8] + 33\,197\,571 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,270 c[6] + \\
& \quad 13\,838\,614 c[7] - 32\,855\,542 c[8] + 33\,203\,907 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,276 c[5] - 3\,244\,846 c[6] + \\
& \quad 13\,739\,814 c[7] - 32\,346\,574 c[8] + 32\,170\,347 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,276 c[5] - 3\,244\,814 c[6] + \\
& \quad 13\,738\,886 c[7] - 32\,337\,646 c[8] + 32\,141\,835 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,276 c[5] - 3\,244\,750 c[6] + \\
& \quad 13\,737\,094 c[7] - 32\,321\,070 c[8] + 32\,091\,147 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,292 c[5] - 3\,245\,422 c[6] + \\
& \quad 13\,747\,526 c[7] - 32\,392\,078 c[8] + 32\,270\,139 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,292 c[5] - 3\,245\,390 c[6] + \\
& \quad 13\,746\,598 c[7] - 32\,383\,150 c[8] + 32\,241\,627 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,308 c[5] - 3\,246\,030 c[6] + \\
& \quad 13\,756\,166 c[7] - 32\,446\,510 c[8] + 32\,398\,443 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,308 c[5] - 3\,245\,998 c[6] + \\
& \quad 13\,755\,238 c[7] - 32\,437\,582 c[8] + 32\,369\,931 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,670 c[6] + \\
& \quad 13\,765\,670 c[7] - 32\,508\,590 c[8] + 32\,548\,923 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,638 c[6] + \\
& \quad 13\,764\,742 c[7] - 32\,499\,662 c[8] + 32\,520\,411 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,638 c[6] + \\
& \quad 13\,764\,806 c[7] - 32\,500\,942 c[8] + 32\,526\,747 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,278 c[6] + \\
& \quad 13\,774\,310 c[7] - 32\,563\,022 c[8] + 32\,677\,227 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,886 c[6] + \\
& \quad 13\,782\,886 c[7] - 32\,616\,174 c[8] + 32\,799\,195 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,884 c[5] - 3\,237\,182 c[6] + \\
& \quad 13\,665\,078 c[7] - 31\,983\,046 c[8] + 31\,464\,675 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,900 c[5] - 3\,237\,790 c[6] + \\
& \quad 13\,673\,718 c[7] - 32\,037\,478 c[8] + 31\,592\,979 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,900 c[5] - 3\,237\,758 c[6] + \\
& \quad 13\,672\,790 c[7] - 32\,028\,550 c[8] + 31\,564\,467 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,916 c[5] - 3\,238\,398 c[6] + \\
& \quad 13\,682\,358 c[7] - 32\,091\,910 c[8] + 31\,721\,283 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,916 c[5] - 3\,238\,366 c[6] + \\
& \quad 13\,681\,430 c[7] - 32\,082\,982 c[8] + 31\,692\,771 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,932 c[5] - 3\,239\,006 c[6] + \\
& \quad 13\,690\,934 c[7] - 32\,145\,062 c[8] + 31\,843\,251 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,932 c[5] - 3\,238\,974 c[6] + \\
& \quad 13\,690\,070 c[7] - 32\,137\,414 c[8] + 31\,821\,075 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,614 c[6] +
\end{aligned}$$

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13 699 574 c[7] - 32 199 494 c[8] + 31 971 555 c[9] ≥ 0 &&
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13 709 142 c[7] - 32 262 854 c[8] + 32 128 371 c[9] ≥ 0 &&
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13 598 982 c[7] - 31 673 950 c[8] + 30 887 307 c[9] ≥ 0 &&
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13 616 262 c[7] - 31 782 814 c[8] + 31 143 915 c[9] ≥ 0 &&
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13 624 838 c[7] - 31 835 966 c[8] + 31 265 883 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 148 c[5] - 3 223 678 c[6] +
13 541 526 c[7] - 31 419 286 c[8] + 30 438 243 c[9] ≥ 0 &&
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13 467 718 c[7] - 31 064 686 c[8] + 29 761 083 c[9] ≥ 0, Array[c, 9], Integers]]
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{394 163, -309 744, 95 411, -14 968, 1273, -56, 1},
{393 395, -309 680, 95 411, -14 968, 1273, -56, 1},

```



```
{381051, -306264, 95115, -14960, 1273, -56, 1},
{380763, -306232, 95115, -14960, 1273, -56, 1},
{380475, -306200, 95115, -14960, 1273, -56, 1},
{382635, -306584, 95131, -14960, 1273, -56, 1},
{382283, -306552, 95131, -14960, 1273, -56, 1},
{382347, -306552, 95131, -14960, 1273, -56, 1},
{381995, -306520, 95131, -14960, 1273, -56, 1},
{384219, -306904, 95147, -14960, 1273, -56, 1},
{383867, -306872, 95147, -14960, 1273, -56, 1},
{383515, -306840, 95147, -14960, 1273, -56, 1},
{385803, -307224, 95163, -14960, 1273, -56, 1},
{373923, -304032, 94883, -14952, 1273, -56, 1},
{373635, -304000, 94883, -14952, 1273, -56, 1},
{375507, -304352, 94899, -14952, 1273, -56, 1},
{375155, -304320, 94899, -14952, 1273, -56, 1},
{366795, -301800, 94651, -14944, 1273, -56, 1}};
```

```
A // MatrixForm
```

```
( 423795 -319120 96371 -15000 1273 -56 1 )
414683 -316344 96107 -14992 1273 -56 1
414267 -316312 96107 -14992 1273 -56 1
413915 -316280 96107 -14992 1273 -56 1
416075 -316664 96123 -14992 1273 -56 1
416139 -316664 96123 -14992 1273 -56 1
415723 -316632 96123 -14992 1273 -56 1
415787 -316632 96123 -14992 1273 -56 1
415435 -316600 96123 -14992 1273 -56 1
417243 -316952 96139 -14992 1273 -56 1
417307 -316952 96139 -14992 1273 -56 1
416955 -316920 96139 -14992 1273 -56 1
418475 -317240 96155 -14992 1273 -56 1
402515 -313120 95827 -14984 1273 -56 1
404739 -313504 95843 -14984 1273 -56 1
404323 -313472 95843 -14984 1273 -56 1
404387 -313472 95843 -14984 1273 -56 1
404035 -313440 95843 -14984 1273 -56 1
406483 -313856 95859 -14984 1273 -56 1
406547 -313856 95859 -14984 1273 -56 1
406611 -313856 95859 -14984 1273 -56 1
406131 -313824 95859 -14984 1273 -56 1
406195 -313824 95859 -14984 1273 -56 1
406259 -313824 95859 -14984 1273 -56 1
406323 -313824 95859 -14984 1273 -56 1
405843 -313792 95859 -14984 1273 -56 1
405907 -313792 95859 -14984 1273 -56 1
405555 -313760 95859 -14984 1273 -56 1
408419 -314208 95875 -14984 1273 -56 1
408067 -314176 95875 -14984 1273 -56 1
408131 -314176 95875 -14984 1273 -56 1
408195 -314176 95875 -14984 1273 -56 1
407715 -314144 95875 -14984 1273 -56 1
407779 -314144 95875 -14984 1273 -56 1
407843 -314144 95875 -14984 1273 -56 1
```

407 843	-314 144	95 875	-14 984	1273	-56	1
407 363	-314 112	95 875	-14 984	1273	-56	1
407 427	-314 112	95 875	-14 984	1273	-56	1
407 075	-314 080	95 875	-14 984	1273	-56	1
409 651	-314 496	95 891	-14 984	1273	-56	1
409 299	-314 464	95 891	-14 984	1273	-56	1
409 363	-314 464	95 891	-14 984	1273	-56	1
408 947	-314 432	95 891	-14 984	1273	-56	1
408 595	-314 400	95 891	-14 984	1273	-56	1
410 467	-314 752	95 907	-14 984	1273	-56	1
410 115	-314 720	95 907	-14 984	1273	-56	1
394 731	-310 664	95 579	-14 976	1273	-56	1
394 443	-310 632	95 579	-14 976	1273	-56	1
394 155	-310 600	95 579	-14 976	1273	-56	1
396 539	-311 016	95 595	-14 976	1273	-56	1
396 603	-311 016	95 595	-14 976	1273	-56	1
396 187	-310 984	95 595	-14 976	1273	-56	1
396 251	-310 984	95 595	-14 976	1273	-56	1
396 315	-310 984	95 595	-14 976	1273	-56	1
395 963	-310 952	95 595	-14 976	1273	-56	1
396 027	-310 952	95 595	-14 976	1273	-56	1
395 675	-310 920	95 595	-14 976	1273	-56	1
398 475	-311 368	95 611	-14 976	1273	-56	1
398 123	-311 336	95 611	-14 976	1273	-56	1
398 187	-311 336	95 611	-14 976	1273	-56	1
397 771	-311 304	95 611	-14 976	1273	-56	1
397 835	-311 304	95 611	-14 976	1273	-56	1
397 899	-311 304	95 611	-14 976	1273	-56	1
397 483	-311 272	95 611	-14 976	1273	-56	1
397 547	-311 272	95 611	-14 976	1273	-56	1
397 195	-311 240	95 611	-14 976	1273	-56	1
400 059	-311 688	95 627	-14 976	1273	-56	1
399 707	-311 656	95 627	-14 976	1273	-56	1
399 771	-311 656	95 627	-14 976	1273	-56	1
399 355	-311 624	95 627	-14 976	1273	-56	1
399 419	-311 624	95 627	-14 976	1273	-56	1
399 483	-311 624	95 627	-14 976	1273	-56	1
399 003	-311 592	95 627	-14 976	1273	-56	1
399 067	-311 592	95 627	-14 976	1273	-56	1
398 715	-311 560	95 627	-14 976	1273	-56	1
401 643	-312 008	95 643	-14 976	1273	-56	1
401 291	-311 976	95 643	-14 976	1273	-56	1
401 355	-311 976	95 643	-14 976	1273	-56	1
400 939	-311 944	95 643	-14 976	1273	-56	1
401 003	-311 944	95 643	-14 976	1273	-56	1
400 587	-311 912	95 643	-14 976	1273	-56	1
400 235	-311 880	95 643	-14 976	1273	-56	1
402 875	-312 296	95 659	-14 976	1273	-56	1
402 523	-312 264	95 659	-14 976	1273	-56	1
402 107	-312 232	95 659	-14 976	1273	-56	1
401 755	-312 200	95 659	-14 976	1273	-56	1
404 043	-312 584	95 675	-14 976	1273	-56	1
386 307	-308 144	95 331	-14 968	1273	-56	1
387 827	-308 464	95 347	-14 968	1273	-56	1
387 891	-308 464	95 347	-14 968	1273	-56	1

387 603	-308 432	95 347	-14 968	1273	-56	1
387 315	-308 400	95 347	-14 968	1273	-56	1
389 763	-308 816	95 363	-14 968	1273	-56	1
389 411	-308 784	95 363	-14 968	1273	-56	1
389 475	-308 784	95 363	-14 968	1273	-56	1
389 123	-308 752	95 363	-14 968	1273	-56	1
389 187	-308 752	95 363	-14 968	1273	-56	1
388 835	-308 720	95 363	-14 968	1273	-56	1
391 347	-309 136	95 379	-14 968	1273	-56	1
390 995	-309 104	95 379	-14 968	1273	-56	1
391 059	-309 104	95 379	-14 968	1273	-56	1
390 643	-309 072	95 379	-14 968	1273	-56	1
390 707	-309 072	95 379	-14 968	1273	-56	1
390 355	-309 040	95 379	-14 968	1273	-56	1
392 931	-309 456	95 395	-14 968	1273	-56	1
392 579	-309 424	95 395	-14 968	1273	-56	1
392 643	-309 424	95 395	-14 968	1273	-56	1
392 227	-309 392	95 395	-14 968	1273	-56	1
391 875	-309 360	95 395	-14 968	1273	-56	1
394 515	-309 776	95 411	-14 968	1273	-56	1
394 163	-309 744	95 411	-14 968	1273	-56	1
393 395	-309 680	95 411	-14 968	1273	-56	1
381 051	-306 264	95 115	-14 960	1273	-56	1
380 763	-306 232	95 115	-14 960	1273	-56	1
380 475	-306 200	95 115	-14 960	1273	-56	1
382 635	-306 584	95 131	-14 960	1273	-56	1
382 283	-306 552	95 131	-14 960	1273	-56	1
382 347	-306 552	95 131	-14 960	1273	-56	1
381 995	-306 520	95 131	-14 960	1273	-56	1
384 219	-306 904	95 147	-14 960	1273	-56	1
383 867	-306 872	95 147	-14 960	1273	-56	1
383 515	-306 840	95 147	-14 960	1273	-56	1
385 803	-307 224	95 163	-14 960	1273	-56	1
373 923	-304 032	94 883	-14 952	1273	-56	1
373 635	-304 000	94 883	-14 952	1273	-56	1
375 507	-304 352	94 899	-14 952	1273	-56	1
375 155	-304 320	94 899	-14 952	1273	-56	1
366 795	-301 800	94 651	-14 944	1273	-56	1

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 441 595, -15 528 840, 4 710 507, -734 592, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```
{423 795 c[1] - 319 120 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 683 c[1] - 316 344 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 267 c[1] - 316 312 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 915 c[1] - 316 280 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 075 c[1] - 316 664 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 416 139 c[1] - 316 664 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 723 c[1] - 316 632 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 787 c[1] - 316 632 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 435 c[1] - 316 600 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 417 243 c[1] - 316 952 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
```

[illegible]

[illegible]

```

392 579 c[1] - 309 424 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
392 643 c[1] - 309 424 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
392 227 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
391 875 c[1] - 309 360 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 515 c[1] - 309 776 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 163 c[1] - 309 744 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
393 395 c[1] - 309 680 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
381 051 c[1] - 306 264 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
380 763 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
382 635 c[1] - 306 584 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
382 283 c[1] - 306 552 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
382 347 c[1] - 306 552 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
381 995 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
384 219 c[1] - 306 904 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
383 867 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
383 515 c[1] - 306 840 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
385 803 c[1] - 307 224 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
373 923 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
373 635 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
375 507 c[1] - 304 352 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
375 155 c[1] - 304 320 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
366 795 c[1] - 301 800 c[2] + 94 651 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 441 595 c[1] - 15 528 840 c[2] + 4 710 507 c[3] -
734 592 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 441 595 c[1] - 15 528 840 c[2] + 4 710 507 c[3] -
734 592 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
423 795 c[1] - 319 120 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 414 683 c[1] - 316 344 c[2] + 96 107 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 414 267 c[1] - 316 312 c[2] +
96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
413 915 c[1] - 316 280 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 416 075 c[1] - 316 664 c[2] + 96 123 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 416 139 c[1] - 316 664 c[2] +
96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
415 723 c[1] - 316 632 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 415 787 c[1] - 316 632 c[2] + 96 123 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 435 c[1] - 316 600 c[2] +
96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
417 243 c[1] - 316 952 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 417 307 c[1] - 316 952 c[2] + 96 139 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 416 955 c[1] - 316 920 c[2] +
96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&

```

$$\begin{aligned}
& 418\,475\,c[1] - 317\,240\,c[2] + 96\,155\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 402\,515\,c[1] - 313\,120\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 404\,739\,c[1] - 313\,504\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 404\,323\,c[1] - 313\,472\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 404\,387\,c[1] - 313\,472\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 404\,035\,c[1] - 313\,440\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 406\,483\,c[1] - 313\,856\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 406\,547\,c[1] - 313\,856\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 406\,611\,c[1] - 313\,856\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 406\,131\,c[1] - 313\,824\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 406\,195\,c[1] - 313\,824\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 406\,259\,c[1] - 313\,824\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 406\,323\,c[1] - 313\,824\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 405\,843\,c[1] - 313\,792\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 405\,907\,c[1] - 313\,792\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 405\,555\,c[1] - 313\,760\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 408\,419\,c[1] - 314\,208\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 408\,067\,c[1] - 314\,176\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 408\,131\,c[1] - 314\,176\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 408\,195\,c[1] - 314\,176\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 407\,715\,c[1] - 314\,144\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 407\,779\,c[1] - 314\,144\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 407\,843\,c[1] - 314\,144\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 407\,363\,c[1] - 314\,112\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 407\,427\,c[1] - 314\,112\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 407\,075\,c[1] - 314\,080\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 409\,651\,c[1] - 314\,496\,c[2] + \\
& 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 409\,299\,c[1] - 314\,464\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 409\,363\,c[1] - 314\,464\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 408\,947\,c[1] - 314\,432\,c[2] + \\
& 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 408\,595\,c[1] - 314\,400\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 410\,467\,c[1] - 314\,752\,c[2] + 95\,907\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 410\,115\,c[1] - 314\,720\,c[2] + \\
& 95\,907\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& \\
& 394\,731\,c[1] - 310\,664\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \quad \&\& 394\,443\,c[1] - 310\,632\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \quad \&\& 394\,155\,c[1] - 310\,600\,c[2] +
\end{aligned}$$

$$\begin{aligned}
& 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 396\,539\,c[1] - 311\,016\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 396\,603\,c[1] - 311\,016\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 396\,187\,c[1] - 310\,984\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 396\,251\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 396\,315\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 395\,963\,c[1] - 310\,952\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 396\,027\,c[1] - 310\,952\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 395\,675\,c[1] - 310\,920\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 398\,475\,c[1] - 311\,368\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 398\,123\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,187\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,771\,c[1] - 311\,304\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,835\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,899\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,483\,c[1] - 311\,272\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,547\,c[1] - 311\,272\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,195\,c[1] - 311\,240\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,059\,c[1] - 311\,688\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,707\,c[1] - 311\,656\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,771\,c[1] - 311\,656\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,355\,c[1] - 311\,624\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,419\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,483\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,003\,c[1] - 311\,592\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,067\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,715\,c[1] - 311\,560\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 401\,643\,c[1] - 312\,008\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 401\,291\,c[1] - 311\,976\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 401\,355\,c[1] - 311\,976\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,939\,c[1] - 311\,944\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 401\,003\,c[1] - 311\,944\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,587\,c[1] - 311\,912\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,235\,c[1] - 311\,880\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 402\,875\,c[1] - 312\,296\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,523\,c[1] - 312\,264\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 402107 c[1] - 312232 c[2] + \\
& 95659 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 401755 c[1] - 312200 c[2] + 95659 c[3] - 14976 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 404043 c[1] - 312584 c[2] + 95675 c[3] - 14976 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 386307 c[1] - 308144 c[2] + \\
& 95331 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 387827 c[1] - 308464 c[2] + 95347 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 387891 c[1] - 308464 c[2] + 95347 c[3] - 14968 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 387603 c[1] - 308432 c[2] + \\
& 95347 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 387315 c[1] - 308400 c[2] + 95347 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 389763 c[1] - 308816 c[2] + 95363 c[3] - 14968 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 389411 c[1] - 308784 c[2] + \\
& 95363 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 389475 c[1] - 308784 c[2] + 95363 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 389123 c[1] - 308752 c[2] + 95363 c[3] - 14968 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 389187 c[1] - 308752 c[2] + \\
& 95363 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 388835 c[1] - 308720 c[2] + 95363 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 391347 c[1] - 309136 c[2] + 95379 c[3] - 14968 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 390995 c[1] - 309104 c[2] + \\
& 95379 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 391059 c[1] - 309104 c[2] + 95379 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 390643 c[1] - 309072 c[2] + 95379 c[3] - 14968 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 390707 c[1] - 309072 c[2] + \\
& 95379 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 390355 c[1] - 309040 c[2] + 95379 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 392931 c[1] - 309456 c[2] + 95395 c[3] - 14968 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 392579 c[1] - 309424 c[2] + \\
& 95395 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 392643 c[1] - 309424 c[2] + 95395 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 392227 c[1] - 309392 c[2] + 95395 c[3] - 14968 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 391875 c[1] - 309360 c[2] + \\
& 95395 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 394515 c[1] - 309776 c[2] + 95411 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 394163 c[1] - 309744 c[2] + 95411 c[3] - 14968 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 393395 c[1] - 309680 c[2] + \\
& 95411 c[3] - 14968 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 381051 c[1] - 306264 c[2] + 95115 c[3] - 14960 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 380763 c[1] - 306232 c[2] + 95115 c[3] - 14960 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 380475 c[1] - 306200 c[2] + \\
& 95115 c[3] - 14960 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 382635 c[1] - 306584 c[2] + 95131 c[3] - 14960 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq \\
& 0 \& 382283 c[1] - 306552 c[2] + 95131 c[3] - 14960 c[4] + \\
& 1273 c[5] - 56 c[6] + c[7] \geq 0 \& 382347 c[1] - 306552 c[2] + \\
& 95131 c[3] - 14960 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq 0 \& \\
& 381995 c[1] - 306520 c[2] + 95131 c[3] - 14960 c[4] + 1273 c[5] - 56 c[6] + c[7] \geq
\end{aligned}$$

```

0 && 384 219 c[1] - 306 904 c[2] + 95 147 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 383 867 c[1] - 306 872 c[2] +
95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
383 515 c[1] - 306 840 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 385 803 c[1] - 307 224 c[2] + 95 163 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 373 923 c[1] - 304 032 c[2] +
94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
373 635 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 375 507 c[1] - 304 352 c[2] + 94 899 c[3] -
14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
375 155 c[1] - 304 320 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 366 795 c[1] - 301 800 c[2] + 94 651 c[3] - 14 944 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6], c[7]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```

chi = listdim17[[43]]
(-9 + x)11 (5 + x)32 (899 524 - 568 885 x + 147 793 x2 - 20 190 x3 + 1530 x4 - 61 x5 + x6)

```

```

CoefficientList[feasibleinterlacingpolylist[chi], x]

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A = {{1, -65, 1777, -26 457, 231 371, -1 186 427, 3 295 299, -3 811 563},
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{1, -65, 1777, -26 449, 231 035, -1 181 243, 3 260 499, -3 725 811},
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{1, -65, 1777, -26 441, 230 715, -1 176 491, 3 229 523, -3 651 147},
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{1, -65, 1777, -26 441, 230 731, -1 177 019, 3 235 139, -3 670 587},
{1, -65, 1777, -26 441, 230 731, -1 176 987, 3 234 435, -3 666 715},
{1, -65, 1777, -26 441, 230 731, -1 176 987, 3 234 499, -3 667 419},
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{1, -65, 1777, -26409, 229483, -1158939, 3119843, -3397563}};
```

Dimensions[A]

```
{77, 8}
```

A // MatrixForm

```
( 1 -65 1777 -26457 231371 -1186427 3295299 -3811563
 1 -65 1777 -26457 231371 -1186427 3295363 -3812139
 1 -65 1777 -26449 231035 -1181275 3261203 -3729555
 1 -65 1777 -26449 231035 -1181243 3260499 -3725811
 1 -65 1777 -26449 231035 -1181243 3260563 -3726387
 1 -65 1777 -26449 231035 -1181243 3260627 -3726963
 1 -65 1777 -26449 231035 -1181211 3259923 -3723219
 1 -65 1777 -26449 231051 -1181739 3265475 -3741955
 1 -65 1777 -26449 231051 -1181739 3265539 -3742531
 1 -65 1777 -26449 231051 -1181707 3264899 -3739491
 1 -65 1777 -26449 231051 -1181707 3264899 -3739363
 1 -65 1777 -26449 231051 -1181707 3264963 -3740067
 1 -65 1777 -26449 231067 -1182171 3269299 -3753043
 1 -65 1777 -26441 230699 -1176059 3225699 -3640059
 1 -65 1777 -26441 230699 -1176027 3225123 -3637467
 1 -65 1777 -26441 230715 -1176555 3230611 -3655755
 1 -65 1777 -26441 230715 -1176555 3230675 -3656331
 1 -65 1777 -26441 230715 -1176555 3230739 -3656907
 1 -65 1777 -26441 230715 -1176523 3230035 -3653163
 1 -65 1777 -26441 230715 -1176523 3230099 -3653739
 1 -65 1777 -26441 230715 -1176523 3230163 -3654315
 1 -65 1777 -26441 230715 -1176491 3229523 -3651147
 1 -65 1777 -26441 230731 -1177019 3235011 -3669307
 1 -65 1777 -26441 230731 -1177019 3235139 -3670587
 1 -65 1777 -26441 230731 -1176987 3234435 -3666715
 1 -65 1777 -26441 230731 -1176987 3234499 -3667419
 1 -65 1777 -26441 230731 -1176987 3234563 -3667995
 1 -65 1777 -26441 230731 -1176987 3234627 -3668571
 1 -65 1777 -26441 230731 -1176955 3233859 -3664251
 1 -65 1777 -26441 230731 -1176955 3233923 -3664827
 1 -65 1777 -26441 230747 -1177451 3238899 -3680971
 1 -65 1777 -26441 230747 -1177451 3238963 -3681675
 1 -65 1777 -26441 230747 -1177419 3238323 -3678507
 1 -65 1777 -26433 230379 -1171371 3195811 -3570003
 1 -65 1777 -26433 230379 -1171339 3195171 -3566835)
```

```

- - - - -
1 -65 1777 -26433 230395 -1171867 3200851 -3586851
1 -65 1777 -26433 230395 -1171835 3200211 -3583683
1 -65 1777 -26433 230395 -1171835 3200275 -3584259
1 -65 1777 -26433 230395 -1171803 3199571 -3580515
1 -65 1777 -26433 230395 -1171803 3199635 -3581091
1 -65 1777 -26433 230395 -1171771 3199059 -3578499
1 -65 1777 -26433 230395 -1171739 3198483 -3575907
1 -65 1777 -26433 230411 -1172331 3205315 -3601107
1 -65 1777 -26433 230411 -1172299 3204675 -3597939
1 -65 1777 -26433 230411 -1172299 3204739 -3598515
1 -65 1777 -26433 230411 -1172267 3204035 -3594771
1 -65 1777 -26433 230411 -1172267 3204099 -3595347
1 -65 1777 -26433 230411 -1172267 3204163 -3595923
1 -65 1777 -26433 230411 -1172235 3203459 -3592179
1 -65 1777 -26433 230411 -1172235 3203523 -3592755
1 -65 1777 -26433 230411 -1172203 3202883 -3589587
1 -65 1777 -26433 230427 -1172763 3209139 -3612195
1 -65 1777 -26433 230427 -1172731 3208563 -3609603
1 -65 1777 -26433 230427 -1172731 3208627 -3610179
1 -65 1777 -26433 230427 -1172699 3207923 -3606435
1 -65 1777 -26433 230443 -1173195 3212899 -3622579
1 -65 1777 -26425 230059 -1166619 3164707 -3494187
1 -65 1777 -26425 230075 -1167083 3169171 -3508443
1 -65 1777 -26425 230075 -1167051 3168595 -3505851
1 -65 1777 -26425 230091 -1167547 3173635 -3522699
1 -65 1777 -26425 230091 -1167515 3172995 -3519531
1 -65 1777 -26425 230091 -1167515 3173059 -3520107
1 -65 1777 -26425 230091 -1167483 3172419 -3516939
1 -65 1777 -26425 230091 -1167483 3172483 -3517515
1 -65 1777 -26425 230107 -1168043 3178739 -3540123
1 -65 1777 -26425 230107 -1168011 3178099 -3536955
1 -65 1777 -26425 230107 -1167979 3177459 -3533787
1 -65 1777 -26425 230107 -1167979 3177523 -3534363
1 -65 1777 -26425 230107 -1167947 3176883 -3531195
1 -65 1777 -26425 230123 -1168475 3182563 -3551211
1 -65 1777 -26425 230123 -1168443 3181923 -3548043
1 -65 1777 -26417 229771 -1162763 3141955 -3444291
1 -65 1777 -26417 229787 -1163227 3146419 -3458547
1 -65 1777 -26417 229787 -1163195 3145779 -3455379
1 -65 1777 -26417 229803 -1163723 3151523 -3475971
1 -65 1777 -26417 229803 -1163691 3150883 -3472803
1 -65 1777 -26409 229483 -1158939 3119843 -3397563

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse
```

```
{49, -3185, 87073, -1295985, 11321835, -57923403, 160203907, -183989267}
```

```
Array[c, 8].Transpose[A]
```

```

{c[1] - 65 c[2] + 1777 c[3] - 26457 c[4] +
 231371 c[5] - 1186427 c[6] + 3295299 c[7] - 3811563 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26457 c[4] + 231371 c[5] - 1186427 c[6] +
 3295363 c[7] - 3812139 c[8], c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] +
 231035 c[5] - 1181275 c[6] + 3261203 c[7] - 3729555 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] + 231035 c[5] - 1181243 c[6] +

```

$3\,260\,499\,c[7] - 3\,725\,811\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,449\,c[4] +$
 $231\,035\,c[5] - 1\,181\,243\,c[6] + 3\,260\,563\,c[7] - 3\,726\,387\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,449\,c[4] + 231\,035\,c[5] - 1\,181\,243\,c[6] +$
 $3\,260\,627\,c[7] - 3\,726\,963\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,449\,c[4] +$
 $231\,035\,c[5] - 1\,181\,211\,c[6] + 3\,259\,923\,c[7] - 3\,723\,219\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,449\,c[4] + 231\,051\,c[5] - 1\,181\,739\,c[6] +$
 $3\,265\,475\,c[7] - 3\,741\,955\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,449\,c[4] +$
 $231\,051\,c[5] - 1\,181\,739\,c[6] + 3\,265\,539\,c[7] - 3\,742\,531\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,449\,c[4] + 231\,051\,c[5] - 1\,181\,707\,c[6] +$
 $3\,264\,899\,c[7] - 3\,739\,491\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,449\,c[4] +$
 $231\,051\,c[5] - 1\,181\,707\,c[6] + 3\,264\,899\,c[7] - 3\,739\,363\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,449\,c[4] + 231\,051\,c[5] - 1\,181\,707\,c[6] +$
 $3\,264\,963\,c[7] - 3\,740\,067\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,449\,c[4] +$
 $231\,067\,c[5] - 1\,182\,171\,c[6] + 3\,269\,299\,c[7] - 3\,753\,043\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,699\,c[5] - 1\,176\,059\,c[6] +$
 $3\,225\,699\,c[7] - 3\,640\,059\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,699\,c[5] - 1\,176\,027\,c[6] + 3\,225\,123\,c[7] - 3\,637\,467\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,715\,c[5] - 1\,176\,555\,c[6] +$
 $3\,230\,611\,c[7] - 3\,655\,755\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,715\,c[5] - 1\,176\,555\,c[6] + 3\,230\,675\,c[7] - 3\,656\,331\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,715\,c[5] - 1\,176\,555\,c[6] +$
 $3\,230\,739\,c[7] - 3\,656\,907\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,715\,c[5] - 1\,176\,523\,c[6] + 3\,230\,035\,c[7] - 3\,653\,163\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,715\,c[5] - 1\,176\,523\,c[6] +$
 $3\,230\,099\,c[7] - 3\,653\,739\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,715\,c[5] - 1\,176\,523\,c[6] + 3\,230\,163\,c[7] - 3\,654\,315\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,715\,c[5] - 1\,176\,491\,c[6] +$
 $3\,229\,523\,c[7] - 3\,651\,147\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,731\,c[5] - 1\,177\,019\,c[6] + 3\,235\,011\,c[7] - 3\,669\,307\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,177\,019\,c[6] +$
 $3\,235\,139\,c[7] - 3\,670\,587\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,731\,c[5] - 1\,176\,987\,c[6] + 3\,234\,435\,c[7] - 3\,666\,715\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,176\,987\,c[6] +$
 $3\,234\,499\,c[7] - 3\,667\,419\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,731\,c[5] - 1\,176\,987\,c[6] + 3\,234\,563\,c[7] - 3\,667\,995\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,176\,987\,c[6] +$
 $3\,234\,627\,c[7] - 3\,668\,571\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,731\,c[5] - 1\,176\,955\,c[6] + 3\,233\,859\,c[7] - 3\,664\,251\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,176\,955\,c[6] +$
 $3\,233\,923\,c[7] - 3\,664\,827\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,747\,c[5] - 1\,177\,451\,c[6] + 3\,238\,899\,c[7] - 3\,680\,971\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,747\,c[5] - 1\,177\,451\,c[6] +$
 $3\,238\,963\,c[7] - 3\,681\,675\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,747\,c[5] - 1\,177\,419\,c[6] + 3\,238\,323\,c[7] - 3\,678\,507\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,371\,c[6] +$
 $3\,195\,811\,c[7] - 3\,570\,003\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,379\,c[5] - 1\,171\,339\,c[6] + 3\,195\,171\,c[7] - 3\,566\,835\,c[8],$

$c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230395 c[5] - 1171867 c[6] +$
 $3200851 c[7] - 3586851 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230395 c[5] - 1171835 c[6] + 3200211 c[7] - 3583683 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230395 c[5] - 1171835 c[6] +$
 $3200275 c[7] - 3584259 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230395 c[5] - 1171803 c[6] + 3199571 c[7] - 3580515 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230395 c[5] - 1171803 c[6] +$
 $3199635 c[7] - 3581091 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230395 c[5] - 1171771 c[6] + 3199059 c[7] - 3578499 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230395 c[5] - 1171739 c[6] +$
 $3198483 c[7] - 3575907 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230411 c[5] - 1172331 c[6] + 3205315 c[7] - 3601107 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172299 c[6] +$
 $3204675 c[7] - 3597939 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230411 c[5] - 1172299 c[6] + 3204739 c[7] - 3598515 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172267 c[6] +$
 $3204035 c[7] - 3594771 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230411 c[5] - 1172267 c[6] + 3204099 c[7] - 3595347 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172267 c[6] +$
 $3204163 c[7] - 3595923 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230411 c[5] - 1172235 c[6] + 3203459 c[7] - 3592179 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172235 c[6] +$
 $3203523 c[7] - 3592755 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230411 c[5] - 1172203 c[6] + 3202883 c[7] - 3589587 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172763 c[6] +$
 $3209139 c[7] - 3612195 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230427 c[5] - 1172731 c[6] + 3208563 c[7] - 3609603 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172731 c[6] +$
 $3208627 c[7] - 3610179 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230427 c[5] - 1172699 c[6] + 3207923 c[7] - 3606435 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230443 c[5] - 1173195 c[6] +$
 $3212899 c[7] - 3622579 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +$
 $230059 c[5] - 1166619 c[6] + 3164707 c[7] - 3494187 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230075 c[5] - 1167083 c[6] +$
 $3169171 c[7] - 3508443 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +$
 $230075 c[5] - 1167051 c[6] + 3168595 c[7] - 3505851 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167547 c[6] +$
 $3173635 c[7] - 3522699 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +$
 $230091 c[5] - 1167515 c[6] + 3172995 c[7] - 3519531 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167515 c[6] +$
 $3173059 c[7] - 3520107 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +$
 $230091 c[5] - 1167483 c[6] + 3172419 c[7] - 3516939 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167483 c[6] +$
 $3172483 c[7] - 3517515 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +$
 $230107 c[5] - 1168043 c[6] + 3178739 c[7] - 3540123 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168011 c[6] +$
 $3178099 c[7] - 3536955 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +$

```

230 107 c[5] - 1 167 979 c[6] + 3 177 459 c[7] - 3 533 787 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 107 c[5] - 1 167 979 c[6] +
3 177 523 c[7] - 3 534 363 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 107 c[5] - 1 167 947 c[6] + 3 176 883 c[7] - 3 531 195 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 123 c[5] - 1 168 475 c[6] +
3 182 563 c[7] - 3 551 211 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 123 c[5] - 1 168 443 c[6] + 3 181 923 c[7] - 3 548 043 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 771 c[5] - 1 162 763 c[6] +
3 141 955 c[7] - 3 444 291 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 787 c[5] - 1 163 227 c[6] + 3 146 419 c[7] - 3 458 547 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 787 c[5] - 1 163 195 c[6] +
3 145 779 c[7] - 3 455 379 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 803 c[5] - 1 163 723 c[6] + 3 151 523 c[7] - 3 475 971 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 803 c[5] - 1 163 691 c[6] +
3 150 883 c[7] - 3 472 803 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 483 c[5] - 1 158 939 c[6] + 3 119 843 c[7] - 3 397 563 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 985 c[4] +
11 321 835 c[5] - 57 923 403 c[6] + 160 203 907 c[7] - 183 989 267 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 985 c[4] +
11 321 835 c[5] - 57 923 403 c[6] + 160 203 907 c[7] - 183 989 267 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 457 c[4] + 231 371 c[5] - 1 186 427 c[6] +
3 295 299 c[7] - 3 811 563 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 457 c[4] +
231 371 c[5] - 1 186 427 c[6] + 3 295 363 c[7] - 3 812 139 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 035 c[5] - 1 181 275 c[6] +
3 261 203 c[7] - 3 729 555 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
231 035 c[5] - 1 181 243 c[6] + 3 260 499 c[7] - 3 725 811 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 035 c[5] - 1 181 243 c[6] +
3 260 563 c[7] - 3 726 387 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
231 035 c[5] - 1 181 243 c[6] + 3 260 627 c[7] - 3 726 963 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 035 c[5] - 1 181 211 c[6] +
3 259 923 c[7] - 3 723 219 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
231 051 c[5] - 1 181 739 c[6] + 3 265 475 c[7] - 3 741 955 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 051 c[5] - 1 181 739 c[6] +
3 265 539 c[7] - 3 742 531 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
231 051 c[5] - 1 181 707 c[6] + 3 264 899 c[7] - 3 739 491 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 051 c[5] - 1 181 707 c[6] +
3 264 899 c[7] - 3 739 363 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
231 051 c[5] - 1 181 707 c[6] + 3 264 963 c[7] - 3 740 067 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 067 c[5] - 1 182 171 c[6] +
3 269 299 c[7] - 3 753 043 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 699 c[5] - 1 176 059 c[6] + 3 225 699 c[7] - 3 640 059 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 699 c[5] - 1 176 027 c[6] +
3 225 123 c[7] - 3 637 467 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +

```


$$\begin{aligned}
& 230\,715\,c[5] - 1\,176\,555\,c[6] + 3\,230\,611\,c[7] - 3\,655\,755\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,715\,c[5] - 1\,176\,555\,c[6] + \\
& \quad 3\,230\,675\,c[7] - 3\,656\,331\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,715\,c[5] - 1\,176\,555\,c[6] + 3\,230\,739\,c[7] - 3\,656\,907\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,715\,c[5] - 1\,176\,523\,c[6] + \\
& \quad 3\,230\,035\,c[7] - 3\,653\,163\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,715\,c[5] - 1\,176\,523\,c[6] + 3\,230\,099\,c[7] - 3\,653\,739\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,715\,c[5] - 1\,176\,523\,c[6] + \\
& \quad 3\,230\,163\,c[7] - 3\,654\,315\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,715\,c[5] - 1\,176\,491\,c[6] + 3\,229\,523\,c[7] - 3\,651\,147\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,177\,019\,c[6] + \\
& \quad 3\,235\,011\,c[7] - 3\,669\,307\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,731\,c[5] - 1\,177\,019\,c[6] + 3\,235\,139\,c[7] - 3\,670\,587\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,176\,987\,c[6] + \\
& \quad 3\,234\,435\,c[7] - 3\,666\,715\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,731\,c[5] - 1\,176\,987\,c[6] + 3\,234\,499\,c[7] - 3\,667\,419\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,176\,987\,c[6] + \\
& \quad 3\,234\,563\,c[7] - 3\,667\,995\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,731\,c[5] - 1\,176\,987\,c[6] + 3\,234\,627\,c[7] - 3\,668\,571\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,176\,955\,c[6] + \\
& \quad 3\,233\,859\,c[7] - 3\,664\,251\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,731\,c[5] - 1\,176\,955\,c[6] + 3\,233\,923\,c[7] - 3\,664\,827\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,747\,c[5] - 1\,177\,451\,c[6] + \\
& \quad 3\,238\,899\,c[7] - 3\,680\,971\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,747\,c[5] - 1\,177\,451\,c[6] + 3\,238\,963\,c[7] - 3\,681\,675\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,747\,c[5] - 1\,177\,419\,c[6] + \\
& \quad 3\,238\,323\,c[7] - 3\,678\,507\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,379\,c[5] - 1\,171\,371\,c[6] + 3\,195\,811\,c[7] - 3\,570\,003\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,339\,c[6] + \\
& \quad 3\,195\,171\,c[7] - 3\,566\,835\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,867\,c[6] + 3\,200\,851\,c[7] - 3\,586\,851\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,835\,c[6] + \\
& \quad 3\,200\,211\,c[7] - 3\,583\,683\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,835\,c[6] + 3\,200\,275\,c[7] - 3\,584\,259\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,803\,c[6] + \\
& \quad 3\,199\,571\,c[7] - 3\,580\,515\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,803\,c[6] + 3\,199\,635\,c[7] - 3\,581\,091\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,771\,c[6] + \\
& \quad 3\,199\,059\,c[7] - 3\,578\,499\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,739\,c[6] + 3\,198\,483\,c[7] - 3\,575\,907\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,331\,c[6] + \\
& \quad 3\,205\,315\,c[7] - 3\,601\,107\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,299\,c[6] + 3\,204\,675\,c[7] - 3\,597\,939\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,299\,c[6] + \\
& \quad 3\,204\,739\,c[7] - 3\,598\,515\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,267\,c[6] + 3\,204\,035\,c[7] - 3\,594\,771\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,267\,c[6] +
\end{aligned}$$

```

3 204 099 c[7] - 3 595 347 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 411 c[5] - 1 172 267 c[6] + 3 204 163 c[7] - 3 595 923 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 411 c[5] - 1 172 235 c[6] +
3 203 459 c[7] - 3 592 179 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 411 c[5] - 1 172 235 c[6] + 3 203 523 c[7] - 3 592 755 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 411 c[5] - 1 172 203 c[6] +
3 202 883 c[7] - 3 589 587 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 427 c[5] - 1 172 763 c[6] + 3 209 139 c[7] - 3 612 195 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 427 c[5] - 1 172 731 c[6] +
3 208 563 c[7] - 3 609 603 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 427 c[5] - 1 172 731 c[6] + 3 208 627 c[7] - 3 610 179 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 427 c[5] - 1 172 699 c[6] +
3 207 923 c[7] - 3 606 435 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 443 c[5] - 1 173 195 c[6] + 3 212 899 c[7] - 3 622 579 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 059 c[5] - 1 166 619 c[6] +
3 164 707 c[7] - 3 494 187 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 075 c[5] - 1 167 083 c[6] + 3 169 171 c[7] - 3 508 443 c[8] ≥ 0 &&
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3 168 595 c[7] - 3 505 851 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
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3 172 995 c[7] - 3 519 531 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 091 c[5] - 1 167 515 c[6] + 3 173 059 c[7] - 3 520 107 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 091 c[5] - 1 167 483 c[6] +
3 172 419 c[7] - 3 516 939 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 091 c[5] - 1 167 483 c[6] + 3 172 483 c[7] - 3 517 515 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 107 c[5] - 1 168 043 c[6] +
3 178 739 c[7] - 3 540 123 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 107 c[5] - 1 168 011 c[6] + 3 178 099 c[7] - 3 536 955 c[8] ≥ 0 &&
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3 177 459 c[7] - 3 533 787 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 107 c[5] - 1 167 979 c[6] + 3 177 523 c[7] - 3 534 363 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 107 c[5] - 1 167 947 c[6] +
3 176 883 c[7] - 3 531 195 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 123 c[5] - 1 168 475 c[6] + 3 182 563 c[7] - 3 551 211 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 123 c[5] - 1 168 443 c[6] +
3 181 923 c[7] - 3 548 043 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 771 c[5] - 1 162 763 c[6] + 3 141 955 c[7] - 3 444 291 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 787 c[5] - 1 163 227 c[6] +
3 146 419 c[7] - 3 458 547 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 787 c[5] - 1 163 195 c[6] + 3 145 779 c[7] - 3 455 379 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 803 c[5] - 1 163 723 c[6] +
3 151 523 c[7] - 3 475 971 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 803 c[5] - 1 163 691 c[6] + 3 150 883 c[7] - 3 472 803 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 158 939 c[6] +
3 119 843 c[7] - 3 397 563 c[8] ≥ 0, Array[c, 8], Integers]]

```

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GCD[0, 0, 0, 0, 0, 49 785, 28 128, 8819]
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cert.g
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-102 467 932
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```
cert.Transpose[A]
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 88 934 076, 55 732 188, 52 452 636, 49 173 084, 63 982 428, 60 702 876, 57 423 324,
 68 953 116, 36 880 060, 29 192 124, 45 130 300, 40 721 916, 37 442 364, 34 162 812,
 52 251 708, 48 972 156, 21 869 788, 17 461 404, 28 991 196, 91 210 116, 102 739 908,
 59 699 364, 71 229 156, 67 949 604, 82 758 948, 79 479 396, 87 729 636, 95 979 876,
 36 438 852, 47 968 644, 44 689 092, 59 498 436, 56 218 884, 52 939 332, 67 748 676,
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```
chi = listdim17[[44]]
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```
 $(-9 + x)^{12} (5 + x)^{32} (-99\,908 + 52\,105\,x - 10\,632\,x^2 + 1062\,x^3 - 52\,x^4 + x^5)$ 
```

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CoefficientList[feasibleinterlacingpolylist[chi], x]
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388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 059 c[1] - 309 104 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 707 c[1] - 309 072 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 771 c[1] - 309 072 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 355 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 419 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 483 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
390 131 c[1] - 309 008 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 643 c[1] - 309 424 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 291 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 355 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
391 939 c[1] - 309 360 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
392 003 c[1] - 309 360 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
394 227 c[1] - 309 744 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
393 875 c[1] - 309 712 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
379 179 c[1] - 305 912 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 763 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
380 187 c[1] - 306 168 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 347 c[1] - 306 552 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 995 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
382 059 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
381 707 c[1] - 306 488 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 931 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
383 579 c[1] - 306 840 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
385 515 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
372 051 c[1] - 303 680 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
373 635 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
375 219 c[1] - 304 320 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
364 923 c[1] - 301 448 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 434 299 c[1] - 15 527 432 c[2] + 4 710 507 c[3] -
734 592 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 434 299 c[1] - 15 527 432 c[2] + 4 710 507 c[3] -
734 592 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
423 699 c[1] - 319 088 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 947 c[1] - 315 896 c[2] + 96 091 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 414 171 c[1] - 316 280 c[2] +
96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
413 755 c[1] - 316 248 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥

```

$$\begin{aligned}
& 0 \&\& 413\,819\,c[1] - 316\,248\,c[2] + 96\,107\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 415\,979\,c[1] - 316\,632\,c[2] + \\
& 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 416\,043\,c[1] - 316\,632\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 415\,563\,c[1] - 316\,600\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 415\,627\,c[1] - 316\,600\,c[2] + \\
& 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 415\,691\,c[1] - 316\,600\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 415\,275\,c[1] - 316\,568\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 417\,435\,c[1] - 316\,952\,c[2] + \\
& 96\,139\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 417\,083\,c[1] - 316\,920\,c[2] + 96\,139\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 417\,147\,c[1] - 316\,920\,c[2] + 96\,139\,c[3] - 14\,992\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 417\,211\,c[1] - 316\,920\,c[2] + \\
& 96\,139\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 416\,795\,c[1] - 316\,888\,c[2] + 96\,139\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,003\,c[1] - 313\,056\,c[2] + 95\,827\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 403\,811\,c[1] - 313\,408\,c[2] + \\
& 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 403\,875\,c[1] - 313\,408\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,523\,c[1] - 313\,376\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 406\,035\,c[1] - 313\,792\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 405\,619\,c[1] - 313\,760\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,683\,c[1] - 313\,760\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 405\,747\,c[1] - 313\,760\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 405\,331\,c[1] - 313\,728\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,395\,c[1] - 313\,728\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,843\,c[1] - 314\,144\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 407\,907\,c[1] - 314\,144\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,427\,c[1] - 314\,112\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,491\,c[1] - 314\,112\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 407\,555\,c[1] - 314\,112\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,619\,c[1] - 314\,112\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,139\,c[1] - 314\,080\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 407\,203\,c[1] - 314\,080\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,267\,c[1] - 314\,080\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,331\,c[1] - 314\,080\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 406\,915\,c[1] - 314\,048\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 409\,715\,c[1] - 314\,496\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 409\,779\,c[1] - 314\,496\,c[2] + \\
& 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& 409\,363\,c[1] - 314\,464\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 409\,427\,c[1] - 314\,464\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 409\,491\,c[1] - 314\,464\,c[2] + \\
& 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 409\,075\,c[1] - 314\,432\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 409\,139\,c[1] - 314\,432\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 409\,203\,c[1] - 314\,432\,c[2] + \\
& 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 408\,723\,c[1] - 314\,400\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 408\,787\,c[1] - 314\,400\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 410\,947\,c[1] - 314\,784\,c[2] + \\
& 95\,907\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 410\,659\,c[1] - 314\,752\,c[2] + 95\,907\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 393\,867\,c[1] - 310\,568\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 395\,675\,c[1] - 310\,920\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 395\,739\,c[1] - 310\,920\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 395\,451\,c[1] - 310\,888\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 395\,163\,c[1] - 310\,856\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,835\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,899\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,483\,c[1] - 311\,272\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,547\,c[1] - 311\,272\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,611\,c[1] - 311\,272\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,195\,c[1] - 311\,240\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,259\,c[1] - 311\,240\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,323\,c[1] - 311\,240\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 396\,971\,c[1] - 311\,208\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 397\,035\,c[1] - 311\,208\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,771\,c[1] - 311\,656\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,419\,c[1] - 311\,624\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,483\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 399\,067\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,131\,c[1] - 311\,592\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,195\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,779\,c[1] - 311\,560\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 398\,843\,c[1] - 311\,560\,c[2] + \\
& 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 398\,907\,c[1] - 311\,560\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,491\,c[1] - 311\,528\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 401\,355\,c[1] - 311\,976\,c[2] +
\end{aligned}$$

$$\begin{aligned}
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 401\,003\,c[1] - 311\,944\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 401\,067\,c[1] - 311\,944\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,651\,c[1] - 311\,912\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 400\,715\,c[1] - 311\,912\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,779\,c[1] - 311\,912\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,299\,c[1] - 311\,880\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 400\,363\,c[1] - 311\,880\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,011\,c[1] - 311\,848\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,939\,c[1] - 312\,296\,c[2] + \\
& 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 402\,587\,c[1] - 312\,264\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,651\,c[1] - 312\,264\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,235\,c[1] - 312\,232\,c[2] + \\
& 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 402\,299\,c[1] - 312\,232\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,171\,c[1] - 312\,584\,c[2] + 95\,675\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 385\,731\,c[1] - 308\,080\,c[2] + \\
& 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 387\,891\,c[1] - 308\,464\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 387\,539\,c[1] - 308\,432\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 387\,603\,c[1] - 308\,432\,c[2] + \\
& 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 387\,315\,c[1] - 308\,400\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 387\,027\,c[1] - 308\,368\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 389\,475\,c[1] - 308\,784\,c[2] + \\
& 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 389\,123\,c[1] - 308\,752\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 389\,187\,c[1] - 308\,752\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 388\,835\,c[1] - 308\,720\,c[2] + \\
& 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 388\,899\,c[1] - 308\,720\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 388\,547\,c[1] - 308\,688\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 388\,611\,c[1] - 308\,688\,c[2] + \\
& 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 391\,059\,c[1] - 309\,104\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 390\,707\,c[1] - 309\,072\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,771\,c[1] - 309\,072\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 390\,355\,c[1] - 309\,040\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 390\,419\,c[1] - 309\,040\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,483\,c[1] - 309\,040\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 390\,131\,c[1] - 309\,008\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 392\,643\,c[1] - 309\,424\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] +
\end{aligned}$$

```

1273 c[5] - 56 c[6] + c[7] ≥ 0 && 392 291 c[1] - 309 392 c[2] +
95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
392 355 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 391 939 c[1] - 309 360 c[2] + 95 395 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 392 003 c[1] - 309 360 c[2] +
95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
394 227 c[1] - 309 744 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 393 875 c[1] - 309 712 c[2] + 95 411 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 377 595 c[1] - 305 592 c[2] +
95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
379 179 c[1] - 305 912 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 380 763 c[1] - 306 232 c[2] +
95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 380 187 c[1] - 306 168 c[2] + 95 115 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 382 347 c[1] - 306 552 c[2] +
95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
381 995 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 382 059 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 381 707 c[1] - 306 488 c[2] +
95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
383 931 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 383 579 c[1] - 306 840 c[2] + 95 147 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 385 515 c[1] - 307 192 c[2] +
95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
372 051 c[1] - 303 680 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 373 635 c[1] - 304 000 c[2] + 94 883 c[3] -
14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
375 219 c[1] - 304 320 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 364 923 c[1] - 301 448 c[2] + 94 635 c[3] - 14 944 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{7626, 83 879, 663 478, 2 693 660, 0, 0, 0}

GCD[7626, 83 879, 663 478, 2 693 660, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 2 693 660, 663 478, 83 879, 7626}

cert.g
-16 827 928

```

cert.Transpose[A]

```
{1484560, 15381016, 10747352, 10259064, 10747128, 5625400, 6113464, 5137112,
5625176, 6113240, 5624952, 503224, 503000, 991064, 1479128, 990840,
24155520, 19033568, 19521632, 19521408, 14399904, 13911616, 14399680,
14887744, 14399456, 14887520, 9277952, 9766016, 8789664, 9277728, 9765792,
10253856, 9277504, 9765568, 10253632, 10741696, 10253408, 4644064,
5132128, 4643840, 5131904, 5619968, 5131680, 5619744, 6107808, 5131456,
5619520, 497792, 985632, 27808072, 22686120, 23174184, 23662024, 24149864,
17564392, 18052456, 17564168, 18052232, 18540296, 18052008, 18540072,
19028136, 19027912, 19515976, 13418568, 13418344, 13906408, 13418120,
13906184, 14394248, 13905960, 14394024, 14882088, 14393800, 9272520,
9272296, 9760360, 9272072, 9760136, 10248200, 9271848, 9759912, 9759688,
5126472, 5126248, 5614312, 5126024, 5614088, 980200, 31460624, 26338896,
26338672, 26826736, 27314576, 27802416, 22192848, 22192624, 22680688,
22680464, 23168528, 23168304, 23656368, 18046800, 18046576, 18534640,
18046352, 18534416, 19022480, 19022256, 13900752, 13900528, 14388592,
13900304, 14388368, 9754704, 9754480, 35113176, 30967128, 31454968,
26821080, 27308920, 27796760, 22675032, 22674808, 23162872, 23162648,
18528984, 18528760, 14382936, 31449312, 27303264, 23157216, 31931496}
```

chi = listdim17[[45]]

$(-9 + x)^{12} (5 + x)^{32} (87 - 20x + x^2) (-1148 + 335x - 32x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {423 603, -319 056, 96 371, -15 000, 1273, -56, 1},
  {411 435, -315 832, 96 091, -14 992, 1273, -56, 1},
  {415 115, -316 536, 96 123, -14 992, 1273, -56, 1},
  {417 339, -316 920, 96 139, -14 992, 1273, -56, 1},
  {416 923, -316 888, 96 139, -14 992, 1273, -56, 1},
  {416 987, -316 888, 96 139, -14 992, 1273, -56, 1},
  {405 171, -313 696, 95 859, -14 984, 1273, -56, 1},
  {407 043, -314 048, 95 875, -14 984, 1273, -56, 1},
  {408 851, -314 400, 95 891, -14 984, 1273, -56, 1},
  {408 915, -314 400, 95 891, -14 984, 1273, -56, 1},
  {408 499, -314 368, 95 891, -14 984, 1273, -56, 1},
  {411 075, -314 784, 95 907, -14 984, 1273, -56, 1},
  {410 787, -314 752, 95 907, -14 984, 1273, -56, 1},
  {394 875, -310 824, 95 595, -14 976, 1273, -56, 1},
  {396 683, -311 176, 95 611, -14 976, 1273, -56, 1},
  {396 747, -311 176, 95 611, -14 976, 1273, -56, 1},
  {398 907, -311 560, 95 627, -14 976, 1273, -56, 1},
  {398 555, -311 528, 95 627, -14 976, 1273, -56, 1},
  {398 619, -311 528, 95 627, -14 976, 1273, -56, 1},
  {400 779, -311 912, 95 643, -14 976, 1273, -56, 1},
  {400 427, -311 880, 95 643, -14 976, 1273, -56, 1},
  {386 739, -308 336, 95 347, -14 968, 1273, -56, 1},
  {388 547, -308 688, 95 363, -14 968, 1273, -56, 1},
  {388 611, -308 688, 95 363, -14 968, 1273, -56, 1},
  {390 483, -309 040, 95 379, -14 968, 1273, -56, 1},
  {390 131, -309 008, 95 379, -14 968, 1273, -56, 1},
  {378 315, -305 816, 95 099, -14 960, 1273, -56, 1},
  {380 475, -306 200, 95 115, -14 960, 1273, -56, 1},
  {380 187, -306 168, 95 115, -14 960, 1273, -56, 1},
  {382 059, -306 520, 95 131, -14 960, 1273, -56, 1},
  {370 179, -303 328, 94 851, -14 952, 1273, -56, 1},
  {371 763, -303 648, 94 867, -14 952, 1273, -56, 1} }
```

```

A = {{423 603, -319 056, 96 371, -15 000, 1273, -56, 1},
      {411 435, -315 832, 96 091, -14 992, 1273, -56, 1},
      {415 115, -316 536, 96 123, -14 992, 1273, -56, 1},
      {417 339, -316 920, 96 139, -14 992, 1273, -56, 1},
      {416 923, -316 888, 96 139, -14 992, 1273, -56, 1},
      {416 987, -316 888, 96 139, -14 992, 1273, -56, 1},
      {405 171, -313 696, 95 859, -14 984, 1273, -56, 1},
      {407 043, -314 048, 95 875, -14 984, 1273, -56, 1},
      {408 851, -314 400, 95 891, -14 984, 1273, -56, 1},
      {408 915, -314 400, 95 891, -14 984, 1273, -56, 1},
      {408 499, -314 368, 95 891, -14 984, 1273, -56, 1},
      {411 075, -314 784, 95 907, -14 984, 1273, -56, 1},
      {410 787, -314 752, 95 907, -14 984, 1273, -56, 1},
      {394 875, -310 824, 95 595, -14 976, 1273, -56, 1},
      {396 683, -311 176, 95 611, -14 976, 1273, -56, 1},
      {396 747, -311 176, 95 611, -14 976, 1273, -56, 1},
      {398 907, -311 560, 95 627, -14 976, 1273, -56, 1},
      {398 555, -311 528, 95 627, -14 976, 1273, -56, 1},
      {398 619, -311 528, 95 627, -14 976, 1273, -56, 1},
      {400 779, -311 912, 95 643, -14 976, 1273, -56, 1},
      {400 427, -311 880, 95 643, -14 976, 1273, -56, 1},
      {386 739, -308 336, 95 347, -14 968, 1273, -56, 1},
      {388 547, -308 688, 95 363, -14 968, 1273, -56, 1},
      {388 611, -308 688, 95 363, -14 968, 1273, -56, 1},
      {390 483, -309 040, 95 379, -14 968, 1273, -56, 1},
      {390 131, -309 008, 95 379, -14 968, 1273, -56, 1},
      {378 315, -305 816, 95 099, -14 960, 1273, -56, 1},
      {380 475, -306 200, 95 115, -14 960, 1273, -56, 1},
      {380 187, -306 168, 95 115, -14 960, 1273, -56, 1},
      {382 059, -306 520, 95 131, -14 960, 1273, -56, 1},
      {370 179, -303 328, 94 851, -14 952, 1273, -56, 1},
      {371 763, -303 648, 94 867, -14 952, 1273, -56, 1}};

```

A // MatrixForm

$$\begin{pmatrix} 423\,603 & -319\,056 & 96\,371 & -15\,000 & 1273 & -56 & 1 \\ 411\,435 & -315\,832 & 96\,091 & -14\,992 & 1273 & -56 & 1 \\ 415\,115 & -316\,536 & 96\,123 & -14\,992 & 1273 & -56 & 1 \\ 417\,339 & -316\,920 & 96\,139 & -14\,992 & 1273 & -56 & 1 \\ 416\,923 & -316\,888 & 96\,139 & -14\,992 & 1273 & -56 & 1 \\ 416\,987 & -316\,888 & 96\,139 & -14\,992 & 1273 & -56 & 1 \\ 405\,171 & -313\,696 & 95\,859 & -14\,984 & 1273 & -56 & 1 \\ 407\,043 & -314\,048 & 95\,875 & -14\,984 & 1273 & -56 & 1 \\ 408\,851 & -314\,400 & 95\,891 & -14\,984 & 1273 & -56 & 1 \\ 408\,915 & -314\,400 & 95\,891 & -14\,984 & 1273 & -56 & 1 \\ 408\,499 & -314\,368 & 95\,891 & -14\,984 & 1273 & -56 & 1 \\ 411\,075 & -314\,784 & 95\,907 & -14\,984 & 1273 & -56 & 1 \\ 410\,787 & -314\,752 & 95\,907 & -14\,984 & 1273 & -56 & 1 \\ 394\,875 & -310\,824 & 95\,595 & -14\,976 & 1273 & -56 & 1 \\ 396\,683 & -311\,176 & 95\,611 & -14\,976 & 1273 & -56 & 1 \\ 396\,747 & -311\,176 & 95\,611 & -14\,976 & 1273 & -56 & 1 \\ 398\,907 & -311\,560 & 95\,627 & -14\,976 & 1273 & -56 & 1 \\ 398\,555 & -311\,528 & 95\,627 & -14\,976 & 1273 & -56 & 1 \\ 398\,619 & -311\,528 & 95\,627 & -14\,976 & 1273 & -56 & 1 \\ 400\,779 & -311\,912 & 95\,643 & -14\,976 & 1273 & -56 & 1 \\ 400\,427 & -311\,880 & 95\,643 & -14\,976 & 1273 & -56 & 1 \\ 386\,739 & -308\,336 & 95\,347 & -14\,968 & 1273 & -56 & 1 \\ 388\,547 & -308\,688 & 95\,363 & -14\,968 & 1273 & -56 & 1 \\ 388\,611 & -308\,688 & 95\,363 & -14\,968 & 1273 & -56 & 1 \\ 390\,483 & -309\,040 & 95\,379 & -14\,968 & 1273 & -56 & 1 \\ 390\,131 & -309\,008 & 95\,379 & -14\,968 & 1273 & -56 & 1 \\ 378\,315 & -305\,816 & 95\,099 & -14\,960 & 1273 & -56 & 1 \\ 380\,475 & -306\,200 & 95\,115 & -14\,960 & 1273 & -56 & 1 \\ 380\,187 & -306\,168 & 95\,115 & -14\,960 & 1273 & -56 & 1 \\ 382\,059 & -306\,520 & 95\,131 & -14\,960 & 1273 & -56 & 1 \\ 370\,179 & -303\,328 & 94\,851 & -14\,952 & 1273 & -56 & 1 \\ 371\,763 & -303\,648 & 94\,867 & -14\,952 & 1273 & -56 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{20 427 003, -15 526 024, 4 710 507, -734 592, 62 377, -2744, 49}

Array[c, 7].Transpose[A]

```
{ 423 603 c[1] - 319 056 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  411 435 c[1] - 315 832 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  415 115 c[1] - 316 536 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  417 339 c[1] - 316 920 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  416 923 c[1] - 316 888 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  416 987 c[1] - 316 888 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  405 171 c[1] - 313 696 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  407 043 c[1] - 314 048 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  408 851 c[1] - 314 400 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  408 915 c[1] - 314 400 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  408 499 c[1] - 314 368 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  411 075 c[1] - 314 784 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  410 787 c[1] - 314 752 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  394 875 c[1] - 310 824 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  396 683 c[1] - 311 176 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  396 747 c[1] - 311 176 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  398 907 c[1] - 311 560 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  398 555 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  398 619 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  400 779 c[1] - 311 912 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  400 427 c[1] - 311 880 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  386 739 c[1] - 308 336 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  388 547 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  388 611 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  390 483 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  390 131 c[1] - 309 008 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  378 315 c[1] - 305 816 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  380 187 c[1] - 306 168 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  382 059 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  370 179 c[1] - 303 328 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
  371 763 c[1] - 303 648 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] }
```

Array[c, 7].g

```
20 427 003 c[1] - 15 526 024 c[2] + 4 710 507 c[3] -
  734 592 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]
```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 427 003 c[1] - 15 526 024 c[2] + 4 710 507 c[3] -
  734 592 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
  423 603 c[1] - 319 056 c[2] + 96 371 c[3] - 15 000 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 411 435 c[1] - 315 832 c[2] + 96 091 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 115 c[1] - 316 536 c[2] +
  96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  417 339 c[1] - 316 920 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 416 923 c[1] - 316 888 c[2] + 96 139 c[3] - 14 992 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 416 987 c[1] - 316 888 c[2] +
  96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  405 171 c[1] - 313 696 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 407 043 c[1] - 314 048 c[2] + 95 875 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 408 851 c[1] - 314 400 c[2] +
  95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  408 915 c[1] - 314 400 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 408 499 c[1] - 314 368 c[2] + 95 891 c[3] - 14 984 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 075 c[1] - 314 784 c[2] +
  95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  410 787 c[1] - 314 752 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 394 875 c[1] - 310 824 c[2] + 95 595 c[3] - 14 976 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 396 683 c[1] - 311 176 c[2] +
  95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  396 747 c[1] - 311 176 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 398 907 c[1] - 311 560 c[2] + 95 627 c[3] - 14 976 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 398 555 c[1] - 311 528 c[2] +
  95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  398 619 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 400 779 c[1] - 311 912 c[2] + 95 643 c[3] - 14 976 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 400 427 c[1] - 311 880 c[2] +
  95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  386 739 c[1] - 308 336 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 388 547 c[1] - 308 688 c[2] + 95 363 c[3] - 14 968 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 388 611 c[1] - 308 688 c[2] +
  95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  390 483 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 390 131 c[1] - 309 008 c[2] + 95 379 c[3] - 14 968 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 378 315 c[1] - 305 816 c[2] +
  95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 380 187 c[1] - 306 168 c[2] + 95 115 c[3] - 14 960 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 382 059 c[1] - 306 520 c[2] +
  95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
  370 179 c[1] - 303 328 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 371 763 c[1] - 303 648 c[2] + 94 867 c[3] - 14 952 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]

```



```
{4824, 62701, 521244, 2151377, 0, 0, 0}
```

```
GCD[4824, 62701, 521244, 2151377, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 2151377, 521244, 62701, 4824}
```

```
cert.g
```

```
-18190828
```

```
cert.Transpose[A]
```

```
{481140, 15193428, 5484052, 475348, 474996, 783732, 15187636,  
10487316, 5478260, 5786996, 5786644, 469556, 1086676, 25199604,  
20190548, 20499284, 15181844, 15490228, 15798964, 10481524,  
10789908, 29894132, 24885076, 25193812, 20493492, 20801876,  
35205780, 29888340, 30505460, 25805140, 39900308, 35817108}
```

```
chi = listdim17[[46]]
```

```
 $(-11 + x) (-9 + x)^{10} (-7 + x) (5 + x)^{32} (113 - 22x + x^2) (-932 + 293x - 30x^2 + x^3)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -74, 2362, -42450, 469500, -3269310, 13979926, -33506086, 34377651},
      {1, -74, 2362, -42442, 469092, -3261134, 13899462, -33116958, 33637275},
      {1, -74, 2362, -42442, 469092, -3261102, 13898470, -33107006, 33604731},
      {1, -74, 2362, -42442, 469108, -3261742, 13907910, -33168062, 33751179},
      {1, -74, 2362, -42442, 469108, -3261742, 13907974, -33169086, 33755211},
      {1, -74, 2362, -42442, 469108, -3261710, 13907046, -33160286, 33727851},
      {1, -74, 2362, -42442, 469124, -3262350, 13916486, -33221214, 33873147},
      {1, -74, 2362, -42442, 469124, -3262318, 13915622, -33213566, 33850971},
      {1, -74, 2362, -42434, 468700, -3253534, 13826454, -32768982, 32978259},
      {1, -74, 2362, -42434, 468700, -3253502, 13825590, -32761206, 32954931},
      {1, -74, 2362, -42434, 468716, -3254174, 13835894, -32830038, 33124707},
      {1, -74, 2362, -42434, 468716, -3254174, 13835894, -32829910, 33123555},
      {1, -74, 2362, -42434, 468716, -3254174, 13835958, -32831062, 33128739},
      {1, -74, 2362, -42434, 468716, -3254142, 13834966, -32821110, 33096195},
      {1, -74, 2362, -42434, 468716, -3254142, 13835030, -32822262, 33101379},
      {1, -74, 2362, -42434, 468716, -3254142, 13835094, -32823286, 33105411},
      {1, -74, 2362, -42434, 468716, -3254110, 13834166, -32814486, 33078051},
      {1, -74, 2362, -42434, 468732, -3254814, 13845334, -32890838, 33268851},
      {1, -74, 2362, -42434, 468732, -3254782, 13844470, -32883190, 33246675},
      {1, -74, 2362, -42434, 468732, -3254750, 13843606, -32875542, 33224499},
      {1, -74, 2362, -42434, 468732, -3254750, 13843606, -32875414, 33223347},
      {1, -74, 2362, -42434, 468732, -3254750, 13843670, -32876566, 33228531},
      {1, -74, 2362, -42434, 468732, -3254718, 13842742, -32867766, 33201171},
      {1, -74, 2362, -42434, 468748, -3255358, 13852182, -32928694, 33346467},
      {1, -74, 2362, -42426, 468308, -3245934, 13753446, -32421006, 32319243},
      {1, -74, 2362, -42426, 468324, -3246606, 13763878, -32492014, 32498235},
      {1, -74, 2362, -42426, 468324, -3246574, 13762950, -32483086, 32469723},
      {1, -74, 2362, -42426, 468324, -3246574, 13763014, -32484238, 32474907},
      {1, -74, 2362, -42426, 468324, -3246542, 13762086, -32475310, 32446395},
      {1, -74, 2362, -42426, 468324, -3246542, 13762150, -32476462, 32451579},
      {1, -74, 2362, -42426, 468340, -3247182, 13771590, -32537518, 32598027},
      {1, -74, 2362, -42426, 468340, -3247150, 13770662, -32528590, 32569515},
      {1, -74, 2362, -42426, 468340, -3247150, 13770726, -32529742, 32574699},
      {1, -74, 2362, -42426, 468340, -3247150, 13770790, -32530894, 32579883},
      {1, -74, 2362, -42426, 468340, -3247118, 13769798, -32520942, 32547339},
      {1, -74, 2362, -42426, 468356, -3247790, 13780166, -32590670, 32719995},
      {1, -74, 2362, -42426, 468356, -3247758, 13779302, -32583022, 32697819},
      {1, -74, 2362, -42418, 467932, -3238942, 13689142, -32128486, 31792563},
      {1, -74, 2362, -42418, 467948, -3239550, 13697782, -32182918, 31920867},
      {1, -74, 2362, -42418, 467948, -3239518, 13696918, -32175142, 31897539},
      {1, -74, 2362, -42418, 467964, -3240126, 13705494, -32228422, 32020659}};

```

A // MatrixForm

```
( 1 -74 2362 -42450 469500 -3269310 13979926 -33506086 34377651
 1 -74 2362 -42442 469092 -3261134 13899462 -33116958 33637275
 1 -74 2362 -42442 469092 -3261102 13898470 -33107006 33604731
 1 -74 2362 -42442 469108 -3261742 13907910 -33168062 33751179
 1 -74 2362 -42442 469108 -3261742 13907974 -33169086 33755211
 1 -74 2362 -42442 469108 -3261710 13907046 -33160286 33727851
 1 -74 2362 -42442 469124 -3262350 13916486 -33221214 33873147
 1 -74 2362 -42442 469124 -3262318 13915622 -33213566 33850971
 1 -74 2362 -42434 468700 -3253534 13826454 -32768982 32978259
 1 -74 2362 -42434 468700 -3253502 13825590 -32761206 32954931
 1 -74 2362 -42434 468716 -3254174 13835894 -32830038 33124707
 1 -74 2362 -42434 468716 -3254174 13835894 -32829910 33123555
 1 -74 2362 -42434 468716 -3254174 13835958 -32831062 33128739
 1 -74 2362 -42434 468716 -3254142 13834966 -32821110 33096195
 1 -74 2362 -42434 468716 -3254142 13835030 -32822262 33101379
 1 -74 2362 -42434 468716 -3254142 13835094 -32823286 33105411
 1 -74 2362 -42434 468716 -3254110 13834166 -32814486 33078051
 1 -74 2362 -42434 468732 -3254814 13845334 -32890838 33268851
 1 -74 2362 -42434 468732 -3254782 13844470 -32883190 33246675
 1 -74 2362 -42434 468732 -3254750 13843606 -32875542 33224499
 1 -74 2362 -42434 468732 -3254750 13843606 -32875414 33223347
 1 -74 2362 -42434 468732 -3254750 13843670 -32876566 33228531
 1 -74 2362 -42434 468732 -3254718 13842742 -32867766 33201171
 1 -74 2362 -42434 468748 -3255358 13852182 -32928694 33346467
 1 -74 2362 -42426 468308 -3245934 13753446 -32421006 32319243
 1 -74 2362 -42426 468324 -3246606 13763878 -32492014 32498235
 1 -74 2362 -42426 468324 -3246574 13762950 -32483086 32469723
 1 -74 2362 -42426 468324 -3246574 13763014 -32484238 32474907
 1 -74 2362 -42426 468324 -3246542 13762086 -32475310 32446395
 1 -74 2362 -42426 468324 -3246542 13762150 -32476462 32451579
 1 -74 2362 -42426 468340 -3247182 13771590 -32537518 32598027
 1 -74 2362 -42426 468340 -3247150 13770662 -32528590 32569515
 1 -74 2362 -42426 468340 -3247150 13770726 -32529742 32574699
 1 -74 2362 -42426 468340 -3247150 13770790 -32530894 32579883
 1 -74 2362 -42426 468340 -3247118 13769798 -32520942 32547339
 1 -74 2362 -42426 468356 -3247790 13780166 -32590670 32719995
 1 -74 2362 -42426 468356 -3247758 13779302 -32583022 32697819
 1 -74 2362 -42418 467932 -3238942 13689142 -32128486 31792563
 1 -74 2362 -42418 467948 -3239550 13697782 -32182918 31920867
 1 -74 2362 -42418 467948 -3239518 13696918 -32175142 31897539
 1 -74 2362 -42418 467964 -3240126 13705494 -32228422 32020659)
```

Dimensions[A]

```
{41, 9}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3626, 115738, -2079642, 22986420,
 -159844334, 681815718, -1627419342, 1658946011}
```

Array[c, 9].Transpose[A]

```
{c[1] - 74 c[2] + 2362 c[3] - 42450 c[4] + 469500 c[5] -
 3269310 c[6] + 13979926 c[7] - 33506086 c[8] + 34377651 c[9],
```

$c[1] - 74 c[2] + 2362 c[3] - 42\,442 c[4] + 469\,092 c[5] - 3\,261\,134 c[6] +$
 $13\,899\,462 c[7] - 33\,116\,958 c[8] + 33\,637\,275 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,442 c[4] + 469\,092 c[5] - 3\,261\,102 c[6] +$
 $13\,898\,470 c[7] - 33\,107\,006 c[8] + 33\,604\,731 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,442 c[4] + 469\,108 c[5] - 3\,261\,742 c[6] +$
 $13\,907\,910 c[7] - 33\,168\,062 c[8] + 33\,751\,179 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,442 c[4] + 469\,108 c[5] - 3\,261\,742 c[6] +$
 $13\,907\,974 c[7] - 33\,169\,086 c[8] + 33\,755\,211 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,442 c[4] + 469\,108 c[5] - 3\,261\,710 c[6] +$
 $13\,907\,046 c[7] - 33\,160\,286 c[8] + 33\,727\,851 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,442 c[4] + 469\,124 c[5] - 3\,262\,350 c[6] + 13\,916\,486 c[7] -$
 $33\,221\,214 c[8] + 33\,873\,147 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,442 c[4] +$
 $469\,124 c[5] - 3\,262\,318 c[6] + 13\,915\,622 c[7] - 33\,213\,566 c[8] + 33\,850\,971 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,700 c[5] - 3\,253\,534 c[6] + 13\,826\,454 c[7] -$
 $32\,768\,982 c[8] + 32\,978\,259 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,700 c[5] - 3\,253\,502 c[6] + 13\,825\,590 c[7] - 32\,761\,206 c[8] + 32\,954\,931 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,174 c[6] + 13\,835\,894 c[7] -$
 $32\,830\,038 c[8] + 33\,124\,707 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,716 c[5] - 3\,254\,174 c[6] + 13\,835\,894 c[7] - 32\,829\,910 c[8] + 33\,123\,555 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,174 c[6] + 13\,835\,958 c[7] -$
 $32\,831\,062 c[8] + 33\,128\,739 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,716 c[5] - 3\,254\,142 c[6] + 13\,834\,966 c[7] - 32\,821\,110 c[8] + 33\,096\,195 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,142 c[6] + 13\,835\,030 c[7] -$
 $32\,822\,262 c[8] + 33\,101\,379 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,716 c[5] - 3\,254\,142 c[6] + 13\,835\,094 c[7] - 32\,823\,286 c[8] + 33\,105\,411 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,110 c[6] + 13\,834\,166 c[7] -$
 $32\,814\,486 c[8] + 33\,078\,051 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,732 c[5] - 3\,254\,814 c[6] + 13\,845\,334 c[7] - 32\,890\,838 c[8] + 33\,268\,851 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,732 c[5] - 3\,254\,782 c[6] + 13\,844\,470 c[7] -$
 $32\,883\,190 c[8] + 33\,246\,675 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,732 c[5] - 3\,254\,750 c[6] + 13\,843\,606 c[7] - 32\,875\,542 c[8] + 33\,224\,499 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,732 c[5] - 3\,254\,750 c[6] + 13\,843\,606 c[7] -$
 $32\,875\,414 c[8] + 33\,223\,347 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,732 c[5] - 3\,254\,750 c[6] + 13\,843\,670 c[7] - 32\,876\,566 c[8] + 33\,228\,531 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,732 c[5] - 3\,254\,718 c[6] + 13\,842\,742 c[7] -$
 $32\,867\,766 c[8] + 33\,201\,171 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,748 c[5] - 3\,255\,358 c[6] + 13\,852\,182 c[7] - 32\,928\,694 c[8] + 33\,346\,467 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,308 c[5] - 3\,245\,934 c[6] + 13\,753\,446 c[7] -$
 $32\,421\,006 c[8] + 32\,319\,243 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,324 c[5] - 3\,246\,606 c[6] + 13\,763\,878 c[7] - 32\,492\,014 c[8] + 32\,498\,235 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,574 c[6] + 13\,762\,950 c[7] -$
 $32\,483\,086 c[8] + 32\,469\,723 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,324 c[5] - 3\,246\,574 c[6] + 13\,763\,014 c[7] - 32\,484\,238 c[8] + 32\,474\,907 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,542 c[6] + 13\,762\,086 c[7] -$
 $32\,475\,310 c[8] + 32\,446\,395 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,324 c[5] - 3\,246\,542 c[6] + 13\,762\,150 c[7] - 32\,476\,462 c[8] + 32\,451\,579 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,182 c[6] + 13\,771\,590 c[7] -$

```

32 537 518 c[8] + 32 598 027 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 340 c[5] - 3 247 150 c[6] + 13 770 662 c[7] - 32 528 590 c[8] + 32 569 515 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 340 c[5] - 3 247 150 c[6] + 13 770 726 c[7] -
32 529 742 c[8] + 32 574 699 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 340 c[5] - 3 247 150 c[6] + 13 770 790 c[7] - 32 530 894 c[8] + 32 579 883 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 340 c[5] - 3 247 118 c[6] + 13 769 798 c[7] -
32 520 942 c[8] + 32 547 339 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 356 c[5] - 3 247 790 c[6] + 13 780 166 c[7] - 32 590 670 c[8] + 32 719 995 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 356 c[5] - 3 247 758 c[6] + 13 779 302 c[7] -
32 583 022 c[8] + 32 697 819 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 932 c[5] - 3 238 942 c[6] + 13 689 142 c[7] - 32 128 486 c[8] + 31 792 563 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 948 c[5] - 3 239 550 c[6] + 13 697 782 c[7] -
32 182 918 c[8] + 31 920 867 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 948 c[5] - 3 239 518 c[6] + 13 696 918 c[7] - 32 175 142 c[8] + 31 897 539 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 964 c[5] - 3 240 126 c[6] +
13 705 494 c[7] - 32 228 422 c[8] + 32 020 659 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 642 c[4] + 22 986 420 c[5] -
159 844 334 c[6] + 681 815 718 c[7] - 1 627 419 342 c[8] + 1 658 946 011 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 642 c[4] + 22 986 420 c[5] -
159 844 334 c[6] + 681 815 718 c[7] - 1 627 419 342 c[8] + 1 658 946 011 c[9] < 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 450 c[4] + 469 500 c[5] - 3 269 310 c[6] +
13 979 926 c[7] - 33 506 086 c[8] + 34 377 651 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 092 c[5] - 3 261 134 c[6] +
13 899 462 c[7] - 33 116 958 c[8] + 33 637 275 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 092 c[5] - 3 261 102 c[6] +
13 898 470 c[7] - 33 107 006 c[8] + 33 604 731 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 742 c[6] +
13 907 910 c[7] - 33 168 062 c[8] + 33 751 179 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 742 c[6] +
13 907 974 c[7] - 33 169 086 c[8] + 33 755 211 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 710 c[6] +
13 907 046 c[7] - 33 160 286 c[8] + 33 727 851 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 124 c[5] - 3 262 350 c[6] +
13 916 486 c[7] - 33 221 214 c[8] + 33 873 147 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 124 c[5] - 3 262 318 c[6] +
13 915 622 c[7] - 33 213 566 c[8] + 33 850 971 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 700 c[5] - 3 253 534 c[6] +
13 826 454 c[7] - 32 768 982 c[8] + 32 978 259 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 700 c[5] - 3 253 502 c[6] +
13 825 590 c[7] - 32 761 206 c[8] + 32 954 931 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 716 c[5] - 3 254 174 c[6] +
13 835 894 c[7] - 32 830 038 c[8] + 33 124 707 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 716 c[5] - 3 254 174 c[6] +

```

$$\begin{aligned}
& 13\,835\,894\,c[7] - 32\,829\,910\,c[8] + 33\,123\,555\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,716\,c[5] - 3\,254\,174\,c[6] + \\
& 13\,835\,958\,c[7] - 32\,831\,062\,c[8] + 33\,128\,739\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,716\,c[5] - 3\,254\,142\,c[6] + \\
& 13\,834\,966\,c[7] - 32\,821\,110\,c[8] + 33\,096\,195\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,716\,c[5] - 3\,254\,142\,c[6] + \\
& 13\,835\,030\,c[7] - 32\,822\,262\,c[8] + 33\,101\,379\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,716\,c[5] - 3\,254\,142\,c[6] + \\
& 13\,835\,094\,c[7] - 32\,823\,286\,c[8] + 33\,105\,411\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,716\,c[5] - 3\,254\,110\,c[6] + \\
& 13\,834\,166\,c[7] - 32\,814\,486\,c[8] + 33\,078\,051\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,814\,c[6] + \\
& 13\,845\,334\,c[7] - 32\,890\,838\,c[8] + 33\,268\,851\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,782\,c[6] + \\
& 13\,844\,470\,c[7] - 32\,883\,190\,c[8] + 33\,246\,675\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,750\,c[6] + \\
& 13\,843\,606\,c[7] - 32\,875\,542\,c[8] + 33\,224\,499\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,750\,c[6] + \\
& 13\,843\,606\,c[7] - 32\,875\,414\,c[8] + 33\,223\,347\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,750\,c[6] + \\
& 13\,843\,670\,c[7] - 32\,876\,566\,c[8] + 33\,228\,531\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,718\,c[6] + \\
& 13\,842\,742\,c[7] - 32\,867\,766\,c[8] + 33\,201\,171\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,748\,c[5] - 3\,255\,358\,c[6] + \\
& 13\,852\,182\,c[7] - 32\,928\,694\,c[8] + 33\,346\,467\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,934\,c[6] + \\
& 13\,753\,446\,c[7] - 32\,421\,006\,c[8] + 32\,319\,243\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,606\,c[6] + \\
& 13\,763\,878\,c[7] - 32\,492\,014\,c[8] + 32\,498\,235\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,574\,c[6] + \\
& 13\,762\,950\,c[7] - 32\,483\,086\,c[8] + 32\,469\,723\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,574\,c[6] + \\
& 13\,763\,014\,c[7] - 32\,484\,238\,c[8] + 32\,474\,907\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,542\,c[6] + \\
& 13\,762\,086\,c[7] - 32\,475\,310\,c[8] + 32\,446\,395\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,542\,c[6] + \\
& 13\,762\,150\,c[7] - 32\,476\,462\,c[8] + 32\,451\,579\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,182\,c[6] + \\
& 13\,771\,590\,c[7] - 32\,537\,518\,c[8] + 32\,598\,027\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,150\,c[6] + \\
& 13\,770\,662\,c[7] - 32\,528\,590\,c[8] + 32\,569\,515\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,150\,c[6] + \\
& 13\,770\,726\,c[7] - 32\,529\,742\,c[8] + 32\,574\,699\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,150\,c[6] + \\
& 13\,770\,790\,c[7] - 32\,530\,894\,c[8] + 32\,579\,883\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,118\,c[6] + \\
& 13\,769\,798\,c[7] - 32\,520\,942\,c[8] + 32\,547\,339\,c[9] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 356 c[5] - 3 247 790 c[6] +
  13 780 166 c[7] - 32 590 670 c[8] + 32 719 995 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 356 c[5] - 3 247 758 c[6] +
  13 779 302 c[7] - 32 583 022 c[8] + 32 697 819 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 932 c[5] - 3 238 942 c[6] +
  13 689 142 c[7] - 32 128 486 c[8] + 31 792 563 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 948 c[5] - 3 239 550 c[6] +
  13 697 782 c[7] - 32 182 918 c[8] + 31 920 867 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 948 c[5] - 3 239 518 c[6] +
  13 696 918 c[7] - 32 175 142 c[8] + 31 897 539 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 964 c[5] - 3 240 126 c[6] +
  13 705 494 c[7] - 32 228 422 c[8] + 32 020 659 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 2 730 500, 1 336 652, 374 346, 80 967}

GCD[0, 0, 0, 0, 0, 2 730 500, 1 336 652, 374 346, 80 967]
1

cert.g
-2 650 218 559

gpart[listdim17[[46]]]
{1 658 946 011, -1 627 419 342, 681 815 718,
 -159 844 334, 22 986 420, -2 079 642, 115 738, -3626, 49}

{0, 0, 0, 0, 0, 2 730 500, 1 336 652, 374 346, 80 967}.Reverse[gpart[listdim17[[46]]]]
-2 650 218 559

cert.Transpose[A]
{31 091 513, 525 779 681, 377 698 241, 249 558 961, 278 233 329,
 204 183 953, 30 686 977, 30 669 665, 596 165 689, 550 790 681, 468 026 409,
 422 668 713, 496 700 777, 348 619 337, 422 651 401, 451 325 769, 377 276 393,
 249 171 737, 249 154 425, 249 137 113, 203 779 417, 277 811 481, 203 762 105,
 30 265 129, 666 551 697, 686 493 857, 567 086 785, 641 118 849, 521 711 777,
 595 743 841, 467 604 561, 348 197 489, 422 229 553, 496 261 617, 348 180 177,
 248 732 577, 248 715 265, 666 129 849, 566 647 625, 521 272 617, 347 758 329}

chi = listdim17[[47]]
(-9 + x)11 (5 + x)32 (100 - 21 x + x2) (95 - 20 x + x2)2

```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{ {-39693, 26129, -6534, 782, -45, 1},
  {-39805, 26145, -6534, 782, -45, 1}, {-38821, 25953, -6526, 782, -45, 1},
  {-38933, 25969, -6526, 782, -45, 1}, {-39045, 25985, -6526, 782, -45, 1},
  {-37917, 25777, -6518, 782, -45, 1}, {-38061, 25793, -6518, 782, -45, 1},
  {-38205, 25809, -6518, 782, -45, 1}, {-38173, 25809, -6518, 782, -45, 1},
  {-38317, 25825, -6518, 782, -45, 1}, {-38285, 25825, -6518, 782, -45, 1},
  {-37413, 25649, -6510, 782, -45, 1}, {-37557, 25665, -6510, 782, -45, 1},
  {-37525, 25665, -6510, 782, -45, 1}, {-36765, 25505, -6502, 782, -45, 1}}
```

```
A = {{-39693, 26129, -6534, 782, -45, 1},
      {-39805, 26145, -6534, 782, -45, 1}, {-38821, 25953, -6526, 782, -45, 1},
      {-38933, 25969, -6526, 782, -45, 1}, {-39045, 25985, -6526, 782, -45, 1},
      {-37917, 25777, -6518, 782, -45, 1}, {-38061, 25793, -6518, 782, -45, 1},
      {-38205, 25809, -6518, 782, -45, 1}, {-38173, 25809, -6518, 782, -45, 1},
      {-38317, 25825, -6518, 782, -45, 1}, {-38285, 25825, -6518, 782, -45, 1},
      {-37413, 25649, -6510, 782, -45, 1}, {-37557, 25665, -6510, 782, -45, 1},
      {-37525, 25665, -6510, 782, -45, 1}, {-36765, 25505, -6502, 782, -45, 1}};
```

```
A // MatrixForm
```

```
(-39693 26129 -6534 782 -45 1)
(-39805 26145 -6534 782 -45 1)
(-38821 25953 -6526 782 -45 1)
(-38933 25969 -6526 782 -45 1)
(-39045 25985 -6526 782 -45 1)
(-37917 25777 -6518 782 -45 1)
(-38061 25793 -6518 782 -45 1)
(-38205 25809 -6518 782 -45 1)
(-38173 25809 -6518 782 -45 1)
(-38317 25825 -6518 782 -45 1)
(-38285 25825 -6518 782 -45 1)
(-37413 25649 -6510 782 -45 1)
(-37557 25665 -6510 782 -45 1)
(-37525 25665 -6510 782 -45 1)
(-36765 25505 -6502 782 -45 1)
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1943725, 1280065, -320150, 38318, -2205, 49}
```


Array[c, 6].Transpose[A]

```
{ -39 693 c[1] + 26 129 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -39 805 c[1] + 26 145 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 821 c[1] + 25 953 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 933 c[1] + 25 969 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -39 045 c[1] + 25 985 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -37 917 c[1] + 25 777 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 061 c[1] + 25 793 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 205 c[1] + 25 809 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 173 c[1] + 25 809 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 317 c[1] + 25 825 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -38 285 c[1] + 25 825 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -37 413 c[1] + 25 649 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -37 557 c[1] + 25 665 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -37 525 c[1] + 25 665 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ,
  -36 765 c[1] + 25 505 c[2] - 6502 c[3] + 782 c[4] - 45 c[5] + c[6] }
```

Array[c, 6].g

```
-1 943 725 c[1] + 1 280 065 c[2] - 320 150 c[3] + 38 318 c[4] - 2205 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```
-1 943 725 c[1] + 1 280 065 c[2] - 320 150 c[3] + 38 318 c[4] - 2205 c[5] + 49 c[6] < 0 &&
  -39 693 c[1] + 26 129 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -39 805 c[1] + 26 145 c[2] - 6534 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38 821 c[1] + 25 953 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38 933 c[1] + 25 969 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -39 045 c[1] + 25 985 c[2] - 6526 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -37 917 c[1] + 25 777 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38 061 c[1] + 25 793 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38 205 c[1] + 25 809 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38 173 c[1] + 25 809 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38 317 c[1] + 25 825 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -38 285 c[1] + 25 825 c[2] - 6518 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -37 413 c[1] + 25 649 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -37 557 c[1] + 25 665 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -37 525 c[1] + 25 665 c[2] - 6510 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0 &&
  -36 765 c[1] + 25 505 c[2] - 6502 c[3] + 782 c[4] - 45 c[5] + c[6] ≥ 0,
```

Array[c, 6], Integers]]

```
{ -230 256, -1 342 119, -3 968 275, 0, 0, 0 }
```

GCD[-230 256, -1 342 119, -3 968 275, 0, 0, 0]

1

Reverse[cert]

```
{ 0, 0, 0, -3 968 275, -1 342 119, -230 256 }
```

cert.g

-1972885

{-230256, -1342119, -3968275, 0, 0, 0}.gpart[listdim17[[47]]

-1972885

cert.Transpose[A]

{32907, 4347675, 3716419, 8031187, 12345955, 31739, 11714699, 23397659,
16029467, 27712427, 20344235, 24027747, 35710707, 28342515, 36340795}

chi = listdim17[[48]]

$(-9 + x)^{12} (5 + x)^{32} (-98896 + 51969x - 10628x^2 + 1062x^3 - 52x^4 + x^5)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

{ {410283, -315416, 96059, -14992, 1273, -56, 1},
 {412507, -315800, 96075, -14992, 1273, -56, 1},
 {412155, -315768, 96075, -14992, 1273, -56, 1},
 {414091, -316120, 96091, -14992, 1273, -56, 1},
 {413739, -316088, 96091, -14992, 1273, -56, 1},
 {415675, -316440, 96107, -14992, 1273, -56, 1},
 {400275, -312576, 95795, -14984, 1273, -56, 1},
 {399987, -312544, 95795, -14984, 1273, -56, 1},
 {402499, -312960, 95811, -14984, 1273, -56, 1},
 {402147, -312928, 95811, -14984, 1273, -56, 1},
 {401859, -312896, 95811, -14984, 1273, -56, 1},
 {401571, -312864, 95811, -14984, 1273, -56, 1},
 {404083, -313280, 95827, -14984, 1273, -56, 1},
 {403443, -313216, 95827, -14984, 1273, -56, 1},
 {405379, -313568, 95843, -14984, 1273, -56, 1},
 {405027, -313536, 95843, -14984, 1273, -56, 1},
 {390267, -309736, 95531, -14976, 1273, -56, 1},
 {389979, -309704, 95531, -14976, 1273, -56, 1},
 {391851, -310056, 95547, -14976, 1273, -56, 1},
 {391563, -310024, 95547, -14976, 1273, -56, 1},
 {393435, -310376, 95563, -14976, 1273, -56, 1},
 {393147, -310344, 95563, -14976, 1273, -56, 1},
 {395371, -310728, 95579, -14976, 1273, -56, 1},
 {394731, -310664, 95579, -14976, 1273, -56, 1},
 {396955, -311048, 95595, -14976, 1273, -56, 1},
 {396667, -311016, 95595, -14976, 1273, -56, 1},
 {380259, -306896, 95267, -14968, 1273, -56, 1},
 {381843, -307216, 95283, -14968, 1273, -56, 1},

```

{381 555, -307 184, 95 283, -14 968, 1273, -56, 1},
{383 139, -307 504, 95 299, -14 968, 1273, -56, 1},
{382 851, -307 472, 95 299, -14 968, 1273, -56, 1},
{384 723, -307 824, 95 315, -14 968, 1273, -56, 1},
{384 435, -307 792, 95 315, -14 968, 1273, -56, 1},
{386 307, -308 144, 95 331, -14 968, 1273, -56, 1},
{386 019, -308 112, 95 331, -14 968, 1273, -56, 1},
{388 243, -308 496, 95 347, -14 968, 1273, -56, 1},
{371 547, -304 344, 95 019, -14 960, 1273, -56, 1},
{373 131, -304 664, 95 035, -14 960, 1273, -56, 1},
{374 427, -304 952, 95 051, -14 960, 1273, -56, 1},
{376 011, -305 272, 95 067, -14 960, 1273, -56, 1},
{375 723, -305 240, 95 067, -14 960, 1273, -56, 1},
{377 595, -305 592, 95 083, -14 960, 1273, -56, 1},
{364 419, -302 112, 94 787, -14 952, 1273, -56, 1},
{365 715, -302 400, 94 803, -14 952, 1273, -56, 1},
{367 299, -302 720, 94 819, -14 952, 1273, -56, 1},
{368 883, -303 040, 94 835, -14 952, 1273, -56, 1},
{372 403, -303 712, 94 867, -14 952, 1273, -56, 1},
{357 291, -299 880, 94 555, -14 944, 1273, -56, 1},
{358 587, -300 168, 94 571, -14 944, 1273, -56, 1},
{360 171, -300 488, 94 587, -14 944, 1273, -56, 1},
{361 755, -300 808, 94 603, -14 944, 1273, -56, 1},
{351 459, -297 936, 94 339, -14 936, 1273, -56, 1}

```

```

A = {{410 283, -315 416, 96 059, -14 992, 1273, -56, 1},
      {412 507, -315 800, 96 075, -14 992, 1273, -56, 1},
      {412 155, -315 768, 96 075, -14 992, 1273, -56, 1},
      {414 091, -316 120, 96 091, -14 992, 1273, -56, 1},
      {413 739, -316 088, 96 091, -14 992, 1273, -56, 1},
      {415 675, -316 440, 96 107, -14 992, 1273, -56, 1},
      {400 275, -312 576, 95 795, -14 984, 1273, -56, 1},
      {399 987, -312 544, 95 795, -14 984, 1273, -56, 1},
      {402 499, -312 960, 95 811, -14 984, 1273, -56, 1},
      {402 147, -312 928, 95 811, -14 984, 1273, -56, 1},
      {401 859, -312 896, 95 811, -14 984, 1273, -56, 1},
      {401 571, -312 864, 95 811, -14 984, 1273, -56, 1},
      {404 083, -313 280, 95 827, -14 984, 1273, -56, 1},
      {403 443, -313 216, 95 827, -14 984, 1273, -56, 1},
      {405 379, -313 568, 95 843, -14 984, 1273, -56, 1},
      {405 027, -313 536, 95 843, -14 984, 1273, -56, 1},
      {390 267, -309 736, 95 531, -14 976, 1273, -56, 1},
      {389 979, -309 704, 95 531, -14 976, 1273, -56, 1},
      {391 851, -310 056, 95 547, -14 976, 1273, -56, 1},
      {391 563, -310 024, 95 547, -14 976, 1273, -56, 1},
      {393 435, -310 376, 95 563, -14 976, 1273, -56, 1},
      {393 147, -310 344, 95 563, -14 976, 1273, -56, 1},

```

```

{395 371, -310 728, 95 579, -14 976, 1273, -56, 1},
{394 731, -310 664, 95 579, -14 976, 1273, -56, 1},
{396 955, -311 048, 95 595, -14 976, 1273, -56, 1},
{396 667, -311 016, 95 595, -14 976, 1273, -56, 1},
{380 259, -306 896, 95 267, -14 968, 1273, -56, 1},
{381 843, -307 216, 95 283, -14 968, 1273, -56, 1},
{381 555, -307 184, 95 283, -14 968, 1273, -56, 1},
{383 139, -307 504, 95 299, -14 968, 1273, -56, 1},
{382 851, -307 472, 95 299, -14 968, 1273, -56, 1},
{384 723, -307 824, 95 315, -14 968, 1273, -56, 1},
{384 435, -307 792, 95 315, -14 968, 1273, -56, 1},
{386 307, -308 144, 95 331, -14 968, 1273, -56, 1},
{386 019, -308 112, 95 331, -14 968, 1273, -56, 1},
{388 243, -308 496, 95 347, -14 968, 1273, -56, 1},
{371 547, -304 344, 95 019, -14 960, 1273, -56, 1},
{373 131, -304 664, 95 035, -14 960, 1273, -56, 1},
{374 427, -304 952, 95 051, -14 960, 1273, -56, 1},
{376 011, -305 272, 95 067, -14 960, 1273, -56, 1},
{375 723, -305 240, 95 067, -14 960, 1273, -56, 1},
{377 595, -305 592, 95 083, -14 960, 1273, -56, 1},
{364 419, -302 112, 94 787, -14 952, 1273, -56, 1},
{365 715, -302 400, 94 803, -14 952, 1273, -56, 1},
{367 299, -302 720, 94 819, -14 952, 1273, -56, 1},
{368 883, -303 040, 94 835, -14 952, 1273, -56, 1},
{372 403, -303 712, 94 867, -14 952, 1273, -56, 1},
{357 291, -299 880, 94 555, -14 944, 1273, -56, 1},
{358 587, -300 168, 94 571, -14 944, 1273, -56, 1},
{360 171, -300 488, 94 587, -14 944, 1273, -56, 1},
{361 755, -300 808, 94 603, -14 944, 1273, -56, 1},
{351 459, -297 936, 94 339, -14 936, 1273, -56, 1}};

```

```
A // MatrixForm
```

```
( 410 283 -315 416 96 059 -14 992 1273 -56 1 )
 412 507 -315 800 96 075 -14 992 1273 -56 1
 412 155 -315 768 96 075 -14 992 1273 -56 1
 414 091 -316 120 96 091 -14 992 1273 -56 1
 413 739 -316 088 96 091 -14 992 1273 -56 1
 415 675 -316 440 96 107 -14 992 1273 -56 1
 400 275 -312 576 95 795 -14 984 1273 -56 1
 399 987 -312 544 95 795 -14 984 1273 -56 1
 402 499 -312 960 95 811 -14 984 1273 -56 1
 402 147 -312 928 95 811 -14 984 1273 -56 1
 401 859 -312 896 95 811 -14 984 1273 -56 1
 401 571 -312 864 95 811 -14 984 1273 -56 1
 404 083 -313 280 95 827 -14 984 1273 -56 1
 403 443 -313 216 95 827 -14 984 1273 -56 1
 405 379 -313 568 95 843 -14 984 1273 -56 1
 405 027 -313 536 95 843 -14 984 1273 -56 1
 390 267 -309 736 95 531 -14 976 1273 -56 1
 389 979 -309 704 95 531 -14 976 1273 -56 1
 391 851 -310 056 95 547 -14 976 1273 -56 1
 391 563 -310 024 95 547 -14 976 1273 -56 1
 393 435 -310 376 95 563 -14 976 1273 -56 1
 393 147 -310 344 95 563 -14 976 1273 -56 1
 395 371 -310 728 95 579 -14 976 1273 -56 1
 394 731 -310 664 95 579 -14 976 1273 -56 1
 396 955 -311 048 95 595 -14 976 1273 -56 1
 396 667 -311 016 95 595 -14 976 1273 -56 1
 380 259 -306 896 95 267 -14 968 1273 -56 1
 381 843 -307 216 95 283 -14 968 1273 -56 1
 381 555 -307 184 95 283 -14 968 1273 -56 1
 383 139 -307 504 95 299 -14 968 1273 -56 1
 382 851 -307 472 95 299 -14 968 1273 -56 1
 384 723 -307 824 95 315 -14 968 1273 -56 1
 384 435 -307 792 95 315 -14 968 1273 -56 1
 386 307 -308 144 95 331 -14 968 1273 -56 1
 386 019 -308 112 95 331 -14 968 1273 -56 1
 388 243 -308 496 95 347 -14 968 1273 -56 1
 371 547 -304 344 95 019 -14 960 1273 -56 1
 373 131 -304 664 95 035 -14 960 1273 -56 1
 374 427 -304 952 95 051 -14 960 1273 -56 1
 376 011 -305 272 95 067 -14 960 1273 -56 1
 375 723 -305 240 95 067 -14 960 1273 -56 1
 377 595 -305 592 95 083 -14 960 1273 -56 1
 364 419 -302 112 94 787 -14 952 1273 -56 1
 365 715 -302 400 94 803 -14 952 1273 -56 1
 367 299 -302 720 94 819 -14 952 1273 -56 1
 368 883 -303 040 94 835 -14 952 1273 -56 1
 372 403 -303 712 94 867 -14 952 1273 -56 1
 357 291 -299 880 94 555 -14 944 1273 -56 1
 358 587 -300 168 94 571 -14 944 1273 -56 1
 360 171 -300 488 94 587 -14 944 1273 -56 1
 361 755 -300 808 94 603 -14 944 1273 -56 1
 351 459 -297 936 94 339 -14 936 1273 -56 1 )
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 209 683, -15 451 712, 4 703 443, -734 408, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```
{410 283 c[1] - 315 416 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
412 507 c[1] - 315 800 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
412 155 c[1] - 315 768 c[2] + 96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
414 091 c[1] - 316 120 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
413 739 c[1] - 316 088 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
415 675 c[1] - 316 440 c[2] + 96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
400 275 c[1] - 312 576 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
399 987 c[1] - 312 544 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
402 499 c[1] - 312 960 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
402 147 c[1] - 312 928 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
401 859 c[1] - 312 896 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
401 571 c[1] - 312 864 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
404 083 c[1] - 313 280 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
403 443 c[1] - 313 216 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
405 379 c[1] - 313 568 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
405 027 c[1] - 313 536 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
390 267 c[1] - 309 736 c[2] + 95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
389 979 c[1] - 309 704 c[2] + 95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
391 851 c[1] - 310 056 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
391 563 c[1] - 310 024 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
393 435 c[1] - 310 376 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
393 147 c[1] - 310 344 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
395 371 c[1] - 310 728 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 731 c[1] - 310 664 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
396 955 c[1] - 311 048 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
396 667 c[1] - 311 016 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
380 259 c[1] - 306 896 c[2] + 95 267 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
381 843 c[1] - 307 216 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
383 139 c[1] - 307 504 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
384 435 c[1] - 307 792 c[2] + 95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
386 307 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
386 019 c[1] - 308 112 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
388 243 c[1] - 308 496 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
371 547 c[1] - 304 344 c[2] + 95 019 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
373 131 c[1] - 304 664 c[2] + 95 035 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
374 427 c[1] - 304 952 c[2] + 95 051 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
376 011 c[1] - 305 272 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
375 723 c[1] - 305 240 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
364 419 c[1] - 302 112 c[2] + 94 787 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
```

```

365 715 c[1] - 302 400 c[2] + 94 803 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
367 299 c[1] - 302 720 c[2] + 94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
372 403 c[1] - 303 712 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
357 291 c[1] - 299 880 c[2] + 94 555 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
358 587 c[1] - 300 168 c[2] + 94 571 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
360 171 c[1] - 300 488 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
361 755 c[1] - 300 808 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
351 459 c[1] - 297 936 c[2] + 94 339 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 209 683 c[1] - 15 451 712 c[2] + 4 703 443 c[3] -
734 408 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 209 683 c[1] - 15 451 712 c[2] + 4 703 443 c[3] -
734 408 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
410 283 c[1] - 315 416 c[2] + 96 059 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 412 507 c[1] - 315 800 c[2] + 96 075 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 155 c[1] - 315 768 c[2] +
96 075 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
414 091 c[1] - 316 120 c[2] + 96 091 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 413 739 c[1] - 316 088 c[2] + 96 091 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 675 c[1] - 316 440 c[2] +
96 107 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
400 275 c[1] - 312 576 c[2] + 95 795 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 399 987 c[1] - 312 544 c[2] + 95 795 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 402 499 c[1] - 312 960 c[2] +
95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
402 147 c[1] - 312 928 c[2] + 95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 401 859 c[1] - 312 896 c[2] + 95 811 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 401 571 c[1] - 312 864 c[2] +
95 811 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
404 083 c[1] - 313 280 c[2] + 95 827 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 403 443 c[1] - 313 216 c[2] + 95 827 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 405 379 c[1] - 313 568 c[2] +
95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
405 027 c[1] - 313 536 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 390 267 c[1] - 309 736 c[2] + 95 531 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 389 979 c[1] - 309 704 c[2] +
95 531 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
391 851 c[1] - 310 056 c[2] + 95 547 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 391 563 c[1] - 310 024 c[2] + 95 547 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 393 435 c[1] - 310 376 c[2] +
95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
393 147 c[1] - 310 344 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 395 371 c[1] - 310 728 c[2] + 95 579 c[3] - 14 976 c[4] +

```

```

1273 c[5] - 56 c[6] + c[7] ≥ 0 && 394 731 c[1] - 310 664 c[2] +
95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
396 955 c[1] - 311 048 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 396 667 c[1] - 311 016 c[2] + 95 595 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 380 259 c[1] - 306 896 c[2] +
95 267 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
381 843 c[1] - 307 216 c[2] + 95 283 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 381 555 c[1] - 307 184 c[2] + 95 283 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 383 139 c[1] - 307 504 c[2] +
95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
382 851 c[1] - 307 472 c[2] + 95 299 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 384 435 c[1] - 307 792 c[2] +
95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
386 307 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 386 019 c[1] - 308 112 c[2] + 95 331 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 388 243 c[1] - 308 496 c[2] +
95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
371 547 c[1] - 304 344 c[2] + 95 019 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 373 131 c[1] - 304 664 c[2] + 95 035 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 374 427 c[1] - 304 952 c[2] +
95 051 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
376 011 c[1] - 305 272 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 375 723 c[1] - 305 240 c[2] + 95 067 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 377 595 c[1] - 305 592 c[2] +
95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
364 419 c[1] - 302 112 c[2] + 94 787 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 365 715 c[1] - 302 400 c[2] + 94 803 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 367 299 c[1] - 302 720 c[2] +
94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 372 403 c[1] - 303 712 c[2] + 94 867 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 357 291 c[1] - 299 880 c[2] +
94 555 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
358 587 c[1] - 300 168 c[2] + 94 571 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 360 171 c[1] - 300 488 c[2] + 94 587 c[3] -
14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
361 755 c[1] - 300 808 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 351 459 c[1] - 297 936 c[2] + 94 339 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-2157, -9463, -21822, 0, 0, 0, 0}

GCD[-2157, -9463, -21822, 0, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 0, -21822, -9463, -2157}

```


cert.g

-11 268 721

{-2157, -9463, -21822, 0, 0, 0, 0}.gpart[listdim17[[48]]

-11 268 721

cert.Transpose[A]

{3 601 679, 2 089 151, 2 545 599, 1 351 471, 1 807 919, 613 791, 4 075 023, 4 393 423,
2 562 495, 3 018 943, 3 337 343, 3 655 743, 1 824 815, 2 599 663, 1 405 535, 1 861 983,
4 548 367, 4 866 767, 3 810 687, 4 129 087, 3 073 007, 3 391 407, 1 878 879,
2 653 727, 1 141 199, 1 459 599, 5 021 711, 4 284 031, 4 602 431, 3 864 751,
4 183 151, 3 127 071, 3 445 471, 2 389 391, 2 707 791, 1 195 263, 5 075 775,
4 338 095, 3 918 815, 3 181 135, 3 499 535, 2 443 455, 4 392 159, 3 972 879,
3 235 199, 2 497 519, 565 711, 3 708 543, 3 289 263, 2 551 583, 1 813 903, 2 605 647}

chi = listdim17[[49]]

$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-66400 + 37481x - 8304x^2 + 902x^3 - 48x^4 + x^5)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

A = {{1, -63, 1669, -24 083, 204 147, -1 014 557, 2 729 159, -3 052 881},
{1, -63, 1669, -24 083, 204 147, -1 014 525, 2 728 519, -3 049 713},
{1, -63, 1669, -24 083, 204 147, -1 014 525, 2 728 583, -3 050 289},
{1, -63, 1669, -24 083, 204 147, -1 014 493, 2 727 943, -3 047 121},
{1, -63, 1669, -24 083, 204 163, -1 014 989, 2 732 983, -3 063 969},
{1, -63, 1669, -24 083, 204 163, -1 014 957, 2 732 407, -3 061 377},
{1, -63, 1669, -24 083, 204 163, -1 014 925, 2 731 767, -3 058 209},
{1, -63, 1669, -24 083, 204 179, -1 015 389, 2 736 231, -3 072 465},
{1, -63, 1669, -24 075, 203 827, -1 009 837, 2 698 695, -2 980 233},
{1, -63, 1669, -24 075, 203 827, -1 009 773, 2 697 479, -2 974 473},
{1, -63, 1669, -24 075, 203 843, -1 010 269, 2 702 583, -2 991 897},
{1, -63, 1669, -24 075, 203 843, -1 010 237, 2 701 943, -2 988 729},
{1, -63, 1669, -24 075, 203 843, -1 010 205, 2 701 303, -2 985 561},
{1, -63, 1669, -24 075, 203 843, -1 010 205, 2 701 367, -2 986 137},
{1, -63, 1669, -24 075, 203 859, -1 010 701, 2 706 407, -3 002 985},
{1, -63, 1669, -24 075, 203 859, -1 010 669, 2 705 831, -3 000 393},
{1, -63, 1669, -24 075, 203 859, -1 010 637, 2 705 191, -2 997 225},
{1, -63, 1669, -24 075, 203 875, -1 011 133, 2 710 295, -3 014 649},
{1, -63, 1669, -24 075, 203 875, -1 011 101, 2 709 655, -3 011 481},
{1, -63, 1669, -24 075, 203 875, -1 011 069, 2 709 015, -3 008 313},
{1, -63, 1669, -24 067, 203 523, -1 005 517, 2 671 479, -2 916 081},
{1, -63, 1669, -24 067, 203 539, -1 005 949, 2 675 367, -2 927 745},

```
{1, -63, 1669, -24 067, 203 539, -1 005 917, 2 674 727, -2 924 577},
{1, -63, 1669, -24 067, 203 555, -1 006 413, 2 679 831, -2 942 001},
{1, -63, 1669, -24 067, 203 555, -1 006 381, 2 679 191, -2 938 833},
{1, -63, 1669, -24 067, 203 555, -1 006 381, 2 679 255, -2 939 409},
{1, -63, 1669, -24 067, 203 555, -1 006 349, 2 678 615, -2 936 241},
{1, -63, 1669, -24 067, 203 571, -1 006 877, 2 684 295, -2 956 257},
{1, -63, 1669, -24 067, 203 571, -1 006 845, 2 683 719, -2 953 665},
{1, -63, 1669, -24 067, 203 571, -1 006 813, 2 683 079, -2 950 497},
{1, -63, 1669, -24 067, 203 571, -1 006 781, 2 682 439, -2 947 329},
{1, -63, 1669, -24 067, 203 587, -1 007 277, 2 687 543, -2 964 753},
{1, -63, 1669, -24 067, 203 587, -1 007 245, 2 686 903, -2 961 585},
{1, -63, 1669, -24 059, 203 235, -1 001 629, 2 648 151, -2 863 593},
{1, -63, 1669, -24 059, 203 251, -1 002 093, 2 652 615, -2 877 849},
{1, -63, 1669, -24 059, 203 251, -1 002 061, 2 652 039, -2 875 257},
{1, -63, 1669, -24 059, 203 251, -1 002 029, 2 651 399, -2 872 089},
{1, -63, 1669, -24 059, 203 267, -1 002 557, 2 657 079, -2 892 105},
{1, -63, 1669, -24 059, 203 267, -1 002 525, 2 656 503, -2 889 513},
{1, -63, 1669, -24 059, 203 267, -1 002 493, 2 655 863, -2 886 345},
{1, -63, 1669, -24 059, 203 283, -1 002 989, 2 660 967, -2 903 769},
{1, -63, 1669, -24 059, 203 283, -1 002 957, 2 660 327, -2 900 601},
{1, -63, 1669, -24 059, 203 299, -1 003 453, 2 665 431, -2 918 025},
{1, -63, 1669, -24 059, 203 299, -1 003 421, 2 664 791, -2 914 857},
{1, -63, 1669, -24 051, 202 931, -997 309, 2 620 935, -2 799 441},
{1, -63, 1669, -24 051, 202 947, -997 773, 2 625 399, -2 813 697},
{1, -63, 1669, -24 051, 202 947, -997 741, 2 624 823, -2 811 105},
{1, -63, 1669, -24 051, 202 963, -998 205, 2 629 287, -2 825 361},
{1, -63, 1669, -24 051, 202 963, -998 173, 2 628 647, -2 822 193},
{1, -63, 1669, -24 051, 202 979, -998 669, 2 633 751, -2 839 617},
{1, -63, 1669, -24 051, 202 979, -998 637, 2 633 111, -2 836 449},
{1, -63, 1669, -24 051, 202 995, -999 133, 2 638 215, -2 853 873},
{1, -63, 1669, -24 043, 202 659, -993 885, 2 602 071, -2 761 209},
{1, -63, 1669, -24 043, 202 675, -994 349, 2 606 535, -2 775 465},
{1, -63, 1669, -24 043, 202 691, -994 813, 2 610 999, -2 789 721},
{1, -63, 1669, -24 043, 202 707, -995 309, 2 616 103, -2 807 145},
{1, -63, 1669, -24 035, 202 371, -990 029, 2 579 319, -2 711 313},
{1, -63, 1669, -24 027, 202 083, -986 205, 2 557 207, -2 664 585}};
```

```
A // MatrixForm
```

```
( 1 -63 1669 -24 083 204 147 -1 014 557 2 729 159 -3 052 881 )
( 1 -63 1669 -24 083 204 147 -1 014 525 2 728 519 -3 049 713 )
( 1 -63 1669 -24 083 204 147 -1 014 525 2 728 583 -3 050 289 )
( 1 -63 1669 -24 083 204 147 -1 014 493 2 727 943 -3 047 121 )
( 1 -63 1669 -24 083 204 163 -1 014 989 2 732 983 -3 063 969 )
( 1 -63 1669 -24 083 204 163 -1 014 957 2 732 407 -3 061 377 )
( 1 -63 1669 -24 083 204 163 -1 014 925 2 731 767 -3 058 209 )
( 1 -63 1669 -24 083 204 179 -1 015 389 2 736 231 -3 072 465 )
( 1 -63 1669 -24 075 203 827 -1 009 837 2 698 695 -2 980 233 )
( 1 -63 1669 -24 075 203 827 -1 009 773 2 697 479 -2 974 473 )
( 1 -63 1669 -24 075 203 843 -1 010 269 2 702 583 -2 991 897 )
( 1 -63 1669 -24 075 203 843 -1 010 237 2 701 343 -2 988 733 )
```

```

1 -63 1669 -24075 203843 -1010237 2701943 -2988729
1 -63 1669 -24075 203843 -1010205 2701303 -2985561
1 -63 1669 -24075 203843 -1010205 2701367 -2986137
1 -63 1669 -24075 203859 -1010701 2706407 -3002985
1 -63 1669 -24075 203859 -1010669 2705831 -3000393
1 -63 1669 -24075 203859 -1010637 2705191 -2997225
1 -63 1669 -24075 203875 -1011133 2710295 -3014649
1 -63 1669 -24075 203875 -1011101 2709655 -3011481
1 -63 1669 -24075 203875 -1011069 2709015 -3008313
1 -63 1669 -24067 203523 -1005517 2671479 -2916081
1 -63 1669 -24067 203539 -1005949 2675367 -2927745
1 -63 1669 -24067 203539 -1005917 2674727 -2924577
1 -63 1669 -24067 203555 -1006413 2679831 -2942001
1 -63 1669 -24067 203555 -1006381 2679191 -2938833
1 -63 1669 -24067 203555 -1006381 2679255 -2939409
1 -63 1669 -24067 203555 -1006349 2678615 -2936241
1 -63 1669 -24067 203571 -1006877 2684295 -2956257
1 -63 1669 -24067 203571 -1006845 2683719 -2953665
1 -63 1669 -24067 203571 -1006813 2683079 -2950497
1 -63 1669 -24067 203571 -1006781 2682439 -2947329
1 -63 1669 -24067 203587 -1007277 2687543 -2964753
1 -63 1669 -24067 203587 -1007245 2686903 -2961585
1 -63 1669 -24059 203235 -1001629 2648151 -2863593
1 -63 1669 -24059 203251 -1002093 2652615 -2877849
1 -63 1669 -24059 203251 -1002061 2652039 -2875257
1 -63 1669 -24059 203251 -1002029 2651399 -2872089
1 -63 1669 -24059 203267 -1002557 2657079 -2892105
1 -63 1669 -24059 203267 -1002525 2656503 -2889513
1 -63 1669 -24059 203267 -1002493 2655863 -2886345
1 -63 1669 -24059 203283 -1002989 2660967 -2903769
1 -63 1669 -24059 203283 -1002957 2660327 -2900601
1 -63 1669 -24059 203299 -1003453 2665431 -2918025
1 -63 1669 -24059 203299 -1003421 2664791 -2914857
1 -63 1669 -24051 202931 -997309 2620935 -2799441
1 -63 1669 -24051 202947 -997773 2625399 -2813697
1 -63 1669 -24051 202947 -997741 2624823 -2811105
1 -63 1669 -24051 202963 -998205 2629287 -2825361
1 -63 1669 -24051 202963 -998173 2628647 -2822193
1 -63 1669 -24051 202979 -998669 2633751 -2839617
1 -63 1669 -24051 202979 -998637 2633111 -2836449
1 -63 1669 -24051 202995 -999133 2638215 -2853873
1 -63 1669 -24043 202659 -993885 2602071 -2761209
1 -63 1669 -24043 202675 -994349 2606535 -2775465
1 -63 1669 -24043 202691 -994813 2610999 -2789721
1 -63 1669 -24043 202707 -995309 2616103 -2807145
1 -63 1669 -24035 202371 -990029 2579319 -2711313
1 -63 1669 -24027 202083 -986205 2557207 -2664585

```

Dimensions[A]

{58, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1179867, 9997507, -49656797, 133504727, -149306105}

Array[c, 8].Transpose[A]

```
{c[1] - 63 c[2] + 1669 c[3] - 24 083 c[4] + 204 147 c[5] -
  1 014 557 c[6] + 2 729 159 c[7] - 3 052 881 c[8], c[1] - 63 c[2] + 1669 c[3] -
  24 083 c[4] + 204 147 c[5] - 1 014 525 c[6] + 2 728 519 c[7] - 3 049 713 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 083 c[4] + 204 147 c[5] - 1 014 525 c[6] +
  2 728 583 c[7] - 3 050 289 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 083 c[4] +
  204 147 c[5] - 1 014 493 c[6] + 2 727 943 c[7] - 3 047 121 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 083 c[4] + 204 163 c[5] - 1 014 989 c[6] +
  2 732 983 c[7] - 3 063 969 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 083 c[4] +
  204 163 c[5] - 1 014 957 c[6] + 2 732 407 c[7] - 3 061 377 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 083 c[4] + 204 163 c[5] - 1 014 925 c[6] +
  2 731 767 c[7] - 3 058 209 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 083 c[4] +
  204 179 c[5] - 1 015 389 c[6] + 2 736 231 c[7] - 3 072 465 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 827 c[5] - 1 009 837 c[6] +
  2 698 695 c[7] - 2 980 233 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 827 c[5] - 1 009 773 c[6] + 2 697 479 c[7] - 2 974 473 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 843 c[5] - 1 010 269 c[6] +
  2 702 583 c[7] - 2 991 897 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 843 c[5] - 1 010 237 c[6] + 2 701 943 c[7] - 2 988 729 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 843 c[5] - 1 010 205 c[6] +
  2 701 303 c[7] - 2 985 561 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 843 c[5] - 1 010 205 c[6] + 2 701 367 c[7] - 2 986 137 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 859 c[5] - 1 010 701 c[6] +
  2 706 407 c[7] - 3 002 985 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 859 c[5] - 1 010 669 c[6] + 2 705 831 c[7] - 3 000 393 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 859 c[5] - 1 010 637 c[6] +
  2 705 191 c[7] - 2 997 225 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 875 c[5] - 1 011 133 c[6] + 2 710 295 c[7] - 3 014 649 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 875 c[5] - 1 011 101 c[6] +
  2 709 655 c[7] - 3 011 481 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 875 c[5] - 1 011 069 c[6] + 2 709 015 c[7] - 3 008 313 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 523 c[5] - 1 005 517 c[6] +
  2 671 479 c[7] - 2 916 081 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 539 c[5] - 1 005 949 c[6] + 2 675 367 c[7] - 2 927 745 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 539 c[5] - 1 005 917 c[6] +
  2 674 727 c[7] - 2 924 577 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 555 c[5] - 1 006 413 c[6] + 2 679 831 c[7] - 2 942 001 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 555 c[5] - 1 006 381 c[6] +
  2 679 191 c[7] - 2 938 833 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 555 c[5] - 1 006 381 c[6] + 2 679 255 c[7] - 2 939 409 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 555 c[5] - 1 006 349 c[6] +
  2 678 615 c[7] - 2 936 241 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 571 c[5] - 1 006 877 c[6] + 2 684 295 c[7] - 2 956 257 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 571 c[5] - 1 006 845 c[6] +
  2 683 719 c[7] - 2 953 665 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 571 c[5] - 1 006 813 c[6] + 2 683 079 c[7] - 2 950 497 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 571 c[5] - 1 006 781 c[6] +
```

```

2 682 439 c[7] - 2 947 329 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 587 c[5] - 1 007 277 c[6] + 2 687 543 c[7] - 2 964 753 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 587 c[5] - 1 007 245 c[6] +
2 686 903 c[7] - 2 961 585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 235 c[5] - 1 001 629 c[6] + 2 648 151 c[7] - 2 863 593 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 251 c[5] - 1 002 093 c[6] +
2 652 615 c[7] - 2 877 849 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 251 c[5] - 1 002 061 c[6] + 2 652 039 c[7] - 2 875 257 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 251 c[5] - 1 002 029 c[6] +
2 651 399 c[7] - 2 872 089 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 267 c[5] - 1 002 557 c[6] + 2 657 079 c[7] - 2 892 105 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 267 c[5] - 1 002 525 c[6] +
2 656 503 c[7] - 2 889 513 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 267 c[5] - 1 002 493 c[6] + 2 655 863 c[7] - 2 886 345 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 283 c[5] - 1 002 989 c[6] +
2 660 967 c[7] - 2 903 769 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 283 c[5] - 1 002 957 c[6] + 2 660 327 c[7] - 2 900 601 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 299 c[5] - 1 003 453 c[6] +
2 665 431 c[7] - 2 918 025 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 299 c[5] - 1 003 421 c[6] + 2 664 791 c[7] - 2 914 857 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 202 931 c[5] - 997 309 c[6] +
2 620 935 c[7] - 2 799 441 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 947 c[5] - 997 773 c[6] + 2 625 399 c[7] - 2 813 697 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 202 947 c[5] - 997 741 c[6] +
2 624 823 c[7] - 2 811 105 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 963 c[5] - 998 205 c[6] + 2 629 287 c[7] - 2 825 361 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 202 963 c[5] - 998 173 c[6] +
2 628 647 c[7] - 2 822 193 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 979 c[5] - 998 669 c[6] + 2 633 751 c[7] - 2 839 617 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 202 979 c[5] - 998 637 c[6] +
2 633 111 c[7] - 2 836 449 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 995 c[5] - 999 133 c[6] + 2 638 215 c[7] - 2 853 873 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 659 c[5] - 993 885 c[6] +
2 602 071 c[7] - 2 761 209 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 675 c[5] - 994 349 c[6] + 2 606 535 c[7] - 2 775 465 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 691 c[5] - 994 813 c[6] +
2 610 999 c[7] - 2 789 721 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 707 c[5] - 995 309 c[6] + 2 616 103 c[7] - 2 807 145 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 371 c[5] - 990 029 c[6] +
2 579 319 c[7] - 2 711 313 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 083 c[5] - 986 205 c[6] + 2 557 207 c[7] - 2 664 585 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 867 c[4] +
9 997 507 c[5] - 49 656 797 c[6] + 133 504 727 c[7] - 149 306 105 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 867 c[4] +

```

$$\begin{aligned}
& 9\,997\,507\,c[5] - 49\,656\,797\,c[6] + 133\,504\,727\,c[7] - 149\,306\,105\,c[8] < 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,083\,c[4] + 204\,147\,c[5] - 1\,014\,557\,c[6] + \\
& \quad 2\,729\,159\,c[7] - 3\,052\,881\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,083\,c[4] + \\
& \quad 204\,147\,c[5] - 1\,014\,525\,c[6] + 2\,728\,519\,c[7] - 3\,049\,713\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,083\,c[4] + 204\,147\,c[5] - 1\,014\,525\,c[6] + \\
& \quad 2\,728\,583\,c[7] - 3\,050\,289\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,083\,c[4] + \\
& \quad 204\,147\,c[5] - 1\,014\,493\,c[6] + 2\,727\,943\,c[7] - 3\,047\,121\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,083\,c[4] + 204\,163\,c[5] - 1\,014\,989\,c[6] + \\
& \quad 2\,732\,983\,c[7] - 3\,063\,969\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,083\,c[4] + \\
& \quad 204\,163\,c[5] - 1\,014\,957\,c[6] + 2\,732\,407\,c[7] - 3\,061\,377\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,083\,c[4] + 204\,163\,c[5] - 1\,014\,925\,c[6] + \\
& \quad 2\,731\,767\,c[7] - 3\,058\,209\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,083\,c[4] + \\
& \quad 204\,179\,c[5] - 1\,015\,389\,c[6] + 2\,736\,231\,c[7] - 3\,072\,465\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,827\,c[5] - 1\,009\,837\,c[6] + \\
& \quad 2\,698\,695\,c[7] - 2\,980\,233\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& \quad 203\,827\,c[5] - 1\,009\,773\,c[6] + 2\,697\,479\,c[7] - 2\,974\,473\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,843\,c[5] - 1\,010\,269\,c[6] + \\
& \quad 2\,702\,583\,c[7] - 2\,991\,897\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& \quad 203\,843\,c[5] - 1\,010\,237\,c[6] + 2\,701\,943\,c[7] - 2\,988\,729\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,843\,c[5] - 1\,010\,205\,c[6] + \\
& \quad 2\,701\,303\,c[7] - 2\,985\,561\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& \quad 203\,843\,c[5] - 1\,010\,205\,c[6] + 2\,701\,367\,c[7] - 2\,986\,137\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,859\,c[5] - 1\,010\,701\,c[6] + \\
& \quad 2\,706\,407\,c[7] - 3\,002\,985\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& \quad 203\,859\,c[5] - 1\,010\,669\,c[6] + 2\,705\,831\,c[7] - 3\,000\,393\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,859\,c[5] - 1\,010\,637\,c[6] + \\
& \quad 2\,705\,191\,c[7] - 2\,997\,225\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& \quad 203\,875\,c[5] - 1\,011\,133\,c[6] + 2\,710\,295\,c[7] - 3\,014\,649\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,875\,c[5] - 1\,011\,101\,c[6] + \\
& \quad 2\,709\,655\,c[7] - 3\,011\,481\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& \quad 203\,875\,c[5] - 1\,011\,069\,c[6] + 2\,709\,015\,c[7] - 3\,008\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,523\,c[5] - \\
& \quad 1\,005\,517\,c[6] + 2\,671\,479\,c[7] - 2\,916\,081\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,539\,c[5] - 1\,005\,949\,c[6] + \\
& \quad 2\,675\,367\,c[7] - 2\,927\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,539\,c[5] - 1\,005\,917\,c[6] + 2\,674\,727\,c[7] - 2\,924\,577\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,555\,c[5] - 1\,006\,413\,c[6] + \\
& \quad 2\,679\,831\,c[7] - 2\,942\,001\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,555\,c[5] - 1\,006\,381\,c[6] + 2\,679\,191\,c[7] - 2\,938\,833\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,555\,c[5] - 1\,006\,381\,c[6] + \\
& \quad 2\,679\,255\,c[7] - 2\,939\,409\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,555\,c[5] - 1\,006\,349\,c[6] + 2\,678\,615\,c[7] - 2\,936\,241\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,571\,c[5] - 1\,006\,877\,c[6] + \\
& \quad 2\,684\,295\,c[7] - 2\,956\,257\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,571\,c[5] - 1\,006\,845\,c[6] + 2\,683\,719\,c[7] - 2\,953\,665\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,571\,c[5] - 1\,006\,813\,c[6] + \\
& \quad 2\,683\,079\,c[7] - 2\,950\,497\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] +
\end{aligned}$$

```

203 571 c[5] - 1 006 781 c[6] + 2 682 439 c[7] - 2 947 329 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 587 c[5] - 1 007 277 c[6] +
2 687 543 c[7] - 2 964 753 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 587 c[5] - 1 007 245 c[6] + 2 686 903 c[7] - 2 961 585 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 235 c[5] - 1 001 629 c[6] +
2 648 151 c[7] - 2 863 593 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 251 c[5] - 1 002 093 c[6] + 2 652 615 c[7] - 2 877 849 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 251 c[5] - 1 002 061 c[6] +
2 652 039 c[7] - 2 875 257 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 251 c[5] - 1 002 029 c[6] + 2 651 399 c[7] - 2 872 089 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 267 c[5] - 1 002 557 c[6] +
2 657 079 c[7] - 2 892 105 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 267 c[5] - 1 002 525 c[6] + 2 656 503 c[7] - 2 889 513 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 267 c[5] - 1 002 493 c[6] +
2 655 863 c[7] - 2 886 345 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 283 c[5] - 1 002 989 c[6] + 2 660 967 c[7] - 2 903 769 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 283 c[5] - 1 002 957 c[6] +
2 660 327 c[7] - 2 900 601 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 299 c[5] - 1 003 453 c[6] + 2 665 431 c[7] - 2 918 025 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 299 c[5] - 1 003 421 c[6] +
2 664 791 c[7] - 2 914 857 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 931 c[5] - 997 309 c[6] + 2 620 935 c[7] - 2 799 441 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 202 947 c[5] - 997 773 c[6] +
2 625 399 c[7] - 2 813 697 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 947 c[5] - 997 741 c[6] + 2 624 823 c[7] - 2 811 105 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 202 963 c[5] - 998 205 c[6] +
2 629 287 c[7] - 2 825 361 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 963 c[5] - 998 173 c[6] + 2 628 647 c[7] - 2 822 193 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 202 979 c[5] - 998 669 c[6] +
2 633 751 c[7] - 2 839 617 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 979 c[5] - 998 637 c[6] + 2 633 111 c[7] - 2 836 449 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 202 995 c[5] - 999 133 c[6] +
2 638 215 c[7] - 2 853 873 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 659 c[5] - 993 885 c[6] + 2 602 071 c[7] - 2 761 209 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 675 c[5] - 994 349 c[6] +
2 606 535 c[7] - 2 775 465 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 691 c[5] - 994 813 c[6] + 2 610 999 c[7] - 2 789 721 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 707 c[5] - 995 309 c[6] +
2 616 103 c[7] - 2 807 145 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 371 c[5] - 990 029 c[6] + 2 579 319 c[7] - 2 711 313 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 205 c[6] +
2 557 207 c[7] - 2 664 585 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -1 569 046, -573 439, -115 384, -17 518}

GCD[0, 0, 0, 0, -1 569 046, -573 439, -115 384, -17 518]

```

cert.g

-169 426 217

$\{0, 0, 0, 0, -1569046, -573439, -115384, -17518\}.\text{Reverse}[\text{gpart}[\text{listdim17}[[49]]]]$

-169 426 217

cert.Transpose[A]

{49 605 063, 49 603 751, 52 309 543, 52 308 231, 25 237 143, 27 941 623,
27 940 311, 3 573 703, 87 478 215, 90 181 383, 65 816 087, 65 814 775, 65 813 463,
68 519 255, 41 448 167, 44 152 647, 44 151 335, 19 786 039, 19 784 727,
19 783 415, 103 687 927, 82 025 799, 82 024 487, 57 659 191, 57 657 879,
60 363 671, 60 362 359, 33 292 583, 35 997 063, 35 995 751, 35 994 439,
11 629 143, 11 627 831, 98 235 511, 73 868 903, 76 573 383, 76 572 071, 49 502 295,
52 206 775, 52 205 463, 27 840 167, 27 838 855, 3 473 559, 3 472 247, 114 445 223,
90 078 615, 92 783 095, 68 416 487, 68 415 175, 44 049 879, 44 048 567,
19 683 271, 84 626 199, 60 259 591, 35 892 983, 11 527 687, 76 469 303, 68 313 719}

chi = listdim17[[50]]

$(-9 + x)^{12} (5 + x)^{32} (73 - 18x + x^2) (-1360 + 377x - 34x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

{ {416 779, -316 728, 96 123, -14 992, 1273, -56, 1},
 {416 427, -316 696, 96 123, -14 992, 1273, -56, 1},
 {418 363, -317 048, 96 139, -14 992, 1273, -56, 1},
 {419 531, -317 336, 96 155, -14 992, 1273, -56, 1},
 {404 611, -313 504, 95 843, -14 984, 1273, -56, 1},
 {406 899, -313 888, 95 859, -14 984, 1273, -56, 1},
 {406 483, -313 856, 95 859, -14 984, 1273, -56, 1},
 {408 771, -314 240, 95 875, -14 984, 1273, -56, 1},
 {408 419, -314 208, 95 875, -14 984, 1273, -56, 1},
 {408 067, -314 176, 95 875, -14 984, 1273, -56, 1},
 {410 355, -314 560, 95 891, -14 984, 1273, -56, 1},
 {410 003, -314 528, 95 891, -14 984, 1273, -56, 1},
 {411 939, -314 880, 95 907, -14 984, 1273, -56, 1},
 {411 171, -314 816, 95 907, -14 984, 1273, -56, 1},
 {413 107, -315 168, 95 923, -14 984, 1273, -56, 1},
 {395 019, -310 696, 95 579, -14 976, 1273, -56, 1},
 {394 667, -310 664, 95 579, -14 976, 1273, -56, 1},
 {396 603, -311 016, 95 595, -14 976, 1273, -56, 1},
 {396 251, -310 984, 95 595, -14 976, 1273, -56, 1},
 {398 123, -311 336, 95 611, -14 976, 1273, -56, 1},
 {398 187, -311 336, 95 611, -14 976, 1273, -56, 1},


```

{397 771, -311 304, 95 611, -14 976, 1273, -56, 1},
{400 059, -311 688, 95 627, -14 976, 1273, -56, 1},
{399 707, -311 656, 95 627, -14 976, 1273, -56, 1},
{399 355, -311 624, 95 627, -14 976, 1273, -56, 1},
{401 643, -312 008, 95 643, -14 976, 1273, -56, 1},
{406 683, -313 000, 95 691, -14 976, 1273, -56, 1},
{382 851, -307 472, 95 299, -14 968, 1273, -56, 1},
{384 723, -307 824, 95 315, -14 968, 1273, -56, 1},
{384 435, -307 792, 95 315, -14 968, 1273, -56, 1},
{386 307, -308 144, 95 331, -14 968, 1273, -56, 1},
{387 891, -308 464, 95 347, -14 968, 1273, -56, 1},
{387 539, -308 432, 95 347, -14 968, 1273, -56, 1},
{389 411, -308 784, 95 363, -14 968, 1273, -56, 1},
{391 347, -309 136, 95 379, -14 968, 1273, -56, 1},
{390 995, -309 104, 95 379, -14 968, 1273, -56, 1},
{392 931, -309 456, 95 395, -14 968, 1273, -56, 1},
{394 099, -309 744, 95 411, -14 968, 1273, -56, 1},
{376 011, -305 272, 95 067, -14 960, 1273, -56, 1},
{377 595, -305 592, 95 083, -14 960, 1273, -56, 1},
{379 179, -305 912, 95 099, -14 960, 1273, -56, 1},
{380 699, -306 232, 95 115, -14 960, 1273, -56, 1},
{382 635, -306 584, 95 131, -14 960, 1273, -56, 1},
{382 283, -306 552, 95 131, -14 960, 1273, -56, 1},
{368 883, -303 040, 94 835, -14 952, 1273, -56, 1},
{372 339, -303 712, 94 867, -14 952, 1273, -56, 1},
{373 923, -304 032, 94 883, -14 952, 1273, -56, 1},
{363 627, -301 160, 94 619, -14 944, 1273, -56, 1},
{354 915, -298 608, 94 371, -14 936, 1273, -56, 1}

```

```

A = {{416 779, -316 728, 96 123, -14 992, 1273, -56, 1},
      {416 427, -316 696, 96 123, -14 992, 1273, -56, 1},
      {418 363, -317 048, 96 139, -14 992, 1273, -56, 1},
      {419 531, -317 336, 96 155, -14 992, 1273, -56, 1},
      {404 611, -313 504, 95 843, -14 984, 1273, -56, 1},
      {406 899, -313 888, 95 859, -14 984, 1273, -56, 1},
      {406 483, -313 856, 95 859, -14 984, 1273, -56, 1},
      {408 771, -314 240, 95 875, -14 984, 1273, -56, 1},
      {408 419, -314 208, 95 875, -14 984, 1273, -56, 1},
      {408 067, -314 176, 95 875, -14 984, 1273, -56, 1},
      {410 355, -314 560, 95 891, -14 984, 1273, -56, 1},
      {410 003, -314 528, 95 891, -14 984, 1273, -56, 1},
      {411 939, -314 880, 95 907, -14 984, 1273, -56, 1},
      {411 171, -314 816, 95 907, -14 984, 1273, -56, 1},
      {413 107, -315 168, 95 923, -14 984, 1273, -56, 1},
      {395 019, -310 696, 95 579, -14 976, 1273, -56, 1},
      {394 667, -310 664, 95 579, -14 976, 1273, -56, 1},
      {396 603, -311 016, 95 595, -14 976, 1273, -56, 1},

```

```

{396 251, -310 984, 95 595, -14 976, 1273, -56, 1},
{398 123, -311 336, 95 611, -14 976, 1273, -56, 1},
{398 187, -311 336, 95 611, -14 976, 1273, -56, 1},
{397 771, -311 304, 95 611, -14 976, 1273, -56, 1},
{400 059, -311 688, 95 627, -14 976, 1273, -56, 1},
{399 707, -311 656, 95 627, -14 976, 1273, -56, 1},
{399 355, -311 624, 95 627, -14 976, 1273, -56, 1},
{401 643, -312 008, 95 643, -14 976, 1273, -56, 1},
{406 683, -313 000, 95 691, -14 976, 1273, -56, 1},
{382 851, -307 472, 95 299, -14 968, 1273, -56, 1},
{384 723, -307 824, 95 315, -14 968, 1273, -56, 1},
{384 435, -307 792, 95 315, -14 968, 1273, -56, 1},
{386 307, -308 144, 95 331, -14 968, 1273, -56, 1},
{387 891, -308 464, 95 347, -14 968, 1273, -56, 1},
{387 539, -308 432, 95 347, -14 968, 1273, -56, 1},
{389 411, -308 784, 95 363, -14 968, 1273, -56, 1},
{391 347, -309 136, 95 379, -14 968, 1273, -56, 1},
{390 995, -309 104, 95 379, -14 968, 1273, -56, 1},
{392 931, -309 456, 95 395, -14 968, 1273, -56, 1},
{394 099, -309 744, 95 411, -14 968, 1273, -56, 1},
{376 011, -305 272, 95 067, -14 960, 1273, -56, 1},
{377 595, -305 592, 95 083, -14 960, 1273, -56, 1},
{379 179, -305 912, 95 099, -14 960, 1273, -56, 1},
{380 699, -306 232, 95 115, -14 960, 1273, -56, 1},
{382 635, -306 584, 95 131, -14 960, 1273, -56, 1},
{382 283, -306 552, 95 131, -14 960, 1273, -56, 1},
{368 883, -303 040, 94 835, -14 952, 1273, -56, 1},
{372 339, -303 712, 94 867, -14 952, 1273, -56, 1},
{373 923, -304 032, 94 883, -14 952, 1273, -56, 1},
{363 627, -301 160, 94 619, -14 944, 1273, -56, 1},
{354 915, -298 608, 94 371, -14 936, 1273, -56, 1}};

```

```
A // MatrixForm
```

```
( 416 779 -316 728 96 123 -14 992 1273 -56 1 )
 416 427 -316 696 96 123 -14 992 1273 -56 1
 418 363 -317 048 96 139 -14 992 1273 -56 1
 419 531 -317 336 96 155 -14 992 1273 -56 1
 404 611 -313 504 95 843 -14 984 1273 -56 1
 406 899 -313 888 95 859 -14 984 1273 -56 1
 406 483 -313 856 95 859 -14 984 1273 -56 1
 408 771 -314 240 95 875 -14 984 1273 -56 1
 408 419 -314 208 95 875 -14 984 1273 -56 1
 408 067 -314 176 95 875 -14 984 1273 -56 1
 410 355 -314 560 95 891 -14 984 1273 -56 1
 410 003 -314 528 95 891 -14 984 1273 -56 1
 411 939 -314 880 95 907 -14 984 1273 -56 1
 411 171 -314 816 95 907 -14 984 1273 -56 1
 413 107 -315 168 95 923 -14 984 1273 -56 1
 395 019 -310 696 95 579 -14 976 1273 -56 1
 394 667 -310 664 95 579 -14 976 1273 -56 1
 396 603 -311 016 95 595 -14 976 1273 -56 1
 396 251 -310 984 95 595 -14 976 1273 -56 1
 398 123 -311 336 95 611 -14 976 1273 -56 1
 398 187 -311 336 95 611 -14 976 1273 -56 1
 397 771 -311 304 95 611 -14 976 1273 -56 1
 400 059 -311 688 95 627 -14 976 1273 -56 1
 399 707 -311 656 95 627 -14 976 1273 -56 1
 399 355 -311 624 95 627 -14 976 1273 -56 1
 401 643 -312 008 95 643 -14 976 1273 -56 1
 406 683 -313 000 95 691 -14 976 1273 -56 1
 382 851 -307 472 95 299 -14 968 1273 -56 1
 384 723 -307 824 95 315 -14 968 1273 -56 1
 384 435 -307 792 95 315 -14 968 1273 -56 1
 386 307 -308 144 95 331 -14 968 1273 -56 1
 387 891 -308 464 95 347 -14 968 1273 -56 1
 387 539 -308 432 95 347 -14 968 1273 -56 1
 389 411 -308 784 95 363 -14 968 1273 -56 1
 391 347 -309 136 95 379 -14 968 1273 -56 1
 390 995 -309 104 95 379 -14 968 1273 -56 1
 392 931 -309 456 95 395 -14 968 1273 -56 1
 394 099 -309 744 95 411 -14 968 1273 -56 1
 376 011 -305 272 95 067 -14 960 1273 -56 1
 377 595 -305 592 95 083 -14 960 1273 -56 1
 379 179 -305 912 95 099 -14 960 1273 -56 1
 380 699 -306 232 95 115 -14 960 1273 -56 1
 382 635 -306 584 95 131 -14 960 1273 -56 1
 382 283 -306 552 95 131 -14 960 1273 -56 1
 368 883 -303 040 94 835 -14 952 1273 -56 1
 372 339 -303 712 94 867 -14 952 1273 -56 1
 373 923 -304 032 94 883 -14 952 1273 -56 1
 363 627 -301 160 94 619 -14 944 1273 -56 1
 354 915 -298 608 94 371 -14 936 1273 -56 1 )
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 295 795, -15 476 032, 4 704 883, -734 408, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

$\{416\,779\,c[1] - 316\,728\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $416\,427\,c[1] - 316\,696\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $418\,363\,c[1] - 317\,048\,c[2] + 96\,139\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $419\,531\,c[1] - 317\,336\,c[2] + 96\,155\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $404\,611\,c[1] - 313\,504\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,899\,c[1] - 313\,888\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,483\,c[1] - 313\,856\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,771\,c[1] - 314\,240\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,419\,c[1] - 314\,208\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $408\,067\,c[1] - 314\,176\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $410\,355\,c[1] - 314\,560\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $410\,003\,c[1] - 314\,528\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $411\,939\,c[1] - 314\,880\,c[2] + 95\,907\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $411\,171\,c[1] - 314\,816\,c[2] + 95\,907\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $413\,107\,c[1] - 315\,168\,c[2] + 95\,923\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $395\,019\,c[1] - 310\,696\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,667\,c[1] - 310\,664\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,603\,c[1] - 311\,016\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $396\,251\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,123\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $398\,187\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $397\,771\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $400\,059\,c[1] - 311\,688\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $399\,707\,c[1] - 311\,656\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $399\,355\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $401\,643\,c[1] - 312\,008\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $406\,683\,c[1] - 313\,000\,c[2] + 95\,691\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $382\,851\,c[1] - 307\,472\,c[2] + 95\,299\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $384\,723\,c[1] - 307\,824\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $384\,435\,c[1] - 307\,792\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $386\,307\,c[1] - 308\,144\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $387\,891\,c[1] - 308\,464\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $387\,539\,c[1] - 308\,432\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $389\,411\,c[1] - 308\,784\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $391\,347\,c[1] - 309\,136\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $390\,995\,c[1] - 309\,104\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $392\,931\,c[1] - 309\,456\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,099\,c[1] - 309\,744\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $376\,011\,c[1] - 305\,272\,c[2] + 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $377\,595\,c[1] - 305\,592\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $379\,179\,c[1] - 305\,912\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $380\,699\,c[1] - 306\,232\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $382\,635\,c[1] - 306\,584\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $382\,283\,c[1] - 306\,552\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $368\,883\,c[1] - 303\,040\,c[2] + 94\,835\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $372\,339\,c[1] - 303\,712\,c[2] + 94\,867\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $373\,923\,c[1] - 304\,032\,c[2] + 94\,883\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$

$363\,627\,c[1] - 301\,160\,c[2] + 94\,619\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $354\,915\,c[1] - 298\,608\,c[2] + 94\,371\,c[3] - 14\,936\,c[4] + 1273\,c[5] - 56\,c[6] + c[7]\}$

Array[c, 7].g

$20\,295\,795\,c[1] - 15\,476\,032\,c[2] + 4\,704\,883\,c[3] -$
 $734\,408\,c[4] + 62\,377\,c[5] - 2744\,c[6] + 49\,c[7]$

cert =

Flatten[Array[c, 7] /. FindInstance[$20\,295\,795\,c[1] - 15\,476\,032\,c[2] + 4\,704\,883\,c[3] -$
 $734\,408\,c[4] + 62\,377\,c[5] - 2744\,c[6] + 49\,c[7] < 0 \&\&$
 $416\,779\,c[1] - 316\,728\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$
 $0 \&\& 416\,427\,c[1] - 316\,696\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] +$
 $1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 418\,363\,c[1] - 317\,048\,c[2] +$
 $96\,139\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&$
 $419\,531\,c[1] - 317\,336\,c[2] + 96\,155\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$
 $0 \&\& 404\,611\,c[1] - 313\,504\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] +$
 $1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 406\,899\,c[1] - 313\,888\,c[2] +$
 $95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&$
 $406\,483\,c[1] - 313\,856\,c[2] + 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$
 $0 \&\& 408\,771\,c[1] - 314\,240\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] +$
 $1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 408\,419\,c[1] - 314\,208\,c[2] +$
 $95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&$
 $408\,067\,c[1] - 314\,176\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$
 $0 \&\& 410\,355\,c[1] - 314\,560\,c[2] + 95\,891\,c[3] - 14\,984\,c[4] +$
 $1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 410\,003\,c[1] - 314\,528\,c[2] +$
 $95\,891\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&$
 $411\,939\,c[1] - 314\,880\,c[2] + 95\,907\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$
 $0 \&\& 411\,171\,c[1] - 314\,816\,c[2] + 95\,907\,c[3] - 14\,984\,c[4] +$
 $1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 413\,107\,c[1] - 315\,168\,c[2] +$
 $95\,923\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&$
 $395\,019\,c[1] - 310\,696\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$
 $0 \&\& 394\,667\,c[1] - 310\,664\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] +$
 $1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 396\,603\,c[1] - 311\,016\,c[2] +$
 $95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&$
 $396\,251\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$
 $0 \&\& 398\,123\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] +$
 $1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 398\,187\,c[1] - 311\,336\,c[2] +$
 $95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&$
 $397\,771\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$
 $0 \&\& 400\,059\,c[1] - 311\,688\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] +$
 $1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 399\,707\,c[1] - 311\,656\,c[2] +$
 $95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&$
 $399\,355\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$
 $0 \&\& 401\,643\,c[1] - 312\,008\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] +$
 $1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 406\,683\,c[1] - 313\,000\,c[2] +$
 $95\,691\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&$
 $382\,851\,c[1] - 307\,472\,c[2] + 95\,299\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq$

```

0 && 384 723 c[1] - 307 824 c[2] + 95 315 c[3] - 14 968 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 384 435 c[1] - 307 792 c[2] +
  95 315 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
386 307 c[1] - 308 144 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 387 891 c[1] - 308 464 c[2] + 95 347 c[3] - 14 968 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 387 539 c[1] - 308 432 c[2] +
  95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
389 411 c[1] - 308 784 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 391 347 c[1] - 309 136 c[2] + 95 379 c[3] - 14 968 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 390 995 c[1] - 309 104 c[2] +
  95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
392 931 c[1] - 309 456 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 394 099 c[1] - 309 744 c[2] + 95 411 c[3] - 14 968 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 376 011 c[1] - 305 272 c[2] +
  95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 379 179 c[1] - 305 912 c[2] + 95 099 c[3] - 14 960 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 380 699 c[1] - 306 232 c[2] +
  95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
382 635 c[1] - 306 584 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 382 283 c[1] - 306 552 c[2] + 95 131 c[3] - 14 960 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 368 883 c[1] - 303 040 c[2] +
  94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
372 339 c[1] - 303 712 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 373 923 c[1] - 304 032 c[2] + 94 883 c[3] -
  14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
363 627 c[1] - 301 160 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 354 915 c[1] - 298 608 c[2] + 94 371 c[3] - 14 936 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{386 966, 4 256 617, 47 338 744, 531 045 255, 0, 0, 4 598 007 557 155}

GCD[386 966, 4 256 617, 47 338 744, 531 045 255, 0, 0, 4 598 007 557 155]
1

Reverse[cert]
{4 598 007 557 155, 0, 0, 531 045 255, 47 338 744, 4 256 617, 386 966}

cert.g
-19 742 267

{386 966, 4 256 617, 47 338 744, 531 045 255, 0, 0, 4 598 007 557 155}.
gpart[listdim17[[50]]]
-19 742 267

```

`cert.Transpose[A]`

```
{8697045, 8696757, 16953653, 444149, 16941685, 25198869, 432757, 8689941,
 8689653, 8689365, 16946549, 16946261, 25203157, 436757, 8693653, 8677973,
 8677685, 16934581, 16934293, 425365, 25191189, 425077, 8682261, 8681973,
 8681685, 16938869, 16943157, 16922613, 413685, 25179221, 8670293, 16926901,
 16926613, 417685, 8674581, 8674293, 16931189, 421685, 406005, 8662613,
 16919221, 410005, 8666901, 8666613, 8654933, 402613, 8659221, 394933, 387253}
```

`chi = listdim17[[51]]`

$(-9 + x)^{11} (5 + x)^{32} (893584 - 567289x + 147653x^2 - 20186x^3 + 1530x^4 - 61x^5 + x^6)$

`CoefficientList[feasibleinterlacingpolylist[chi], x]`

```
A = {{1, -65, 1777, -26449, 231019, -1180779, 3256099, -3712131},
      {1, -65, 1777, -26449, 231035, -1181307, 3261843, -3732723},
      {1, -65, 1777, -26449, 231035, -1181275, 3261139, -3728979},
      {1, -65, 1777, -26449, 231051, -1181803, 3266755, -3748291},
      {1, -65, 1777, -26449, 231051, -1181803, 3266819, -3748995},
      {1, -65, 1777, -26449, 231051, -1181803, 3266883, -3749571},
      {1, -65, 1777, -26449, 231051, -1181771, 3266115, -3745123},
      {1, -65, 1777, -26449, 231051, -1181771, 3266179, -3745827},
      {1, -65, 1777, -26449, 231051, -1181771, 3266179, -3745699},
      {1, -65, 1777, -26449, 231051, -1181771, 3266243, -3746403},
      {1, -65, 1777, -26449, 231067, -1182267, 3271219, -3762547},
      {1, -65, 1777, -26449, 231067, -1182235, 3270579, -3759379},
      {1, -65, 1777, -26441, 230683, -1175563, 3220595, -3622635},
      {1, -65, 1777, -26441, 230699, -1176091, 3226275, -3642651},
      {1, -65, 1777, -26441, 230699, -1176059, 3225571, -3638907},
      {1, -65, 1777, -26441, 230699, -1176059, 3225635, -3639483},
      {1, -65, 1777, -26441, 230699, -1176027, 3224995, -3636315},
      {1, -65, 1777, -26441, 230715, -1176619, 3231955, -3662667},
      {1, -65, 1777, -26441, 230715, -1176587, 3231187, -3658219},
      {1, -65, 1777, -26441, 230715, -1176587, 3231315, -3659499},
      {1, -65, 1777, -26441, 230715, -1176587, 3231379, -3660075},
      {1, -65, 1777, -26441, 230715, -1176555, 3230675, -3656331},
      {1, -65, 1777, -26441, 230715, -1176555, 3230739, -3656907},
      {1, -65, 1777, -26441, 230715, -1176523, 3230035, -3653163},
      {1, -65, 1777, -26441, 230715, -1176523, 3230099, -3653739},
      {1, -65, 1777, -26441, 230731, -1177147, 3237635, -3682683},
      {1, -65, 1777, -26441, 230731, -1177115, 3236995, -3679515},
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A // MatrixForm

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Dimensions[A]

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& 3235843 c[7] - 3674331 c[8], c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +
\end{aligned}$$

$230\,731\,c[5] - 1\,177\,019\,c[6] + 3\,235\,075\,c[7] - 3\,669\,883\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,177\,019\,c[6] +$
 $3\,235\,139\,c[7] - 3\,670\,587\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,731\,c[5] - 1\,177\,019\,c[6] + 3\,235\,203\,c[7] - 3\,671\,163\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,176\,987\,c[6] +$
 $3\,234\,499\,c[7] - 3\,667\,419\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,747\,c[5] - 1\,177\,579\,c[6] + 3\,241\,523\,c[7] - 3\,694\,347\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,747\,c[5] - 1\,177\,547\,c[6] +$
 $3\,240\,883\,c[7] - 3\,691\,179\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,747\,c[5] - 1\,177\,515\,c[6] + 3\,240\,179\,c[7] - 3\,687\,307\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,747\,c[5] - 1\,177\,515\,c[6] +$
 $3\,240\,243\,c[7] - 3\,688\,011\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,747\,c[5] - 1\,177\,483\,c[6] + 3\,239\,539\,c[7] - 3\,684\,139\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,363\,c[5] - 1\,170\,875\,c[6] +$
 $3\,190\,707\,c[7] - 3\,552\,579\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,363\,c[5] - 1\,170\,843\,c[6] + 3\,190\,067\,c[7] - 3\,549\,411\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,371\,c[6] +$
 $3\,195\,747\,c[7] - 3\,569\,427\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,379\,c[5] - 1\,171\,371\,c[6] + 3\,195\,811\,c[7] - 3\,570\,003\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,339\,c[6] +$
 $3\,195\,171\,c[7] - 3\,566\,835\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,379\,c[5] - 1\,171\,307\,c[6] + 3\,194\,531\,c[7] - 3\,563\,667\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,307\,c[6] +$
 $3\,194\,595\,c[7] - 3\,564\,243\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,379\,c[5] - 1\,171\,275\,c[6] + 3\,193\,955\,c[7] - 3\,561\,075\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,899\,c[6] +$
 $3\,201\,491\,c[7] - 3\,590\,019\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,395\,c[5] - 1\,171\,867\,c[6] + 3\,200\,851\,c[7] - 3\,586\,851\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,835\,c[6] +$
 $3\,200\,275\,c[7] - 3\,584\,259\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,395\,c[5] - 1\,171\,803\,c[6] + 3\,199\,635\,c[7] - 3\,581\,091\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,771\,c[6] +$
 $3\,198\,995\,c[7] - 3\,577\,923\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,395\,c[5] - 1\,171\,771\,c[6] + 3\,199\,059\,c[7] - 3\,578\,499\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,739\,c[6] +$
 $3\,198\,355\,c[7] - 3\,574\,755\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,411\,c[5] - 1\,172\,363\,c[6] + 3\,205\,955\,c[7] - 3\,604\,275\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,331\,c[6] +$
 $3\,205\,315\,c[7] - 3\,601\,107\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,411\,c[5] - 1\,172\,299\,c[6] + 3\,204\,611\,c[7] - 3\,597\,235\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,299\,c[6] +$
 $3\,204\,739\,c[7] - 3\,598\,515\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,411\,c[5] - 1\,172\,267\,c[6] + 3\,204\,099\,c[7] - 3\,595\,347\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,235\,c[6] +$
 $3\,203\,459\,c[7] - 3\,592\,179\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,427\,c[5] - 1\,172\,859\,c[6] + 3\,211\,059\,c[7] - 3\,621\,699\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,827\,c[6] +$

$$\begin{aligned}
& 3\,210\,419\,c[7] - 3\,618\,531\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,795\,c[6] + 3\,209\,843\,c[7] - 3\,615\,939\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,763\,c[6] + \\
& 3\,209\,203\,c[7] - 3\,612\,771\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,323\,c[6] + 3\,215\,523\,c[7] - 3\,635\,955\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,259\,c[6] + \\
& 3\,214\,307\,c[7] - 3\,630\,195\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,043\,c[5] - 1\,166\,155\,c[6] + 3\,160\,243\,c[7] - 3\,479\,931\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,123\,c[6] + \\
& 3\,159\,603\,c[7] - 3\,476\,763\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,043\,c[5] - 1\,166\,091\,c[6] + 3\,159\,027\,c[7] - 3\,474\,171\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,619\,c[6] + \\
& 3\,164\,707\,c[7] - 3\,494\,187\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,059\,c[5] - 1\,166\,587\,c[6] + 3\,164\,067\,c[7] - 3\,491\,019\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,555\,c[6] + \\
& 3\,163\,491\,c[7] - 3\,488\,427\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,059\,c[5] - 1\,166\,523\,c[6] + 3\,162\,915\,c[7] - 3\,485\,835\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,083\,c[6] + \\
& 3\,169\,171\,c[7] - 3\,508\,443\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,075\,c[5] - 1\,167\,051\,c[6] + 3\,168\,531\,c[7] - 3\,505\,275\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,051\,c[6] + \\
& 3\,168\,595\,c[7] - 3\,505\,851\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,075\,c[5] - 1\,167\,019\,c[6] + 3\,167\,955\,c[7] - 3\,502\,683\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,166\,987\,c[6] + \\
& 3\,167\,315\,c[7] - 3\,499\,515\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,579\,c[6] + 3\,174\,275\,c[7] - 3\,525\,867\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,547\,c[6] + \\
& 3\,173\,635\,c[7] - 3\,522\,699\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,515\,c[6] + 3\,172\,931\,c[7] - 3\,518\,827\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,515\,c[6] + \\
& 3\,173\,059\,c[7] - 3\,520\,107\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,483\,c[6] + 3\,172\,419\,c[7] - 3\,516\,939\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,043\,c[6] + \\
& 3\,178\,739\,c[7] - 3\,540\,123\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,011\,c[6] + 3\,178\,163\,c[7] - 3\,537\,531\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,539\,c[6] + \\
& 3\,183\,843\,c[7] - 3\,557\,547\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,003\,c[6] + 3\,188\,307\,c[7] - 3\,571\,803\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,499\,c[6] + \\
& 3\,193\,411\,c[7] - 3\,589\,227\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,707\,c[5] - 1\,160\,939\,c[6] + 3\,124\,675\,c[7] - 3\,389\,859\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,835\,c[6] + \\
& 3\,133\,027\,c[7] - 3\,415\,779\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,739\,c[5] - 1\,161\,803\,c[6] + 3\,132\,387\,c[7] - 3\,412\,611\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,771\,c[6] + \\
& 3\,131\,811\,c[7] - 3\,410\,019\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,755\,c[5] - 1\,162\,299\,c[6] + 3\,137\,491\,c[7] - 3\,430\,035\,c[8],
\end{aligned}$$

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c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 755 c[5] - 1 162 267 c[6] +
  3 136 851 c[7] - 3 426 867 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
  229 755 c[5] - 1 162 267 c[6] + 3 136 915 c[7] - 3 427 443 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 755 c[5] - 1 162 235 c[6] +
  3 136 275 c[7] - 3 424 275 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
  229 771 c[5] - 1 162 795 c[6] + 3 142 595 c[7] - 3 447 459 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 771 c[5] - 1 162 763 c[6] +
  3 141 955 c[7] - 3 444 291 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
  229 771 c[5] - 1 162 731 c[6] + 3 141 379 c[7] - 3 441 699 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 787 c[5] - 1 163 259 c[6] +
  3 147 059 c[7] - 3 461 715 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
  229 803 c[5] - 1 163 755 c[6] + 3 152 163 c[7] - 3 479 139 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 803 c[5] - 1 163 723 c[6] +
  3 151 523 c[7] - 3 475 971 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 419 c[5] - 1 157 051 c[6] + 3 101 347 c[7] - 3 337 371 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 435 c[5] - 1 157 515 c[6] +
  3 105 811 c[7] - 3 351 627 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 435 c[5] - 1 157 483 c[6] + 3 105 171 c[7] - 3 348 459 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 451 c[5] - 1 157 979 c[6] +
  3 110 275 c[7] - 3 365 883 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 467 c[5] - 1 158 475 c[6] + 3 115 379 c[7] - 3 383 307 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 115 c[5] - 1 152 731 c[6] +
  3 074 131 c[7] - 3 273 219 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 131 c[5] - 1 153 195 c[6] + 3 078 595 c[7] - 3 287 475 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 801 c[4] +
  11 314 555 c[5] - 57 819 979 c[6] + 159 582 835 c[7] - 182 677 067 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 801 c[4] +
  11 314 555 c[5] - 57 819 979 c[6] + 159 582 835 c[7] - 182 677 067 c[8] < 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 019 c[5] - 1 180 779 c[6] +
  3 256 099 c[7] - 3 712 131 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
  231 035 c[5] - 1 181 307 c[6] + 3 261 843 c[7] - 3 732 723 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 035 c[5] - 1 181 275 c[6] +
  3 261 139 c[7] - 3 728 979 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
  231 051 c[5] - 1 181 803 c[6] + 3 266 755 c[7] - 3 748 291 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 051 c[5] - 1 181 803 c[6] +
  3 266 819 c[7] - 3 748 995 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
  231 051 c[5] - 1 181 803 c[6] + 3 266 883 c[7] - 3 749 571 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 051 c[5] - 1 181 771 c[6] +
  3 266 115 c[7] - 3 745 123 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
  231 051 c[5] - 1 181 771 c[6] + 3 266 179 c[7] - 3 745 827 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 051 c[5] - 1 181 771 c[6] +
  3 266 179 c[7] - 3 745 699 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
  231 051 c[5] - 1 181 771 c[6] + 3 266 243 c[7] - 3 746 403 c[8] ≥ 0 &&

```

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] + 231067 c[5] - 1182267 c[6] + \\
& \quad 3271219 c[7] - 3762547 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] + \\
& \quad 231067 c[5] - 1182235 c[6] + 3270579 c[7] - 3759379 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230683 c[5] - 1175563 c[6] + \\
& \quad 3220595 c[7] - 3622635 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230699 c[5] - 1176091 c[6] + 3226275 c[7] - 3642651 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230699 c[5] - 1176059 c[6] + \\
& \quad 3225571 c[7] - 3638907 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230699 c[5] - 1176059 c[6] + 3225635 c[7] - 3639483 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230699 c[5] - 1176027 c[6] + \\
& \quad 3224995 c[7] - 3636315 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230715 c[5] - 1176619 c[6] + 3231955 c[7] - 3662667 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230715 c[5] - 1176587 c[6] + \\
& \quad 3231187 c[7] - 3658219 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230715 c[5] - 1176587 c[6] + 3231315 c[7] - 3659499 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230715 c[5] - 1176587 c[6] + \\
& \quad 3231379 c[7] - 3660075 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230715 c[5] - 1176555 c[6] + 3230675 c[7] - 3656331 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230715 c[5] - 1176555 c[6] + \\
& \quad 3230739 c[7] - 3656907 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230715 c[5] - 1176523 c[6] + 3230035 c[7] - 3653163 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230715 c[5] - 1176523 c[6] + \\
& \quad 3230099 c[7] - 3653739 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230731 c[5] - 1177147 c[6] + 3237635 c[7] - 3682683 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230731 c[5] - 1177115 c[6] + \\
& \quad 3236995 c[7] - 3679515 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230731 c[5] - 1177115 c[6] + 3237059 c[7] - 3680091 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230731 c[5] - 1177083 c[6] + \\
& \quad 3236291 c[7] - 3675643 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230731 c[5] - 1177083 c[6] + 3236419 c[7] - 3676923 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230731 c[5] - 1177051 c[6] + \\
& \quad 3235779 c[7] - 3673755 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230731 c[5] - 1177051 c[6] + 3235843 c[7] - 3674331 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230731 c[5] - 1177019 c[6] + \\
& \quad 3235075 c[7] - 3669883 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230731 c[5] - 1177019 c[6] + 3235139 c[7] - 3670587 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230731 c[5] - 1177019 c[6] + \\
& \quad 3235203 c[7] - 3671163 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230731 c[5] - 1176987 c[6] + 3234499 c[7] - 3667419 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230747 c[5] - 1177579 c[6] + \\
& \quad 3241523 c[7] - 3694347 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230747 c[5] - 1177547 c[6] + 3240883 c[7] - 3691179 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230747 c[5] - 1177515 c[6] + \\
& \quad 3240179 c[7] - 3687307 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230747 c[5] - 1177515 c[6] + 3240243 c[7] - 3688011 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230747 c[5] - 1177483 c[6] + \\
& \quad 3239539 c[7] - 3684139 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,363\,c[5] - 1\,170\,875\,c[6] + 3\,190\,707\,c[7] - 3\,552\,579\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,363\,c[5] - 1\,170\,843\,c[6] + \\
& \quad 3\,190\,067\,c[7] - 3\,549\,411\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,379\,c[5] - 1\,171\,371\,c[6] + 3\,195\,747\,c[7] - 3\,569\,427\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,371\,c[6] + \\
& \quad 3\,195\,811\,c[7] - 3\,570\,003\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,379\,c[5] - 1\,171\,339\,c[6] + 3\,195\,171\,c[7] - 3\,566\,835\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,307\,c[6] + \\
& \quad 3\,194\,531\,c[7] - 3\,563\,667\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,379\,c[5] - 1\,171\,307\,c[6] + 3\,194\,595\,c[7] - 3\,564\,243\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,275\,c[6] + \\
& \quad 3\,193\,955\,c[7] - 3\,561\,075\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,899\,c[6] + 3\,201\,491\,c[7] - 3\,590\,019\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,867\,c[6] + \\
& \quad 3\,200\,851\,c[7] - 3\,586\,851\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,835\,c[6] + 3\,200\,275\,c[7] - 3\,584\,259\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,803\,c[6] + \\
& \quad 3\,199\,635\,c[7] - 3\,581\,091\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,771\,c[6] + 3\,198\,995\,c[7] - 3\,577\,923\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,771\,c[6] + \\
& \quad 3\,199\,059\,c[7] - 3\,578\,499\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,739\,c[6] + 3\,198\,355\,c[7] - 3\,574\,755\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,363\,c[6] + \\
& \quad 3\,205\,955\,c[7] - 3\,604\,275\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,331\,c[6] + 3\,205\,315\,c[7] - 3\,601\,107\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,299\,c[6] + \\
& \quad 3\,204\,611\,c[7] - 3\,597\,235\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,299\,c[6] + 3\,204\,739\,c[7] - 3\,598\,515\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,267\,c[6] + \\
& \quad 3\,204\,099\,c[7] - 3\,595\,347\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,235\,c[6] + 3\,203\,459\,c[7] - 3\,592\,179\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,859\,c[6] + \\
& \quad 3\,211\,059\,c[7] - 3\,621\,699\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,427\,c[5] - 1\,172\,827\,c[6] + 3\,210\,419\,c[7] - 3\,618\,531\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,795\,c[6] + \\
& \quad 3\,209\,843\,c[7] - 3\,615\,939\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,427\,c[5] - 1\,172\,763\,c[6] + 3\,209\,203\,c[7] - 3\,612\,771\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,323\,c[6] + \\
& \quad 3\,215\,523\,c[7] - 3\,635\,955\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,259\,c[6] + 3\,214\,307\,c[7] - 3\,630\,195\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,155\,c[6] + \\
& \quad 3\,160\,243\,c[7] - 3\,479\,931\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,043\,c[5] - 1\,166\,123\,c[6] + 3\,159\,603\,c[7] - 3\,476\,763\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,091\,c[6] + \\
& \quad 3\,159\,027\,c[7] - 3\,474\,171\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,059\,c[5] - 1\,166\,619\,c[6] + 3\,164\,707\,c[7] - 3\,494\,187\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,587\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,164\,067\,c[7] - 3\,491\,019\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,059\,c[5] - 1\,166\,555\,c[6] + 3\,163\,491\,c[7] - 3\,488\,427\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,523\,c[6] + \\
& 3\,162\,915\,c[7] - 3\,485\,835\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,075\,c[5] - 1\,167\,083\,c[6] + 3\,169\,171\,c[7] - 3\,508\,443\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,051\,c[6] + \\
& 3\,168\,531\,c[7] - 3\,505\,275\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,075\,c[5] - 1\,167\,051\,c[6] + 3\,168\,595\,c[7] - 3\,505\,851\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,019\,c[6] + \\
& 3\,167\,955\,c[7] - 3\,502\,683\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,075\,c[5] - 1\,166\,987\,c[6] + 3\,167\,315\,c[7] - 3\,499\,515\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,579\,c[6] + \\
& 3\,174\,275\,c[7] - 3\,525\,867\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,547\,c[6] + 3\,173\,635\,c[7] - 3\,522\,699\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,515\,c[6] + \\
& 3\,172\,931\,c[7] - 3\,518\,827\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,515\,c[6] + 3\,173\,059\,c[7] - 3\,520\,107\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,483\,c[6] + \\
& 3\,172\,419\,c[7] - 3\,516\,939\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,739\,c[7] - 3\,540\,123\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,011\,c[6] + \\
& 3\,178\,163\,c[7] - 3\,537\,531\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,539\,c[6] + 3\,183\,843\,c[7] - 3\,557\,547\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,003\,c[6] + \\
& 3\,188\,307\,c[7] - 3\,571\,803\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,499\,c[6] + 3\,193\,411\,c[7] - 3\,589\,227\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,707\,c[5] - 1\,160\,939\,c[6] + \\
& 3\,124\,675\,c[7] - 3\,389\,859\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,739\,c[5] - 1\,161\,835\,c[6] + 3\,133\,027\,c[7] - 3\,415\,779\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,803\,c[6] + \\
& 3\,132\,387\,c[7] - 3\,412\,611\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,739\,c[5] - 1\,161\,771\,c[6] + 3\,131\,811\,c[7] - 3\,410\,019\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,299\,c[6] + \\
& 3\,137\,491\,c[7] - 3\,430\,035\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,755\,c[5] - 1\,162\,267\,c[6] + 3\,136\,851\,c[7] - 3\,426\,867\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,267\,c[6] + \\
& 3\,136\,915\,c[7] - 3\,427\,443\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,755\,c[5] - 1\,162\,235\,c[6] + 3\,136\,275\,c[7] - 3\,424\,275\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,795\,c[6] + \\
& 3\,142\,595\,c[7] - 3\,447\,459\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,771\,c[5] - 1\,162\,763\,c[6] + 3\,141\,955\,c[7] - 3\,444\,291\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,731\,c[6] + \\
& 3\,141\,379\,c[7] - 3\,441\,699\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,259\,c[6] + 3\,147\,059\,c[7] - 3\,461\,715\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& 3\,152\,163\,c[7] - 3\,479\,139\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,523\,c[7] - 3\,475\,971\,c[8] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 419 c[5] - 1 157 051 c[6] +
  3 101 347 c[7] - 3 337 371 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 435 c[5] - 1 157 515 c[6] + 3 105 811 c[7] - 3 351 627 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 435 c[5] - 1 157 483 c[6] +
  3 105 171 c[7] - 3 348 459 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 451 c[5] - 1 157 979 c[6] + 3 110 275 c[7] - 3 365 883 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 467 c[5] - 1 158 475 c[6] +
  3 115 379 c[7] - 3 383 307 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 115 c[5] - 1 152 731 c[6] + 3 074 131 c[7] - 3 273 219 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 195 c[6] +
  3 078 595 c[7] - 3 287 475 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -3 978 492, -1 477 259, -314 027, -53 170}

```

```
GCD[0, 0, 0, 0, -3 978 492, -1 477 259, -314 027, -53 170]
```

```
1
```

```
cert.g
```

```
-161 467 654
```

```
{0, 0, 0, 0, -3 978 492, -1 477 259, -314 027, -53 170}.Reverse[gpart[listdim17[[51]]]]
-161 467 654
```

```
cert.Transpose[A]
```

```

{80 166 010, 87 608 442, 62 342 682, 41 922 970, 59 256 922, 69 785 114, 27 185 402,
  44 519 354, 37 713 594, 55 047 546, 19 890 266, 5 152 698, 102 268 666, 99 182 906,
  73 917 146, 84 445 338, 69 707 770, 96 097 146, 53 497 434, 81 359 578, 91 887 770,
  66 622 010, 77 150 202, 51 884 442, 62 412 634, 93 011 386, 78 273 818, 88 802 010,
  46 202 298, 74 064 442, 59 326 874, 69 855 066, 27 255 354, 44 589 306, 55 117 498,
  29 851 738, 66 769 306, 52 031 738, 19 960 218, 37 294 170, 5 222 650, 110 757 370,
  96 019 802, 92 934 042, 103 462 234, 88 724 666, 73 987 098, 84 515 290,
  69 777 722, 100 376 474, 85 638 906, 81 429 530, 66 691 962, 51 954 394, 62 482 586,
  37 216 826, 78 343 770, 63 606 202, 31 534 682, 59 396 826, 44 659 258, 29 921 690,
  71 048 634, 56 311 066, 52 101 690, 37 364 122, 49 015 930, 30 068 986, 115 036 698,
  100 299 130, 96 089 754, 93 003 994, 78 266 426, 74 057 050, 69 847 674, 70 971 290,
  56 233 722, 66 761 914, 52 024 346, 37 286 778, 63 676 154, 48 938 586, 16 867 066,
  44 729 210, 29 991 642, 41 643 450, 37 434 074, 34 348 314, 12 315 610, 5 020 474,
  126 611 162, 78 336 378, 63 598 810, 59 389 434, 56 303 674, 41 566 106, 52 094 298,
  37 356 730, 49 008 538, 34 270 970, 30 061 594, 26 975 834, 19 680 698, 4 943 130,
  63 668 762, 41 636 058, 26 898 490, 19 603 354, 12 308 218, 26 968 442, 4 935 738}

```

```
chi = listdim17[[52]]
```

```
(-9 + x)12 (5 + x)32 (-99 248 + 52 001 x - 10 628 x2 + 1062 x3 - 52 x4 + x5)
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {416 267, -316 664, 96 123, -14 992, 1273, -56, 1},
  {416 331, -316 664, 96 123, -14 992, 1273, -56, 1},
  {415 979, -316 632, 96 123, -14 992, 1273, -56, 1},
  {418 139, -317 016, 96 139, -14 992, 1273, -56, 1},
  {418 203, -317 016, 96 139, -14 992, 1273, -56, 1},
  {417 851, -316 984, 96 139, -14 992, 1273, -56, 1},
  {419 371, -317 304, 96 155, -14 992, 1273, -56, 1},
  {402 291, -313 088, 95 827, -14 984, 1273, -56, 1},
  {404 163, -313 440, 95 843, -14 984, 1273, -56, 1},
  {406 323, -313 824, 95 859, -14 984, 1273, -56, 1},
  {405 971, -313 792, 95 859, -14 984, 1273, -56, 1},
  {406 035, -313 792, 95 859, -14 984, 1273, -56, 1},
  {408 131, -314 176, 95 875, -14 984, 1273, -56, 1},
  {408 195, -314 176, 95 875, -14 984, 1273, -56, 1},
  {407 843, -314 144, 95 875, -14 984, 1273, -56, 1},
  {407 907, -314 144, 95 875, -14 984, 1273, -56, 1},
  {407 555, -314 112, 95 875, -14 984, 1273, -56, 1},
  {407 619, -314 112, 95 875, -14 984, 1273, -56, 1},
  {410 067, -314 528, 95 891, -14 984, 1273, -56, 1},
  {409 779, -314 496, 95 891, -14 984, 1273, -56, 1},
  {409 427, -314 464, 95 891, -14 984, 1273, -56, 1},
  {409 491, -314 464, 95 891, -14 984, 1273, -56, 1},
  {411 363, -314 816, 95 907, -14 984, 1273, -56, 1},
  {411 011, -314 784, 95 907, -14 984, 1273, -56, 1},
  {392 283, -310 248, 95 563, -14 976, 1273, -56, 1},
  {394 155, -310 600, 95 579, -14 976, 1273, -56, 1},
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 393 867 c[1] - 310 568 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 396 315 c[1] - 310 984 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 396 027 c[1] - 310 952 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 395 739 c[1] - 310 920 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 398 187 c[1] - 311 336 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 835 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 899 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 547 c[1] - 311 272 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 611 c[1] - 311 272 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 323 c[1] - 311 240 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 399 771 c[1] - 311 656 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 399 419 c[1] - 311 624 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 399 483 c[1] - 311 624 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 399 131 c[1] - 311 592 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 399 195 c[1] - 311 592 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 398 843 c[1] - 311 560 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 401 355 c[1] - 311 976 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
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$401\,067\,c[1] - 311\,944\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $400\,715\,c[1] - 311\,912\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $402\,939\,c[1] - 312\,296\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $384\,147\,c[1] - 307\,760\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $386\,019\,c[1] - 308\,112\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $385\,731\,c[1] - 308\,080\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $385\,443\,c[1] - 308\,048\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $385\,155\,c[1] - 308\,016\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $387\,891\,c[1] - 308\,464\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $387\,603\,c[1] - 308\,432\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $387\,315\,c[1] - 308\,400\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $387\,027\,c[1] - 308\,368\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $389\,475\,c[1] - 308\,784\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $389\,123\,c[1] - 308\,752\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $389\,187\,c[1] - 308\,752\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $388\,899\,c[1] - 308\,720\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $391\,059\,c[1] - 309\,104\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $390\,707\,c[1] - 309\,072\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $390\,771\,c[1] - 309\,072\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $390\,419\,c[1] - 309\,040\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $392\,643\,c[1] - 309\,424\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $392\,291\,c[1] - 309\,392\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $392\,355\,c[1] - 309\,392\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $394\,227\,c[1] - 309\,744\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $376\,011\,c[1] - 305\,272\,c[2] + 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $375\,723\,c[1] - 305\,240\,c[2] + 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $377\,595\,c[1] - 305\,592\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $377\,307\,c[1] - 305\,560\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $377\,019\,c[1] - 305\,528\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $379\,179\,c[1] - 305\,912\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $378\,891\,c[1] - 305\,880\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $378\,603\,c[1] - 305\,848\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $380\,763\,c[1] - 306\,232\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $380\,475\,c[1] - 306\,200\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $380\,187\,c[1] - 306\,168\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $382\,347\,c[1] - 306\,552\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $382\,059\,c[1] - 306\,520\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $383\,931\,c[1] - 306\,872\,c[2] + 95\,147\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $383\,579\,c[1] - 306\,840\,c[2] + 95\,147\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $367\,299\,c[1] - 302\,720\,c[2] + 94\,819\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $368\,883\,c[1] - 303\,040\,c[2] + 94\,835\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $368\,595\,c[1] - 303\,008\,c[2] + 94\,835\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $370\,467\,c[1] - 303\,360\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $370\,179\,c[1] - 303\,328\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $369\,891\,c[1] - 303\,296\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $372\,051\,c[1] - 303\,680\,c[2] + 94\,867\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$
 $371\,763\,c[1] - 303\,648\,c[2] + 94\,867\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7],$

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373 635 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
361 755 c[1] - 300 808 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
361 467 c[1] - 300 776 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
363 339 c[1] - 301 128 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
364 923 c[1] - 301 448 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
354 627 c[1] - 298 576 c[2] + 94 371 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] }

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Array[c, 7].g
```

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20 288 499 c[1] - 15 474 624 c[2] + 4 704 883 c[3] -
734 408 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

```
cert =
```

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Flatten[Array[c, 7] /. FindInstance[20 288 499 c[1] - 15 474 624 c[2] + 4 704 883 c[3] -
734 408 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
416 267 c[1] - 316 664 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 416 331 c[1] - 316 664 c[2] + 96 123 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 415 979 c[1] - 316 632 c[2] +
96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
418 139 c[1] - 317 016 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 418 203 c[1] - 317 016 c[2] + 96 139 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 417 851 c[1] - 316 984 c[2] +
96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
419 371 c[1] - 317 304 c[2] + 96 155 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 402 291 c[1] - 313 088 c[2] + 95 827 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 404 163 c[1] - 313 440 c[2] +
95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
406 323 c[1] - 313 824 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 405 971 c[1] - 313 792 c[2] + 95 859 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 406 035 c[1] - 313 792 c[2] +
95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
408 131 c[1] - 314 176 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 408 195 c[1] - 314 176 c[2] + 95 875 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 407 843 c[1] - 314 144 c[2] +
95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
407 907 c[1] - 314 144 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 407 555 c[1] - 314 112 c[2] + 95 875 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 407 619 c[1] - 314 112 c[2] +
95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
410 067 c[1] - 314 528 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 409 779 c[1] - 314 496 c[2] + 95 891 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 409 427 c[1] - 314 464 c[2] +
95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
409 491 c[1] - 314 464 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 363 c[1] - 314 816 c[2] + 95 907 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 011 c[1] - 314 784 c[2] +
95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
392 283 c[1] - 310 248 c[2] + 95 563 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥

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$$\begin{aligned}
& 0 \ \&\& 394\,155\,c[1] - 310\,600\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 393\,867\,c[1] - 310\,568\,c[2] + \\
& \quad 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 396\,315\,c[1] - 310\,984\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 396\,027\,c[1] - 310\,952\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 395\,739\,c[1] - 310\,920\,c[2] + \\
& \quad 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 398\,187\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 397\,835\,c[1] - 311\,304\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 397\,899\,c[1] - 311\,304\,c[2] + \\
& \quad 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 397\,547\,c[1] - 311\,272\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 397\,611\,c[1] - 311\,272\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 397\,323\,c[1] - 311\,240\,c[2] + \\
& \quad 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 399\,771\,c[1] - 311\,656\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 399\,419\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 399\,483\,c[1] - 311\,624\,c[2] + \\
& \quad 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 399\,131\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 399\,195\,c[1] - 311\,592\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 398\,843\,c[1] - 311\,560\,c[2] + \\
& \quad 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 401\,355\,c[1] - 311\,976\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 401\,067\,c[1] - 311\,944\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 400\,715\,c[1] - 311\,912\,c[2] + \\
& \quad 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 402\,939\,c[1] - 312\,296\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 384\,147\,c[1] - 307\,760\,c[2] + 95\,315\,c[3] - 14\,968\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 386\,019\,c[1] - 308\,112\,c[2] + \\
& \quad 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 385\,731\,c[1] - 308\,080\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 385\,443\,c[1] - 308\,048\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 385\,155\,c[1] - 308\,016\,c[2] + \\
& \quad 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 387\,891\,c[1] - 308\,464\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 387\,603\,c[1] - 308\,432\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 387\,315\,c[1] - 308\,400\,c[2] + \\
& \quad 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 387\,027\,c[1] - 308\,368\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 389\,475\,c[1] - 308\,784\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 389\,123\,c[1] - 308\,752\,c[2] + \\
& \quad 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& \\
& 389\,187\,c[1] - 308\,752\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& \quad 0 \ \&\& 388\,899\,c[1] - 308\,720\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + \\
& \quad 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\& 391\,059\,c[1] - 309\,104\,c[2] + \\
& \quad 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \ \&\&
\end{aligned}$$

$$\begin{aligned}
& 390\,707\,c[1] - 309\,072\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 390\,771\,c[1] - 309\,072\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,419\,c[1] - 309\,040\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 392\,643\,c[1] - 309\,424\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 392\,291\,c[1] - 309\,392\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 392\,355\,c[1] - 309\,392\,c[2] + \\
& 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 394\,227\,c[1] - 309\,744\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 376\,011\,c[1] - 305\,272\,c[2] + 95\,067\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 375\,723\,c[1] - 305\,240\,c[2] + \\
& 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 377\,595\,c[1] - 305\,592\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 377\,307\,c[1] - 305\,560\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 377\,019\,c[1] - 305\,528\,c[2] + \\
& 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 379\,179\,c[1] - 305\,912\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 378\,891\,c[1] - 305\,880\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 378\,603\,c[1] - 305\,848\,c[2] + \\
& 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 380\,763\,c[1] - 306\,232\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 380\,475\,c[1] - 306\,200\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 380\,187\,c[1] - 306\,168\,c[2] + \\
& 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 382\,347\,c[1] - 306\,552\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 382\,059\,c[1] - 306\,520\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 383\,931\,c[1] - 306\,872\,c[2] + \\
& 95\,147\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 383\,579\,c[1] - 306\,840\,c[2] + 95\,147\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 367\,299\,c[1] - 302\,720\,c[2] + 94\,819\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 368\,883\,c[1] - 303\,040\,c[2] + \\
& 94\,835\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 368\,595\,c[1] - 303\,008\,c[2] + 94\,835\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 370\,467\,c[1] - 303\,360\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 370\,179\,c[1] - 303\,328\,c[2] + \\
& 94\,851\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 369\,891\,c[1] - 303\,296\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 372\,051\,c[1] - 303\,680\,c[2] + 94\,867\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 371\,763\,c[1] - 303\,648\,c[2] + \\
& 94\,867\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 373\,635\,c[1] - 304\,000\,c[2] + 94\,883\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 361\,755\,c[1] - 300\,808\,c[2] + 94\,603\,c[3] - \\
& 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 361\,467\,c[1] - 300\,776\,c[2] + 94\,603\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 363\,339\,c[1] - 301\,128\,c[2] + 94\,619\,c[3] - \\
& 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 364\,923\,c[1] - 301\,448\,c[2] + 94\,635\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq
\end{aligned}$$

```

0 && 354 627 c[1] - 298 576 c[2] + 94 371 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6], c[7]}

```

```
GCD[]
```

```
Reverse[cert]
```

```
cert.g
```

```
cert.Transpose[A]
```

```
chi = listdim17[[53]]
```

```
(-13 + x) (-9 + x)13 (5 + x)32 (-848 + 285 x - 30 x2 + x3)
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-47 099, 30 221, -7350, 850, -47, 1}, {-45 747, 30 013, -7342, 850, -47, 1},
  {-45 955, 30 029, -7342, 850, -47, 1}, {-46 195, 30 045, -7342, 850, -47, 1},
  {-46 163, 30 045, -7342, 850, -47, 1}, {-46 403, 30 061, -7342, 850, -47, 1},
  {-46 371, 30 061, -7342, 850, -47, 1}, {-46 579, 30 077, -7342, 850, -47, 1},
  {-44 843, 29 837, -7334, 850, -47, 1}, {-44 811, 29 837, -7334, 850, -47, 1},
  {-45 051, 29 853, -7334, 850, -47, 1}, {-45 019, 29 853, -7334, 850, -47, 1},
  {-45 259, 29 869, -7334, 850, -47, 1}, {-45 227, 29 869, -7334, 850, -47, 1},
  {-45 467, 29 885, -7334, 850, -47, 1}, {-45 435, 29 885, -7334, 850, -47, 1},
  {-43 939, 29 661, -7326, 850, -47, 1}, {-43 907, 29 661, -7326, 850, -47, 1},
  {-43 875, 29 661, -7326, 850, -47, 1}, {-44 147, 29 677, -7326, 850, -47, 1},
  {-44 115, 29 677, -7326, 850, -47, 1}, {-44 083, 29 677, -7326, 850, -47, 1},
  {-44 323, 29 693, -7326, 850, -47, 1}, {-44 291, 29 693, -7326, 850, -47, 1},
  {-44 499, 29 709, -7326, 850, -47, 1}, {-42 795, 29 469, -7318, 850, -47, 1},
  {-43 035, 29 485, -7318, 850, -47, 1}, {-43 003, 29 485, -7318, 850, -47, 1},
  {-42 971, 29 485, -7318, 850, -47, 1}, {-42 939, 29 485, -7318, 850, -47, 1},
  {-43 211, 29 501, -7318, 850, -47, 1}, {-43 179, 29 501, -7318, 850, -47, 1},
  {-43 147, 29 501, -7318, 850, -47, 1}, {-43 387, 29 517, -7318, 850, -47, 1},
  {-43 355, 29 517, -7318, 850, -47, 1}, {-41 891, 29 293, -7310, 850, -47, 1},
  {-41 859, 29 293, -7310, 850, -47, 1}, {-42 099, 29 309, -7310, 850, -47, 1},
  {-42 067, 29 309, -7310, 850, -47, 1}, {-42 035, 29 309, -7310, 850, -47, 1},
  {-42 003, 29 309, -7310, 850, -47, 1}, {-42 243, 29 325, -7310, 850, -47, 1},
  {-42 211, 29 325, -7310, 850, -47, 1}, {-42 419, 29 341, -7310, 850, -47, 1},
  {-40 779, 29 101, -7302, 850, -47, 1}, {-40 955, 29 117, -7302, 850, -47, 1},
  {-40 923, 29 117, -7302, 850, -47, 1}, {-41 131, 29 133, -7302, 850, -47, 1},
  {-41 099, 29 133, -7302, 850, -47, 1}, {-41 067, 29 133, -7302, 850, -47, 1},
  {-41 275, 29 149, -7302, 850, -47, 1}, {-39 843, 28 925, -7294, 850, -47, 1},
  {-39 987, 28 941, -7294, 850, -47, 1}, {-40 163, 28 957, -7294, 850, -47, 1},
  {-40 131, 28 957, -7294, 850, -47, 1}, {-40 339, 28 973, -7294, 850, -47, 1},
  {-39 051, 28 765, -7286, 850, -47, 1}, {-39 195, 28 781, -7286, 850, -47, 1}}
```



```

A = {{-47 099, 30 221, -7350, 850, -47, 1}, {-45 747, 30 013, -7342, 850, -47, 1},
      {-45 955, 30 029, -7342, 850, -47, 1}, {-46 195, 30 045, -7342, 850, -47, 1},
      {-46 163, 30 045, -7342, 850, -47, 1}, {-46 403, 30 061, -7342, 850, -47, 1},
      {-46 371, 30 061, -7342, 850, -47, 1}, {-46 579, 30 077, -7342, 850, -47, 1},
      {-44 843, 29 837, -7334, 850, -47, 1}, {-44 811, 29 837, -7334, 850, -47, 1},
      {-45 051, 29 853, -7334, 850, -47, 1}, {-45 019, 29 853, -7334, 850, -47, 1},
      {-45 259, 29 869, -7334, 850, -47, 1}, {-45 227, 29 869, -7334, 850, -47, 1},
      {-45 467, 29 885, -7334, 850, -47, 1}, {-45 435, 29 885, -7334, 850, -47, 1},
      {-43 939, 29 661, -7326, 850, -47, 1}, {-43 907, 29 661, -7326, 850, -47, 1},
      {-43 875, 29 661, -7326, 850, -47, 1}, {-44 147, 29 677, -7326, 850, -47, 1},
      {-44 115, 29 677, -7326, 850, -47, 1}, {-44 083, 29 677, -7326, 850, -47, 1},
      {-44 323, 29 693, -7326, 850, -47, 1}, {-44 291, 29 693, -7326, 850, -47, 1},
      {-44 499, 29 709, -7326, 850, -47, 1}, {-42 795, 29 469, -7318, 850, -47, 1},
      {-43 035, 29 485, -7318, 850, -47, 1}, {-43 003, 29 485, -7318, 850, -47, 1},
      {-42 971, 29 485, -7318, 850, -47, 1}, {-42 939, 29 485, -7318, 850, -47, 1},
      {-43 211, 29 501, -7318, 850, -47, 1}, {-43 179, 29 501, -7318, 850, -47, 1},
      {-43 147, 29 501, -7318, 850, -47, 1}, {-43 387, 29 517, -7318, 850, -47, 1},
      {-43 355, 29 517, -7318, 850, -47, 1}, {-41 891, 29 293, -7310, 850, -47, 1},
      {-41 859, 29 293, -7310, 850, -47, 1}, {-42 099, 29 309, -7310, 850, -47, 1},
      {-42 067, 29 309, -7310, 850, -47, 1}, {-42 035, 29 309, -7310, 850, -47, 1},
      {-42 003, 29 309, -7310, 850, -47, 1}, {-42 243, 29 325, -7310, 850, -47, 1},
      {-42 211, 29 325, -7310, 850, -47, 1}, {-42 419, 29 341, -7310, 850, -47, 1},
      {-40 779, 29 101, -7302, 850, -47, 1}, {-40 955, 29 117, -7302, 850, -47, 1},
      {-40 923, 29 117, -7302, 850, -47, 1}, {-41 131, 29 133, -7302, 850, -47, 1},
      {-41 099, 29 133, -7302, 850, -47, 1}, {-41 067, 29 133, -7302, 850, -47, 1},
      {-41 275, 29 149, -7302, 850, -47, 1}, {-39 843, 28 925, -7294, 850, -47, 1},
      {-39 987, 28 941, -7294, 850, -47, 1}, {-40 163, 28 957, -7294, 850, -47, 1},
      {-40 131, 28 957, -7294, 850, -47, 1}, {-40 339, 28 973, -7294, 850, -47, 1},
      {-39 051, 28 765, -7286, 850, -47, 1}, {-39 195, 28 781, -7286, 850, -47, 1}};

```

```
A // MatrixForm
```

```

(
-47 099 30 221 -7350 850 -47 1
-45 747 30 013 -7342 850 -47 1
-45 955 30 029 -7342 850 -47 1
-46 195 30 045 -7342 850 -47 1
-46 163 30 045 -7342 850 -47 1
-46 403 30 061 -7342 850 -47 1
-46 371 30 061 -7342 850 -47 1
-46 579 30 077 -7342 850 -47 1
-44 843 29 837 -7334 850 -47 1
-44 811 29 837 -7334 850 -47 1
-45 051 29 853 -7334 850 -47 1
-45 019 29 853 -7334 850 -47 1
-45 259 29 869 -7334 850 -47 1
-45 227 29 869 -7334 850 -47 1
-45 467 29 885 -7334 850 -47 1
-45 435 29 885 -7334 850 -47 1
-43 939 29 661 -7326 850 -47 1
-43 907 29 661 -7326 850 -47 1
-43 875 29 661 -7326 850 -47 1

```

```

-44 147 29 677 -7326 850 -47 1
-44 115 29 677 -7326 850 -47 1
-44 083 29 677 -7326 850 -47 1
-44 323 29 693 -7326 850 -47 1
-44 291 29 693 -7326 850 -47 1
-44 499 29 709 -7326 850 -47 1
-42 795 29 469 -7318 850 -47 1
-43 035 29 485 -7318 850 -47 1
-43 003 29 485 -7318 850 -47 1
-42 971 29 485 -7318 850 -47 1
-42 939 29 485 -7318 850 -47 1
-43 211 29 501 -7318 850 -47 1
-43 179 29 501 -7318 850 -47 1
-43 147 29 501 -7318 850 -47 1
-43 387 29 517 -7318 850 -47 1
-43 355 29 517 -7318 850 -47 1
-41 891 29 293 -7310 850 -47 1
-41 859 29 293 -7310 850 -47 1
-42 099 29 309 -7310 850 -47 1
-42 067 29 309 -7310 850 -47 1
-42 035 29 309 -7310 850 -47 1
-42 003 29 309 -7310 850 -47 1
-42 243 29 325 -7310 850 -47 1
-42 211 29 325 -7310 850 -47 1
-42 419 29 341 -7310 850 -47 1
-40 779 29 101 -7302 850 -47 1
-40 955 29 117 -7302 850 -47 1
-40 923 29 117 -7302 850 -47 1
-41 131 29 133 -7302 850 -47 1
-41 099 29 133 -7302 850 -47 1
-41 067 29 133 -7302 850 -47 1
-41 275 29 149 -7302 850 -47 1
-39 843 28 925 -7294 850 -47 1
-39 987 28 941 -7294 850 -47 1
-40 163 28 957 -7294 850 -47 1
-40 131 28 957 -7294 850 -47 1
-40 339 28 973 -7294 850 -47 1
-39 051 28 765 -7286 850 -47 1
-39 195 28 781 -7286 850 -47 1

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-2 253 467, 1 468 861, -359 558, 41 650, -2303, 49}
```

```
Array[c, 6].Transpose[A]
```

```

{-47 099 c[1] + 30 221 c[2] - 7350 c[3] + 850 c[4] - 47 c[5] + c[6],
 -45 747 c[1] + 30 013 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
 -45 955 c[1] + 30 029 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 195 c[1] + 30 045 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 163 c[1] + 30 045 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 403 c[1] + 30 061 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 371 c[1] + 30 061 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46 579 c[1] + 30 077 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
 -44 843 c[1] + 29 837 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],

```

$-44\,811\,c[1] + 29\,837\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-45\,051\,c[1] + 29\,853\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-45\,019\,c[1] + 29\,853\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-45\,259\,c[1] + 29\,869\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-45\,227\,c[1] + 29\,869\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-45\,467\,c[1] + 29\,885\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-45\,435\,c[1] + 29\,885\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,939\,c[1] + 29\,661\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,907\,c[1] + 29\,661\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,875\,c[1] + 29\,661\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-44\,147\,c[1] + 29\,677\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-44\,115\,c[1] + 29\,677\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-44\,083\,c[1] + 29\,677\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-44\,323\,c[1] + 29\,693\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-44\,291\,c[1] + 29\,693\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-44\,499\,c[1] + 29\,709\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,795\,c[1] + 29\,469\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,035\,c[1] + 29\,485\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,003\,c[1] + 29\,485\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,971\,c[1] + 29\,485\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,939\,c[1] + 29\,485\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,211\,c[1] + 29\,501\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,179\,c[1] + 29\,501\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,147\,c[1] + 29\,501\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,387\,c[1] + 29\,517\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-43\,355\,c[1] + 29\,517\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-41\,891\,c[1] + 29\,293\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-41\,859\,c[1] + 29\,293\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,099\,c[1] + 29\,309\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,067\,c[1] + 29\,309\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,035\,c[1] + 29\,309\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,003\,c[1] + 29\,309\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,243\,c[1] + 29\,325\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,211\,c[1] + 29\,325\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-42\,419\,c[1] + 29\,341\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-40\,779\,c[1] + 29\,101\,c[2] - 7302\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-40\,955\,c[1] + 29\,117\,c[2] - 7302\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-40\,923\,c[1] + 29\,117\,c[2] - 7302\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-41\,131\,c[1] + 29\,133\,c[2] - 7302\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-41\,099\,c[1] + 29\,133\,c[2] - 7302\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-41\,067\,c[1] + 29\,133\,c[2] - 7302\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-41\,275\,c[1] + 29\,149\,c[2] - 7302\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-39\,843\,c[1] + 28\,925\,c[2] - 7294\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-39\,987\,c[1] + 28\,941\,c[2] - 7294\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-40\,163\,c[1] + 28\,957\,c[2] - 7294\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-40\,131\,c[1] + 28\,957\,c[2] - 7294\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-40\,339\,c[1] + 28\,973\,c[2] - 7294\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$

$-39\,051\,c[1] + 28\,765\,c[2] - 7286\,c[3] + 850\,c[4] - 47\,c[5] + c[6],$
 $-39\,195\,c[1] + 28\,781\,c[2] - 7286\,c[3] + 850\,c[4] - 47\,c[5] + c[6]\}$

Array[c, 6].g

$-2\,253\,467\,c[1] + 1\,468\,861\,c[2] - 359\,558\,c[3] + 41\,650\,c[4] - 2303\,c[5] + 49\,c[6]$

cert = Flatten[Array[c, 6] /. FindInstance[

$-2\,253\,467\,c[1] + 1\,468\,861\,c[2] - 359\,558\,c[3] + 41\,650\,c[4] - 2303\,c[5] + 49\,c[6] < 0 \&\&$
 $-47\,099\,c[1] + 30\,221\,c[2] - 7350\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-45\,747\,c[1] + 30\,013\,c[2] - 7342\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-45\,955\,c[1] + 30\,029\,c[2] - 7342\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-46\,195\,c[1] + 30\,045\,c[2] - 7342\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-46\,163\,c[1] + 30\,045\,c[2] - 7342\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-46\,403\,c[1] + 30\,061\,c[2] - 7342\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-46\,371\,c[1] + 30\,061\,c[2] - 7342\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-46\,579\,c[1] + 30\,077\,c[2] - 7342\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-44\,843\,c[1] + 29\,837\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-44\,811\,c[1] + 29\,837\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-45\,051\,c[1] + 29\,853\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-45\,019\,c[1] + 29\,853\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-45\,259\,c[1] + 29\,869\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-45\,227\,c[1] + 29\,869\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-45\,467\,c[1] + 29\,885\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-45\,435\,c[1] + 29\,885\,c[2] - 7334\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,939\,c[1] + 29\,661\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,907\,c[1] + 29\,661\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,875\,c[1] + 29\,661\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-44\,147\,c[1] + 29\,677\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-44\,115\,c[1] + 29\,677\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-44\,083\,c[1] + 29\,677\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-44\,323\,c[1] + 29\,693\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-44\,291\,c[1] + 29\,693\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-44\,499\,c[1] + 29\,709\,c[2] - 7326\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-42\,795\,c[1] + 29\,469\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,035\,c[1] + 29\,485\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,003\,c[1] + 29\,485\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-42\,971\,c[1] + 29\,485\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-42\,939\,c[1] + 29\,485\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,211\,c[1] + 29\,501\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,179\,c[1] + 29\,501\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,147\,c[1] + 29\,501\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,387\,c[1] + 29\,517\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-43\,355\,c[1] + 29\,517\,c[2] - 7318\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-41\,891\,c[1] + 29\,293\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-41\,859\,c[1] + 29\,293\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-42\,099\,c[1] + 29\,309\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$
 $-42\,067\,c[1] + 29\,309\,c[2] - 7310\,c[3] + 850\,c[4] - 47\,c[5] + c[6] \geq 0 \&\&$

```

-42 035 c[1] + 29 309 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 003 c[1] + 29 309 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 243 c[1] + 29 325 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 211 c[1] + 29 325 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-42 419 c[1] + 29 341 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 779 c[1] + 29 101 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 955 c[1] + 29 117 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 923 c[1] + 29 117 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 131 c[1] + 29 133 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 099 c[1] + 29 133 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 067 c[1] + 29 133 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 275 c[1] + 29 149 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 843 c[1] + 28 925 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 987 c[1] + 28 941 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 163 c[1] + 28 957 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 131 c[1] + 28 957 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 339 c[1] + 28 973 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 051 c[1] + 28 765 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 195 c[1] + 28 781 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{32 233, 354 569, 4 029 188, 0, 0, 20 419 347 700}

GCD[32 233, 354 569, 4 029 188, 0, 0, 20 419 347 700]
1

Reverse[cert]
{20 419 347 700, 0, 0, 4 029 188, 354 569, 32 233}

cert.g
-2 167 506

{32 233, 354 569, 4 029 188, 0, 0, 20 419 347 700}.gpart[listdim17[[53]]]
-2 167 506

cert.Transpose[A]
{2 103 582, 4 165 750, 3 134 390, 1 071 574, 2 103 030, 40 214, 1 071 670, 40 310,
3 133 742, 4 165 198, 2 102 382, 3 133 838, 1 071 022, 2 102 478, 39 662, 1 071 118,
2 101 734, 3 133 190, 4 164 646, 1 070 374, 2 101 830, 3 133 286, 1 070 470,
2 101 926, 1 070 566, 3 132 542, 1 069 726, 2 101 182, 3 132 638, 4 164 094,
1 069 822, 2 101 278, 3 132 734, 1 069 918, 2 101 374, 2 100 534, 3 131 990,
1 069 174, 2 100 630, 3 132 086, 4 163 542, 2 100 726, 3 132 182, 2 100 822,
2 099 886, 2 099 982, 3 131 438, 2 100 078, 3 131 534, 4 162 990, 3 131 630,
2 099 334, 3 130 886, 3 130 982, 4 162 438, 3 131 078, 3 130 334, 4 161 886}

```

```
chi = listdim17[[54]]
```

$$(-11 + x) (-9 + x)^{10} (-7 + x) (5 + x)^{32} (-104704 + 53509x - 10764x^2 + 1066x^3 - 52x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -74, 2362, -42442, 469092, -3261230, 13901926, -33137854, 33695739},
      {1, -74, 2362, -42442, 469108, -3261870, 13911366, -33198654, 33839883},
      {1, -74, 2362, -42442, 469108, -3261838, 13910502, -33191006, 33817707},
      {1, -74, 2362, -42442, 469124, -3262478, 13919942, -33251806, 33961851},
      {1, -74, 2362, -42434, 468700, -3253662, 13829910, -32799830, 33069267},
      {1, -74, 2362, -42434, 468700, -3253630, 13829046, -32792182, 33047091},
      {1, -74, 2362, -42434, 468700, -3253598, 13828182, -32784534, 33024915},
      {1, -74, 2362, -42434, 468716, -3254270, 13838486, -32852982, 33191235},
      {1, -74, 2362, -42434, 468716, -3254238, 13837622, -32845334, 33169059},
      {1, -74, 2362, -42434, 468732, -3254878, 13847062, -32906134, 33313203},
      {1, -74, 2362, -42434, 468732, -3254846, 13846198, -32898486, 33291027},
      {1, -74, 2362, -42434, 468748, -3255486, 13855638, -32959286, 33435171},
      {1, -74, 2362, -42434, 468748, -3255454, 13854774, -32951638, 33412995},
      {1, -74, 2362, -42426, 468292, -3245454, 13748454, -32401006, 32298651},
      {1, -74, 2362, -42426, 468308, -3246062, 13757030, -32454158, 32420619},
      {1, -74, 2362, -42426, 468308, -3246030, 13756166, -32446510, 32398443},
      {1, -74, 2362, -42426, 468324, -3246638, 13764742, -32499662, 32520411},
      {1, -74, 2362, -42426, 468324, -3246606, 13763878, -32492014, 32498235},
      {1, -74, 2362, -42426, 468340, -3247246, 13773318, -32552814, 32642379},
      {1, -74, 2362, -42426, 468340, -3247214, 13772454, -32545166, 32620203},
      {1, -74, 2362, -42426, 468356, -3247854, 13781894, -32605966, 32764347},
      {1, -74, 2362, -42426, 468372, -3248462, 13790470, -32659118, 32886315},
      {1, -74, 2362, -42418, 467916, -3238430, 13683286, -32100838, 31749795},
      {1, -74, 2362, -42418, 467932, -3239006, 13690998, -32146342, 31849587},
      {1, -74, 2362, -42418, 467948, -3239614, 13699574, -32199494, 31971555},
      {1, -74, 2362, -42418, 467948, -3239582, 13698710, -32191846, 31949379},
      {1, -74, 2362, -42418, 467964, -3240222, 13708150, -32252646, 32093523},
      {1, -74, 2362, -42418, 467980, -3240830, 13716726, -32305798, 32215491},
      {1, -74, 2362, -42410, 467540, -3231406, 13618118, -31800670, 31200939},
      {1, -74, 2362, -42410, 467556, -3231982, 13625830, -31846174, 31300731},
      {1, -74, 2362, -42410, 467572, -3232590, 13634406, -31899326, 31422699},
      {1, -74, 2362, -42402, 467180, -3224958, 13560662, -31546006, 30751875}};
```

A // MatrixForm

```
( 1 -74 2362 -42 442 469 092 -3 261 230 13 901 926 -33 137 854 33 695 739
 1 -74 2362 -42 442 469 108 -3 261 870 13 911 366 -33 198 654 33 839 883
 1 -74 2362 -42 442 469 108 -3 261 838 13 910 502 -33 191 006 33 817 707
 1 -74 2362 -42 442 469 124 -3 262 478 13 919 942 -33 251 806 33 961 851
 1 -74 2362 -42 434 468 700 -3 253 662 13 829 910 -32 799 830 33 069 267
 1 -74 2362 -42 434 468 700 -3 253 630 13 829 046 -32 792 182 33 047 091
 1 -74 2362 -42 434 468 700 -3 253 598 13 828 182 -32 784 534 33 024 915
 1 -74 2362 -42 434 468 716 -3 254 270 13 838 486 -32 852 982 33 191 235
 1 -74 2362 -42 434 468 716 -3 254 238 13 837 622 -32 845 334 33 169 059
 1 -74 2362 -42 434 468 732 -3 254 878 13 847 062 -32 906 134 33 313 203
 1 -74 2362 -42 434 468 732 -3 254 846 13 846 198 -32 898 486 33 291 027
 1 -74 2362 -42 434 468 748 -3 255 486 13 855 638 -32 959 286 33 435 171
 1 -74 2362 -42 434 468 748 -3 255 454 13 854 774 -32 951 638 33 412 995
 1 -74 2362 -42 426 468 292 -3 245 454 13 748 454 -32 401 006 32 298 651
 1 -74 2362 -42 426 468 308 -3 246 062 13 757 030 -32 454 158 32 420 619
 1 -74 2362 -42 426 468 308 -3 246 030 13 756 166 -32 446 510 32 398 443
 1 -74 2362 -42 426 468 324 -3 246 638 13 764 742 -32 499 662 32 520 411
 1 -74 2362 -42 426 468 324 -3 246 606 13 763 878 -32 492 014 32 498 235
 1 -74 2362 -42 426 468 340 -3 247 246 13 773 318 -32 552 814 32 642 379
 1 -74 2362 -42 426 468 340 -3 247 214 13 772 454 -32 545 166 32 620 203
 1 -74 2362 -42 426 468 356 -3 247 854 13 781 894 -32 605 966 32 764 347
 1 -74 2362 -42 426 468 372 -3 248 462 13 790 470 -32 659 118 32 886 315
 1 -74 2362 -42 418 467 916 -3 238 430 13 683 286 -32 100 838 31 749 795
 1 -74 2362 -42 418 467 932 -3 239 006 13 690 998 -32 146 342 31 849 587
 1 -74 2362 -42 418 467 948 -3 239 614 13 699 574 -32 199 494 31 971 555
 1 -74 2362 -42 418 467 948 -3 239 582 13 698 710 -32 191 846 31 949 379
 1 -74 2362 -42 418 467 964 -3 240 222 13 708 150 -32 252 646 32 093 523
 1 -74 2362 -42 418 467 980 -3 240 830 13 716 726 -32 305 798 32 215 491
 1 -74 2362 -42 410 467 540 -3 231 406 13 618 118 -31 800 670 31 200 939
 1 -74 2362 -42 410 467 556 -3 231 982 13 625 830 -31 846 174 31 300 731
 1 -74 2362 -42 410 467 572 -3 232 590 13 634 406 -31 899 326 31 422 699
 1 -74 2362 -42 402 467 180 -3 224 958 13 560 662 -31 546 006 30 751 875)
```

Dimensions[A]

```
{32, 9}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3626, 115 738, -2 079 458, 22 977 484,
 -159 678 206, 680 334 614, -1 621 087 606, 1 648 586 579}
```

Array[c, 9].Transpose[A]

```
{c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 092 c[5] -
 3 261 230 c[6] + 13 901 926 c[7] - 33 137 854 c[8] + 33 695 739 c[9],
 c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 870 c[6] +
 13 911 366 c[7] - 33 198 654 c[8] + 33 839 883 c[9],
 c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 838 c[6] +
 13 910 502 c[7] - 33 191 006 c[8] + 33 817 707 c[9],
 c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 124 c[5] - 3 262 478 c[6] +
 13 919 942 c[7] - 33 251 806 c[8] + 33 961 851 c[9],
 c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 700 c[5] - 3 253 662 c[6] +
```

```

13 829 910 c[7] - 32 799 830 c[8] + 33 069 267 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 700 c[5] - 3 253 630 c[6] +
13 829 046 c[7] - 32 792 182 c[8] + 33 047 091 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 700 c[5] - 3 253 598 c[6] + 13 828 182 c[7] -
32 784 534 c[8] + 33 024 915 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +
468 716 c[5] - 3 254 270 c[6] + 13 838 486 c[7] - 32 852 982 c[8] + 33 191 235 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 716 c[5] - 3 254 238 c[6] + 13 837 622 c[7] -
32 845 334 c[8] + 33 169 059 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +
468 732 c[5] - 3 254 878 c[6] + 13 847 062 c[7] - 32 906 134 c[8] + 33 313 203 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 732 c[5] - 3 254 846 c[6] + 13 846 198 c[7] -
32 898 486 c[8] + 33 291 027 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] +
468 748 c[5] - 3 255 486 c[6] + 13 855 638 c[7] - 32 959 286 c[8] + 33 435 171 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 748 c[5] - 3 255 454 c[6] + 13 854 774 c[7] -
32 951 638 c[8] + 33 412 995 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 292 c[5] - 3 245 454 c[6] + 13 748 454 c[7] - 32 401 006 c[8] + 32 298 651 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 308 c[5] - 3 246 062 c[6] + 13 757 030 c[7] -
32 454 158 c[8] + 32 420 619 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 308 c[5] - 3 246 030 c[6] + 13 756 166 c[7] - 32 446 510 c[8] + 32 398 443 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 324 c[5] - 3 246 638 c[6] + 13 764 742 c[7] -
32 499 662 c[8] + 32 520 411 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 324 c[5] - 3 246 606 c[6] + 13 763 878 c[7] - 32 492 014 c[8] + 32 498 235 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 340 c[5] - 3 247 246 c[6] + 13 773 318 c[7] -
32 552 814 c[8] + 32 642 379 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 340 c[5] - 3 247 214 c[6] + 13 772 454 c[7] - 32 545 166 c[8] + 32 620 203 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 356 c[5] - 3 247 854 c[6] + 13 781 894 c[7] -
32 605 966 c[8] + 32 764 347 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] +
468 372 c[5] - 3 248 462 c[6] + 13 790 470 c[7] - 32 659 118 c[8] + 32 886 315 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 916 c[5] - 3 238 430 c[6] + 13 683 286 c[7] -
32 100 838 c[8] + 31 749 795 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 932 c[5] - 3 239 006 c[6] + 13 690 998 c[7] - 32 146 342 c[8] + 31 849 587 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 948 c[5] - 3 239 614 c[6] + 13 699 574 c[7] -
32 199 494 c[8] + 31 971 555 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 948 c[5] - 3 239 582 c[6] + 13 698 710 c[7] - 32 191 846 c[8] + 31 949 379 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 964 c[5] - 3 240 222 c[6] + 13 708 150 c[7] -
32 252 646 c[8] + 32 093 523 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 980 c[5] - 3 240 830 c[6] + 13 716 726 c[7] - 32 305 798 c[8] + 32 215 491 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 540 c[5] - 3 231 406 c[6] + 13 618 118 c[7] -
31 800 670 c[8] + 31 200 939 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 556 c[5] - 3 231 982 c[6] + 13 625 830 c[7] - 31 846 174 c[8] + 31 300 731 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 572 c[5] - 3 232 590 c[6] + 13 634 406 c[7] -
31 899 326 c[8] + 31 422 699 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] +
467 180 c[5] - 3 224 958 c[6] + 13 560 662 c[7] - 31 546 006 c[8] + 30 751 875 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 458 c[4] + 22 977 484 c[5] -
159 678 206 c[6] + 680 334 614 c[7] - 1 621 087 606 c[8] + 1 648 586 579 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 458 c[4] + 22 977 484 c[5] -

```


$$\begin{aligned}
& 159\,678\,206\,c[6] + 680\,334\,614\,c[7] - 1\,621\,087\,606\,c[8] + 1\,648\,586\,579\,c[9] < 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,092\,c[5] - 3\,261\,230\,c[6] + \\
& 13\,901\,926\,c[7] - 33\,137\,854\,c[8] + 33\,695\,739\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,108\,c[5] - 3\,261\,870\,c[6] + \\
& 13\,911\,366\,c[7] - 33\,198\,654\,c[8] + 33\,839\,883\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,108\,c[5] - 3\,261\,838\,c[6] + \\
& 13\,910\,502\,c[7] - 33\,191\,006\,c[8] + 33\,817\,707\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,442\,c[4] + 469\,124\,c[5] - 3\,262\,478\,c[6] + \\
& 13\,919\,942\,c[7] - 33\,251\,806\,c[8] + 33\,961\,851\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,700\,c[5] - 3\,253\,662\,c[6] + \\
& 13\,829\,910\,c[7] - 32\,799\,830\,c[8] + 33\,069\,267\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,700\,c[5] - 3\,253\,630\,c[6] + \\
& 13\,829\,046\,c[7] - 32\,792\,182\,c[8] + 33\,047\,091\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,700\,c[5] - 3\,253\,598\,c[6] + \\
& 13\,828\,182\,c[7] - 32\,784\,534\,c[8] + 33\,024\,915\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,716\,c[5] - 3\,254\,270\,c[6] + \\
& 13\,838\,486\,c[7] - 32\,852\,982\,c[8] + 33\,191\,235\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,716\,c[5] - 3\,254\,238\,c[6] + \\
& 13\,837\,622\,c[7] - 32\,845\,334\,c[8] + 33\,169\,059\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,878\,c[6] + \\
& 13\,847\,062\,c[7] - 32\,906\,134\,c[8] + 33\,313\,203\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,846\,c[6] + \\
& 13\,846\,198\,c[7] - 32\,898\,486\,c[8] + 33\,291\,027\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,748\,c[5] - 3\,255\,486\,c[6] + \\
& 13\,855\,638\,c[7] - 32\,959\,286\,c[8] + 33\,435\,171\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,748\,c[5] - 3\,255\,454\,c[6] + \\
& 13\,854\,774\,c[7] - 32\,951\,638\,c[8] + 33\,412\,995\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,292\,c[5] - 3\,245\,454\,c[6] + \\
& 13\,748\,454\,c[7] - 32\,401\,006\,c[8] + 32\,298\,651\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,246\,062\,c[6] + \\
& 13\,757\,030\,c[7] - 32\,454\,158\,c[8] + 32\,420\,619\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,246\,030\,c[6] + \\
& 13\,756\,166\,c[7] - 32\,446\,510\,c[8] + 32\,398\,443\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,638\,c[6] + \\
& 13\,764\,742\,c[7] - 32\,499\,662\,c[8] + 32\,520\,411\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,606\,c[6] + \\
& 13\,763\,878\,c[7] - 32\,492\,014\,c[8] + 32\,498\,235\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,246\,c[6] + \\
& 13\,773\,318\,c[7] - 32\,552\,814\,c[8] + 32\,642\,379\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,214\,c[6] + \\
& 13\,772\,454\,c[7] - 32\,545\,166\,c[8] + 32\,620\,203\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,854\,c[6] + \\
& 13\,781\,894\,c[7] - 32\,605\,966\,c[8] + 32\,764\,347\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,462\,c[6] + \\
& 13\,790\,470\,c[7] - 32\,659\,118\,c[8] + 32\,886\,315\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,430\,c[6] + \\
& 13\,683\,286\,c[7] - 32\,100\,838\,c[8] + 31\,749\,795\,c[9] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 932 c[5] - 3 239 006 c[6] +
  13 690 998 c[7] - 32 146 342 c[8] + 31 849 587 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 948 c[5] - 3 239 614 c[6] +
  13 699 574 c[7] - 32 199 494 c[8] + 31 971 555 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 948 c[5] - 3 239 582 c[6] +
  13 698 710 c[7] - 32 191 846 c[8] + 31 949 379 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 964 c[5] - 3 240 222 c[6] +
  13 708 150 c[7] - 32 252 646 c[8] + 32 093 523 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 830 c[6] +
  13 716 726 c[7] - 32 305 798 c[8] + 32 215 491 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 540 c[5] - 3 231 406 c[6] +
  13 618 118 c[7] - 31 800 670 c[8] + 31 200 939 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 982 c[6] +
  13 625 830 c[7] - 31 846 174 c[8] + 31 300 731 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 572 c[5] - 3 232 590 c[6] +
  13 634 406 c[7] - 31 899 326 c[8] + 31 422 699 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 180 c[5] - 3 224 958 c[6] +
  13 560 662 c[7] - 31 546 006 c[8] + 30 751 875 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 5 733 949, 2 909 745, 855 377, 195 699}

GCD[0, 0, 0, 0, 0, 5 733 949, 2 909 745, 855 377, 195 699]
1

```

cert.g

-756 435 805

```

{0, 0, 0, 0, 0, 5 733 949, 2 909 745, 855 377, 195 699}.Reverse[gpart[listdim17[[54]]]
-756 435 805

```

cert.Transpose[A]

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{197 457 203, 197 637 699, 69 206 659, 69 387 155, 581 798 435, 453 367 395, 324 936 355,
  453 547 891, 325 116 851, 325 297 347, 196 866 307, 197 046 803, 68 615 763, 965 959 171,
  837 708 627, 709 277 587, 581 027 043, 452 596 003, 452 776 499, 324 345 459,
  324 525 955, 196 275 411, 965 187 779, 708 506 195, 580 255 651, 451 824 611,
  452 005 107, 323 754 563, 964 416 387, 707 734 803, 579 484 259, 706 963 411}

```

chi = listdim17[[55]]

$(-11 + x) (-9 + x)^{10} (5 + x)^{32} (95 - 20 x + x^2) (7712 - 3421 x + 555 x^2 - 39 x^3 + x^4)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

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A = {{1, -74, 2362, -42 442, 469 092, -3 261 198, 13 901 126, -33 131 230, 33 677 595},
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Dimensions[A]

{130, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

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 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468716 c[5] - 3254238 c[6] + 13837686 c[7] -$
 $32846614 c[8] + 33175395 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468716 c[5] - 3254238 c[6] + 13837686 c[7] - 32846486 c[8] + 33174243 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468716 c[5] - 3254238 c[6] + 13837750 c[7] -$
 $32847766 c[8] + 33180579 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468716 c[5] - 3254238 c[6] + 13837814 c[7] - 32848918 c[8] + 33185763 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468716 c[5] - 3254206 c[6] + 13836758 c[7] -$
 $32837686 c[8] + 33146883 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468716 c[5] - 3254206 c[6] + 13836822 c[7] - 32838838 c[8] + 33152067 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468716 c[5] - 3254174 c[6] + 13835894 c[7] -$
 $32830038 c[8] + 33124707 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468716 c[5] - 3254174 c[6] + 13835894 c[7] - 32829910 c[8] + 33123555 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468716 c[5] - 3254142 c[6] + 13834966 c[7] -$
 $32821110 c[8] + 33096195 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468732 c[5] - 3254878 c[6] + 13847190 c[7] - 32908694 c[8] + 33325875 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468732 c[5] - 3254846 c[6] + 13846262 c[7] -$
 $32899766 c[8] + 33297363 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468732 c[5] - 3254846 c[6] + 13846326 c[7] - 32901046 c[8] + 33303699 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468732 c[5] - 3254846 c[6] + 13846326 c[7] -$
 $32900918 c[8] + 33302547 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468732 c[5] - 3254846 c[6] + 13846390 c[7] - 32902198 c[8] + 33308883 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468732 c[5] - 3254814 c[6] + 13845398 c[7] -$
 $32892118 c[8] + 33275187 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468732 c[5] - 3254814 c[6] + 13845398 c[7] - 32891990 c[8] + 33274035 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468732 c[5] - 3254782 c[6] + 13844470 c[7] -$
 $32883190 c[8] + 33246675 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468748 c[5] - 3255454 c[6] + 13854902 c[7] - 32954198 c[8] + 33425667 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468748 c[5] - 3255454 c[6] + 13854902 c[7] -$
 $32954070 c[8] + 33424515 c[9], c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] +$
 $468748 c[5] - 3255422 c[6] + 13853974 c[7] - 32945270 c[8] + 33397155 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468292 c[5] - 3245390 c[6] + 13746662 c[7] -$
 $32384302 c[8] + 32246811 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +$
 $468292 c[5] - 3245326 c[6] + 13744870 c[7] - 32367726 c[8] + 32196123 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468292 c[5] - 3245294 c[6] + 13744006 c[7] -$
 $32359950 c[8] + 32172795 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +$
 $468308 c[5] - 3246062 c[6] + 13757094 c[7] - 32455438 c[8] + 32426955 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468308 c[5] - 3246030 c[6] + 13756102 c[7] -$
 $32445230 c[8] + 32392107 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +$

$$\begin{aligned}
& 468\,308\,c[5] - 3\,246\,030\,c[6] + 13\,756\,166\,c[7] - 32\,446\,510\,c[8] + 32\,398\,443\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,998\,c[6] + 13\,755\,238\,c[7] - \\
& 32\,437\,582\,c[8] + 32\,369\,931\,c[9], \quad c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,308\,c[5] - 3\,245\,998\,c[6] + 13\,755\,302\,c[7] - 32\,438\,734\,c[8] + 32\,375\,115\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,966\,c[6] + 13\,754\,374\,c[7] - \\
& 32\,429\,806\,c[8] + 32\,346\,603\,c[9], \quad c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,308\,c[5] - 3\,245\,934\,c[6] + 13\,753\,446\,c[7] - 32\,421\,006\,c[8] + 32\,319\,243\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,934\,c[6] + 13\,753\,510\,c[7] - \\
& 32\,422\,030\,c[8] + 32\,323\,275\,c[9], \quad c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,308\,c[5] - 3\,245\,902\,c[6] + 13\,752\,582\,c[7] - 32\,413\,230\,c[8] + 32\,295\,915\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,638\,c[6] + 13\,764\,742\,c[7] - \\
& 32\,499\,662\,c[8] + 32\,520\,411\,c[9], \quad c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,324\,c[5] - 3\,246\,638\,c[6] + 13\,764\,806\,c[7] - 32\,500\,942\,c[8] + 32\,526\,747\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,638\,c[6] + 13\,764\,870\,c[7] - \\
& 32\,502\,094\,c[8] + 32\,531\,931\,c[9], \quad c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,324\,c[5] - 3\,246\,606\,c[6] + 13\,763\,878\,c[7] - 32\,492\,014\,c[8] + 32\,498\,235\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,606\,c[6] + 13\,763\,942\,c[7] - \\
& 32\,493\,166\,c[8] + 32\,503\,419\,c[9], \quad c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,324\,c[5] - 3\,246\,574\,c[6] + 13\,762\,950\,c[7] - 32\,483\,086\,c[8] + 32\,469\,723\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,574\,c[6] + 13\,763\,014\,c[7] - \\
& 32\,484\,238\,c[8] + 32\,474\,907\,c[9], \quad c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,324\,c[5] - 3\,246\,542\,c[6] + 13\,762\,086\,c[7] - 32\,475\,438\,c[8] + 32\,447\,547\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,542\,c[6] + 13\,762\,086\,c[7] - \\
& 32\,475\,310\,c[8] + 32\,446\,395\,c[9], \quad c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,324\,c[5] - 3\,246\,510\,c[6] + 13\,761\,158\,c[7] - 32\,466\,510\,c[8] + 32\,419\,035\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,278\,c[6] + 13\,774\,310\,c[7] - \\
& 32\,563\,022\,c[8] + 32\,677\,227\,c[9], \quad c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,340\,c[5] - 3\,247\,246\,c[6] + 13\,773\,382\,c[7] - 32\,554\,094\,c[8] + 32\,648\,715\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,246\,c[6] + \\
& 13\,773\,446\,c[7] - 32\,555\,374\,c[8] + 32\,655\,051\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,214\,c[6] + \\
& 13\,772\,454\,c[7] - 32\,545\,166\,c[8] + 32\,620\,203\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,214\,c[6] + \\
& 13\,772\,518\,c[7] - 32\,546\,446\,c[8] + 32\,626\,539\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,214\,c[6] + \\
& 13\,772\,518\,c[7] - 32\,546\,318\,c[8] + 32\,625\,387\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,214\,c[6] + \\
& 13\,772\,582\,c[7] - 32\,547\,598\,c[8] + 32\,631\,723\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,182\,c[6] + \\
& 13\,771\,590\,c[7] - 32\,537\,518\,c[8] + 32\,598\,027\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,182\,c[6] + \\
& 13\,771\,590\,c[7] - 32\,537\,390\,c[8] + 32\,596\,875\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,150\,c[6] + \\
& 13\,770\,662\,c[7] - 32\,528\,590\,c[8] + 32\,569\,515\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,854\,c[6] + \\
& 13\,781\,958\,c[7] - 32\,607\,246\,c[8] + 32\,770\,683\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,854\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 13\,782\,022\,c[7] - 32\,608\,526\,c[8] + 32\,777\,019\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,854\,c[6] + \\
& 13\,782\,086\,c[7] - 32\,609\,806\,c[8] + 32\,783\,355\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,822\,c[6] + \\
& 13\,781\,094\,c[7] - 32\,599\,598\,c[8] + 32\,748\,507\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,822\,c[6] + \\
& 13\,781\,158\,c[7] - 32\,600\,878\,c[8] + 32\,754\,843\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,790\,c[6] + \\
& 13\,780\,166\,c[7] - 32\,590\,670\,c[8] + 32\,719\,995\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,462\,c[6] + \\
& 13\,790\,598\,c[7] - 32\,661\,678\,c[8] + 32\,898\,987\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,430\,c[6] + \\
& 13\,789\,670\,c[7] - 32\,652\,750\,c[8] + 32\,870\,475\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,900\,c[5] - 3\,237\,790\,c[6] + \\
& 13\,673\,718\,c[7] - 32\,037\,478\,c[8] + 31\,592\,979\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,900\,c[5] - 3\,237\,758\,c[6] + \\
& 13\,672\,790\,c[7] - 32\,028\,550\,c[8] + 31\,564\,467\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,398\,c[6] + \\
& 13\,682\,358\,c[7] - 32\,091\,910\,c[8] + 31\,721\,283\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,366\,c[6] + \\
& 13\,681\,430\,c[7] - 32\,082\,982\,c[8] + 31\,692\,771\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,334\,c[6] + \\
& 13\,680\,566\,c[7] - 32\,075\,206\,c[8] + 31\,669\,443\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,302\,c[6] + \\
& 13\,679\,638\,c[7] - 32\,066\,406\,c[8] + 31\,642\,083\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,270\,c[6] + \\
& 13\,678\,774\,c[7] - 32\,058\,630\,c[8] + 31\,618\,755\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,239\,006\,c[6] + \\
& 13\,690\,998\,c[7] - 32\,146\,342\,c[8] + 31\,849\,587\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,974\,c[6] + \\
& 13\,690\,070\,c[7] - 32\,137\,414\,c[8] + 31\,821\,075\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,974\,c[6] + \\
& 13\,690\,134\,c[7] - 32\,138\,566\,c[8] + 31\,826\,259\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,942\,c[6] + \\
& 13\,689\,142\,c[7] - 32\,128\,486\,c[8] + 31\,792\,563\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,942\,c[6] + \\
& 13\,689\,206\,c[7] - 32\,129\,638\,c[8] + 31\,797\,747\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,910\,c[6] + \\
& 13\,688\,278\,c[7] - 32\,120\,710\,c[8] + 31\,769\,235\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,878\,c[6] + \\
& 13\,687\,350\,c[7] - 32\,111\,910\,c[8] + 31\,741\,875\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,614\,c[6] + \\
& 13\,699\,574\,c[7] - 32\,199\,494\,c[8] + 31\,971\,555\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,582\,c[6] + \\
& 13\,698\,646\,c[7] - 32\,190\,566\,c[8] + 31\,943\,043\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,582\,c[6] + \\
& 13\,698\,710\,c[7] - 32\,191\,846\,c[8] + 31\,949\,379\,c[9],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,582 c[6] + \\
& 13\,698\,774 c[7] - 32\,192\,998 c[8] + 31\,954\,563 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,550 c[6] + \\
& 13\,697\,782 c[7] - 32\,182\,918 c[8] + 31\,920\,867 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,518 c[6] + \\
& 13\,696\,854 c[7] - 32\,173\,990 c[8] + 31\,892\,355 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,222 c[6] + \\
& 13\,708\,214 c[7] - 32\,253\,926 c[8] + 32\,099\,859 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,190 c[6] + \\
& 13\,707\,286 c[7] - 32\,244\,998 c[8] + 32\,071\,347 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,190 c[6] + \\
& 13\,707\,350 c[7] - 32\,246\,278 c[8] + 32\,077\,683 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,158 c[6] + \\
& 13\,706\,358 c[7] - 32\,236\,070 c[8] + 32\,042\,835 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,862 c[6] + \\
& 13\,717\,782 c[7] - 32\,317\,286 c[8] + 32\,256\,675 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,830 c[6] + \\
& 13\,716\,854 c[7] - 32\,308\,358 c[8] + 32\,228\,163 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,798 c[6] + \\
& 13\,715\,862 c[7] - 32\,298\,150 c[8] + 32\,193\,315 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,508 c[5] - 3\,230\,126 c[6] + \\
& 13\,598\,982 c[7] - 31\,673\,950 c[8] + 30\,887\,307 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,524 c[5] - 3\,230\,734 c[6] + \\
& 13\,607\,622 c[7] - 31\,728\,382 c[8] + 31\,015\,611 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,342 c[6] + \\
& 13\,616\,262 c[7] - 31\,782\,814 c[8] + 31\,143\,915 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,310 c[6] + \\
& 13\,615\,334 c[7] - 31\,773\,886 c[8] + 31\,115\,403 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,278 c[6] + \\
& 13\,614\,470 c[7] - 31\,766\,110 c[8] + 31\,092\,075 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,246 c[6] + \\
& 13\,613\,542 c[7] - 31\,757\,310 c[8] + 31\,064\,715 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,950 c[6] + \\
& 13\,624\,902 c[7] - 31\,837\,246 c[8] + 31\,272\,219 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,918 c[6] + \\
& 13\,623\,974 c[7] - 31\,828\,318 c[8] + 31\,243\,707 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,886 c[6] + \\
& 13\,623\,046 c[7] - 31\,819\,390 c[8] + 31\,215\,195 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,558 c[6] + \\
& 13\,633\,478 c[7] - 31\,890\,398 c[8] + 31\,394\,187 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,526 c[6] + \\
& 13\,632\,550 c[7] - 31\,881\,470 c[8] + 31\,365\,675 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,148 c[5] - 3\,223\,678 c[6] + \\
& 13\,541\,526 c[7] - 31\,419\,286 c[8] + 30\,438\,243 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,164 c[5] - 3\,224\,286 c[6] + \\
& 13\,550\,166 c[7] - 31\,473\,718 c[8] + 30\,566\,547 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,164 c[5] - 3\,224\,254 c[6] +
\end{aligned}$$

```

13 549 238 c[7] - 31 464 790 c[8] + 30 538 035 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 180 c[5] - 3 224 894 c[6] +
13 558 742 c[7] - 31 526 870 c[8] + 30 688 515 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 654 c[6] +
13 476 358 c[7] - 31 119 118 c[8] + 29 889 387 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 622 c[6] +
13 475 430 c[7] - 31 110 190 c[8] + 29 860 875 c[9] }

```

```
Array[c, 9].g
```

```

49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 458 c[4] + 22 977 484 c[5] -
159 676 798 c[6] + 680 299 222 c[7] - 1 620 802 550 c[8] + 1 647 861 395 c[9]

```

```
cert = Flatten[Array[c, 9] /.
```

```

FindInstance[49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 458 c[4] + 22 977 484 c[5] -
159 676 798 c[6] + 680 299 222 c[7] - 1 620 802 550 c[8] + 1 647 861 395 c[9] < 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 092 c[5] - 3 261 198 c[6] +
13 901 126 c[7] - 33 131 230 c[8] + 33 677 595 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 092 c[5] - 3 261 166 c[6] +
13 900 198 c[7] - 33 122 430 c[8] + 33 650 235 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 092 c[5] - 3 261 134 c[6] +
13 899 270 c[7] - 33 113 630 c[8] + 33 622 875 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 838 c[6] +
13 910 566 c[7] - 33 192 286 c[8] + 33 824 043 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 838 c[6] +
13 910 630 c[7] - 33 193 566 c[8] + 33 830 379 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 838 c[6] +
13 910 630 c[7] - 33 193 438 c[8] + 33 829 227 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 838 c[6] +
13 910 630 c[7] - 33 193 310 c[8] + 33 828 075 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 806 c[6] +
13 909 702 c[7] - 33 184 638 c[8] + 33 801 867 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 806 c[6] +
13 909 702 c[7] - 33 184 510 c[8] + 33 800 715 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 108 c[5] - 3 261 774 c[6] +
13 908 774 c[7] - 33 175 710 c[8] + 33 773 355 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 124 c[5] - 3 262 446 c[6] +
13 919 206 c[7] - 33 246 590 c[8] + 33 951 195 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 124 c[5] - 3 262 414 c[6] +
13 918 278 c[7] - 33 237 790 c[8] + 33 923 835 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 684 c[5] - 3 252 958 c[6] +
13 818 678 c[7] - 32 722 326 c[8] + 32 873 283 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 684 c[5] - 3 252 958 c[6] +
13 818 742 c[7] - 32 723 478 c[8] + 32 878 467 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 684 c[5] - 3 252 926 c[6] +
13 817 814 c[7] - 32 714 550 c[8] + 32 849 955 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 700 c[5] - 3 253 630 c[6] +
13 829 110 c[7] - 32 793 334 c[8] + 33 052 275 c[9] ≥ 0 &&

```

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,700 c[5] - 3\,253\,598 c[6] + \\
& \quad 13\,828\,182 c[7] - 32\,784\,534 c[8] + 33\,024\,915 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,700 c[5] - 3\,253\,598 c[6] + \\
& \quad 13\,828\,182 c[7] - 32\,784\,406 c[8] + 33\,023\,763 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,700 c[5] - 3\,253\,598 c[6] + \\
& \quad 13\,828\,246 c[7] - 32\,785\,558 c[8] + 33\,028\,947 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,700 c[5] - 3\,253\,566 c[6] + \\
& \quad 13\,827\,254 c[7] - 32\,775\,606 c[8] + 32\,996\,403 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,700 c[5] - 3\,253\,566 c[6] + \\
& \quad 13\,827\,318 c[7] - 32\,776\,758 c[8] + 33\,001\,587 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,700 c[5] - 3\,253\,566 c[6] + \\
& \quad 13\,827\,318 c[7] - 32\,776\,630 c[8] + 33\,000\,435 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,700 c[5] - 3\,253\,534 c[6] + \\
& \quad 13\,826\,390 c[7] - 32\,767\,830 c[8] + 32\,973\,075 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,270 c[6] + \\
& \quad 13\,838\,550 c[7] - 32\,854\,262 c[8] + 33\,197\,571 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,270 c[6] + \\
& \quad 13\,838\,614 c[7] - 32\,855\,542 c[8] + 33\,203\,907 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,270 c[6] + \\
& \quad 13\,838\,678 c[7] - 32\,856\,694 c[8] + 33\,209\,091 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,238 c[6] + \\
& \quad 13\,837\,686 c[7] - 32\,846\,614 c[8] + 33\,175\,395 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,238 c[6] + \\
& \quad 13\,837\,686 c[7] - 32\,846\,486 c[8] + 33\,174\,243 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,238 c[6] + \\
& \quad 13\,837\,750 c[7] - 32\,847\,766 c[8] + 33\,180\,579 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,238 c[6] + \\
& \quad 13\,837\,814 c[7] - 32\,848\,918 c[8] + 33\,185\,763 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,206 c[6] + \\
& \quad 13\,836\,758 c[7] - 32\,837\,686 c[8] + 33\,146\,883 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,206 c[6] + \\
& \quad 13\,836\,822 c[7] - 32\,838\,838 c[8] + 33\,152\,067 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,174 c[6] + \\
& \quad 13\,835\,894 c[7] - 32\,830\,038 c[8] + 33\,124\,707 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,174 c[6] + \\
& \quad 13\,835\,894 c[7] - 32\,829\,910 c[8] + 33\,123\,555 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,716 c[5] - 3\,254\,142 c[6] + \\
& \quad 13\,834\,966 c[7] - 32\,821\,110 c[8] + 33\,096\,195 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,732 c[5] - 3\,254\,878 c[6] + \\
& \quad 13\,847\,190 c[7] - 32\,908\,694 c[8] + 33\,325\,875 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,732 c[5] - 3\,254\,846 c[6] + \\
& \quad 13\,846\,262 c[7] - 32\,899\,766 c[8] + 33\,297\,363 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,732 c[5] - 3\,254\,846 c[6] + \\
& \quad 13\,846\,326 c[7] - 32\,901\,046 c[8] + 33\,303\,699 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,732 c[5] - 3\,254\,846 c[6] + \\
& \quad 13\,846\,326 c[7] - 32\,900\,918 c[8] + 33\,302\,547 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,732 c[5] - 3\,254\,846 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 13\,846\,390\,c[7] - 32\,902\,198\,c[8] + 33\,308\,883\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,814\,c[6] + \\
& 13\,845\,398\,c[7] - 32\,892\,118\,c[8] + 33\,275\,187\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,814\,c[6] + \\
& 13\,845\,398\,c[7] - 32\,891\,990\,c[8] + 33\,274\,035\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,732\,c[5] - 3\,254\,782\,c[6] + \\
& 13\,844\,470\,c[7] - 32\,883\,190\,c[8] + 33\,246\,675\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,748\,c[5] - 3\,255\,454\,c[6] + \\
& 13\,854\,902\,c[7] - 32\,954\,198\,c[8] + 33\,425\,667\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,748\,c[5] - 3\,255\,454\,c[6] + \\
& 13\,854\,902\,c[7] - 32\,954\,070\,c[8] + 33\,424\,515\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,434\,c[4] + 468\,748\,c[5] - 3\,255\,422\,c[6] + \\
& 13\,853\,974\,c[7] - 32\,945\,270\,c[8] + 33\,397\,155\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,292\,c[5] - 3\,245\,390\,c[6] + \\
& 13\,746\,662\,c[7] - 32\,384\,302\,c[8] + 32\,246\,811\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,292\,c[5] - 3\,245\,326\,c[6] + \\
& 13\,744\,870\,c[7] - 32\,367\,726\,c[8] + 32\,196\,123\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,292\,c[5] - 3\,245\,294\,c[6] + \\
& 13\,744\,006\,c[7] - 32\,359\,950\,c[8] + 32\,172\,795\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,246\,062\,c[6] + \\
& 13\,757\,094\,c[7] - 32\,455\,438\,c[8] + 32\,426\,955\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,246\,030\,c[6] + \\
& 13\,756\,102\,c[7] - 32\,445\,230\,c[8] + 32\,392\,107\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,246\,030\,c[6] + \\
& 13\,756\,166\,c[7] - 32\,446\,510\,c[8] + 32\,398\,443\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,998\,c[6] + \\
& 13\,755\,238\,c[7] - 32\,437\,582\,c[8] + 32\,369\,931\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,998\,c[6] + \\
& 13\,755\,302\,c[7] - 32\,438\,734\,c[8] + 32\,375\,115\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,966\,c[6] + \\
& 13\,754\,374\,c[7] - 32\,429\,806\,c[8] + 32\,346\,603\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,934\,c[6] + \\
& 13\,753\,446\,c[7] - 32\,421\,006\,c[8] + 32\,319\,243\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,934\,c[6] + \\
& 13\,753\,510\,c[7] - 32\,422\,030\,c[8] + 32\,323\,275\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,308\,c[5] - 3\,245\,902\,c[6] + \\
& 13\,752\,582\,c[7] - 32\,413\,230\,c[8] + 32\,295\,915\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,638\,c[6] + \\
& 13\,764\,742\,c[7] - 32\,499\,662\,c[8] + 32\,520\,411\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,638\,c[6] + \\
& 13\,764\,806\,c[7] - 32\,500\,942\,c[8] + 32\,526\,747\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,638\,c[6] + \\
& 13\,764\,870\,c[7] - 32\,502\,094\,c[8] + 32\,531\,931\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,606\,c[6] + \\
& 13\,763\,878\,c[7] - 32\,492\,014\,c[8] + 32\,498\,235\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,606\,c[6] + \\
& 13\,763\,942\,c[7] - 32\,493\,166\,c[8] + 32\,503\,419\,c[9] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,574 c[6] + \\
& \quad 13\,762\,950 c[7] - 32\,483\,086 c[8] + 32\,469\,723 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,574 c[6] + \\
& \quad 13\,763\,014 c[7] - 32\,484\,238 c[8] + 32\,474\,907 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,542 c[6] + \\
& \quad 13\,762\,086 c[7] - 32\,475\,438 c[8] + 32\,447\,547 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,542 c[6] + \\
& \quad 13\,762\,086 c[7] - 32\,475\,310 c[8] + 32\,446\,395 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,510 c[6] + \\
& \quad 13\,761\,158 c[7] - 32\,466\,510 c[8] + 32\,419\,035 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,278 c[6] + \\
& \quad 13\,774\,310 c[7] - 32\,563\,022 c[8] + 32\,677\,227 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,246 c[6] + \\
& \quad 13\,773\,382 c[7] - 32\,554\,094 c[8] + 32\,648\,715 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,246 c[6] + \\
& \quad 13\,773\,446 c[7] - 32\,555\,374 c[8] + 32\,655\,051 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,214 c[6] + \\
& \quad 13\,772\,454 c[7] - 32\,545\,166 c[8] + 32\,620\,203 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,214 c[6] + \\
& \quad 13\,772\,518 c[7] - 32\,546\,446 c[8] + 32\,626\,539 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,214 c[6] + \\
& \quad 13\,772\,518 c[7] - 32\,546\,318 c[8] + 32\,625\,387 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,214 c[6] + \\
& \quad 13\,772\,582 c[7] - 32\,547\,598 c[8] + 32\,631\,723 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,182 c[6] + \\
& \quad 13\,771\,590 c[7] - 32\,537\,518 c[8] + 32\,598\,027 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,182 c[6] + \\
& \quad 13\,771\,590 c[7] - 32\,537\,390 c[8] + 32\,596\,875 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,150 c[6] + \\
& \quad 13\,770\,662 c[7] - 32\,528\,590 c[8] + 32\,569\,515 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,854 c[6] + \\
& \quad 13\,781\,958 c[7] - 32\,607\,246 c[8] + 32\,770\,683 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,854 c[6] + \\
& \quad 13\,782\,022 c[7] - 32\,608\,526 c[8] + 32\,777\,019 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,854 c[6] + \\
& \quad 13\,782\,086 c[7] - 32\,609\,806 c[8] + 32\,783\,355 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,822 c[6] + \\
& \quad 13\,781\,094 c[7] - 32\,599\,598 c[8] + 32\,748\,507 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,822 c[6] + \\
& \quad 13\,781\,158 c[7] - 32\,600\,878 c[8] + 32\,754\,843 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,790 c[6] + \\
& \quad 13\,780\,166 c[7] - 32\,590\,670 c[8] + 32\,719\,995 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,462 c[6] + \\
& \quad 13\,790\,598 c[7] - 32\,661\,678 c[8] + 32\,898\,987 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,430 c[6] + \\
& \quad 13\,789\,670 c[7] - 32\,652\,750 c[8] + 32\,870\,475 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,900 c[5] - 3\,237\,790 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 13\,673\,718\,c[7] - 32\,037\,478\,c[8] + 31\,592\,979\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,900\,c[5] - 3\,237\,758\,c[6] + \\
& \quad 13\,672\,790\,c[7] - 32\,028\,550\,c[8] + 31\,564\,467\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,398\,c[6] + \\
& \quad 13\,682\,358\,c[7] - 32\,091\,910\,c[8] + 31\,721\,283\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,366\,c[6] + \\
& \quad 13\,681\,430\,c[7] - 32\,082\,982\,c[8] + 31\,692\,771\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,334\,c[6] + \\
& \quad 13\,680\,566\,c[7] - 32\,075\,206\,c[8] + 31\,669\,443\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,302\,c[6] + \\
& \quad 13\,679\,638\,c[7] - 32\,066\,406\,c[8] + 31\,642\,083\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,270\,c[6] + \\
& \quad 13\,678\,774\,c[7] - 32\,058\,630\,c[8] + 31\,618\,755\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,239\,006\,c[6] + \\
& \quad 13\,690\,998\,c[7] - 32\,146\,342\,c[8] + 31\,849\,587\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,974\,c[6] + \\
& \quad 13\,690\,070\,c[7] - 32\,137\,414\,c[8] + 31\,821\,075\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,974\,c[6] + \\
& \quad 13\,690\,134\,c[7] - 32\,138\,566\,c[8] + 31\,826\,259\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,942\,c[6] + \\
& \quad 13\,689\,142\,c[7] - 32\,128\,486\,c[8] + 31\,792\,563\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,942\,c[6] + \\
& \quad 13\,689\,206\,c[7] - 32\,129\,638\,c[8] + 31\,797\,747\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,910\,c[6] + \\
& \quad 13\,688\,278\,c[7] - 32\,120\,710\,c[8] + 31\,769\,235\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,878\,c[6] + \\
& \quad 13\,687\,350\,c[7] - 32\,111\,910\,c[8] + 31\,741\,875\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,614\,c[6] + \\
& \quad 13\,699\,574\,c[7] - 32\,199\,494\,c[8] + 31\,971\,555\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,582\,c[6] + \\
& \quad 13\,698\,646\,c[7] - 32\,190\,566\,c[8] + 31\,943\,043\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,582\,c[6] + \\
& \quad 13\,698\,710\,c[7] - 32\,191\,846\,c[8] + 31\,949\,379\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,582\,c[6] + \\
& \quad 13\,698\,774\,c[7] - 32\,192\,998\,c[8] + 31\,954\,563\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,550\,c[6] + \\
& \quad 13\,697\,782\,c[7] - 32\,182\,918\,c[8] + 31\,920\,867\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,518\,c[6] + \\
& \quad 13\,696\,854\,c[7] - 32\,173\,990\,c[8] + 31\,892\,355\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,222\,c[6] + \\
& \quad 13\,708\,214\,c[7] - 32\,253\,926\,c[8] + 32\,099\,859\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,190\,c[6] + \\
& \quad 13\,707\,286\,c[7] - 32\,244\,998\,c[8] + 32\,071\,347\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,190\,c[6] + \\
& \quad 13\,707\,350\,c[7] - 32\,246\,278\,c[8] + 32\,077\,683\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,158\,c[6] + \\
& \quad 13\,706\,358\,c[7] - 32\,236\,070\,c[8] + 32\,042\,835\,c[9] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 862 c[6] +
  13 717 782 c[7] - 32 317 286 c[8] + 32 256 675 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 830 c[6] +
  13 716 854 c[7] - 32 308 358 c[8] + 32 228 163 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 798 c[6] +
  13 715 862 c[7] - 32 298 150 c[8] + 32 193 315 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 508 c[5] - 3 230 126 c[6] +
  13 598 982 c[7] - 31 673 950 c[8] + 30 887 307 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 524 c[5] - 3 230 734 c[6] +
  13 607 622 c[7] - 31 728 382 c[8] + 31 015 611 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 540 c[5] - 3 231 342 c[6] +
  13 616 262 c[7] - 31 782 814 c[8] + 31 143 915 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 540 c[5] - 3 231 310 c[6] +
  13 615 334 c[7] - 31 773 886 c[8] + 31 115 403 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 540 c[5] - 3 231 278 c[6] +
  13 614 470 c[7] - 31 766 110 c[8] + 31 092 075 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 540 c[5] - 3 231 246 c[6] +
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c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 950 c[6] +
  13 624 902 c[7] - 31 837 246 c[8] + 31 272 219 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 918 c[6] +
  13 623 974 c[7] - 31 828 318 c[8] + 31 243 707 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 886 c[6] +
  13 623 046 c[7] - 31 819 390 c[8] + 31 215 195 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 572 c[5] - 3 232 558 c[6] +
  13 633 478 c[7] - 31 890 398 c[8] + 31 394 187 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 572 c[5] - 3 232 526 c[6] +
  13 632 550 c[7] - 31 881 470 c[8] + 31 365 675 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 148 c[5] - 3 223 678 c[6] +
  13 541 526 c[7] - 31 419 286 c[8] + 30 438 243 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 164 c[5] - 3 224 286 c[6] +
  13 550 166 c[7] - 31 473 718 c[8] + 30 566 547 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 164 c[5] - 3 224 254 c[6] +
  13 549 238 c[7] - 31 464 790 c[8] + 30 538 035 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 180 c[5] - 3 224 894 c[6] +
  13 558 742 c[7] - 31 526 870 c[8] + 30 688 515 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 654 c[6] +
  13 476 358 c[7] - 31 119 118 c[8] + 29 889 387 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 622 c[6] +
  13 475 430 c[7] - 31 110 190 c[8] + 29 860 875 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 14 228 263, 7 055 510, 2 012 098, 444 987}

GCD[0, 0, 0, 0, 0, 14 228 263, 7 055 510, 2 012 098, 444 987]
1

cert.g
-2 183 801 689

```

```
{0, 0, 0, 0, 0, 14 228 263, 7 055 510, 2 012 098, 444 987}.
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Reverse[gpart[listdim17[[55]]]]
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-2 183 801 689
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cert.Transpose[A]
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 1 535 746 199, 1 976 174 551, 1 160 507 287, 2 351 492 103, 1 790 901 319, 1 535 824 839,
 1 976 253 191, 975 234 055, 1 415 662 407, 1 160 585 927, 599 995 143, 1 911 142 391,
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 2 671 836 663, 975 312 695, 1 415 741 047, 855 150 263, 600 073 783, 39 482 999,
 1 791 058 599, 975 391 335, 1 670 896 167, 1 415 819 687, 2 111 324 519, 855 228 903,
 600 152 423, 39 561 639, 855 307 543, 600 231 063, 39 640 279, 2 471 150 911,
 1 535 321 215, 1 160 082 303, 3 541 973 295, 2 030 801 199, 2 726 306 031,
 1 910 638 767, 2 351 067 119, 1 535 399 855, 974 809 071, 1 160 160 943, 599 570 159,
 1 910 717 407, 2 606 222 239, 3 046 650 591, 1 790 554 975, 2 230 983 327, 974 887 711,
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 1 670 124 839, 854 457 575, 1 549 962 407, 38 790 311, 2 365 708 311, 1 550 041 047,
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 38 208 047, 1 669 621 215, 853 953 951, 38 286 687, 854 032 591, 38 365 327,
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```

```
chi = listdim17[[56]]
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```
(-13 + x) (-9 + x)12 (5 + x)32 (7664 - 3413 x + 555 x2 - 39 x3 + x4)
```

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CoefficientList[feasibleinterlacingpolylist[chi], x]
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{401 883, -312 200, 95 659, -14 976, 1273, -56, 1},
{401 947, -312 200, 95 659, -14 976, 1273, -56, 1},
{401 531, -312 168, 95 659, -14 976, 1273, -56, 1},
{404 107, -312 584, 95 675, -14 976, 1273, -56, 1},
{404 171, -312 584, 95 675, -14 976, 1273, -56, 1},
{403 755, -312 552, 95 675, -14 976, 1273, -56, 1},
{403 819, -312 552, 95 675, -14 976, 1273, -56, 1},
{403 339, -312 520, 95 675, -14 976, 1273, -56, 1},
{403 403, -312 520, 95 675, -14 976, 1273, -56, 1},
{405 275, -312 872, 95 691, -14 976, 1273, -56, 1},
{390 483, -309 040, 95 379, -14 968, 1273, -56, 1},
{390 131, -309 008, 95 379, -14 968, 1273, -56, 1},
{390 195, -309 008, 95 379, -14 968, 1273, -56, 1},
{392 291, -309 392, 95 395, -14 968, 1273, -56, 1},
{392 355, -309 392, 95 395, -14 968, 1273, -56, 1},
{391 939, -309 360, 95 395, -14 968, 1273, -56, 1},
{392 003, -309 360, 95 395, -14 968, 1273, -56, 1},
{392 067, -309 360, 95 395, -14 968, 1273, -56, 1},
{391 651, -309 328, 95 395, -14 968, 1273, -56, 1},
{394 163, -309 744, 95 411, -14 968, 1273, -56, 1},
{394 227, -309 744, 95 411, -14 968, 1273, -56, 1},
{393 811, -309 712, 95 411, -14 968, 1273, -56, 1},
{393 875, -309 712, 95 411, -14 968, 1273, -56, 1},
{393 939, -309 712, 95 411, -14 968, 1273, -56, 1},
{393 459, -309 680, 95 411, -14 968, 1273, -56, 1},
{393 523, -309 680, 95 411, -14 968, 1273, -56, 1},
{396 099, -310 096, 95 427, -14 968, 1273, -56, 1},
{395 747, -310 064, 95 427, -14 968, 1273, -56, 1},
{395 811, -310 064, 95 427, -14 968, 1273, -56, 1},
{395 395, -310 032, 95 427, -14 968, 1273, -56, 1},
{397 683, -310 416, 95 443, -14 968, 1273, -56, 1},
{382 059, -306 520, 95 131, -14 960, 1273, -56, 1},
{384 219, -306 904, 95 147, -14 960, 1273, -56, 1},
{383 867, -306 872, 95 147, -14 960, 1273, -56, 1},
{383 931, -306 872, 95 147, -14 960, 1273, -56, 1},
{383 579, -306 840, 95 147, -14 960, 1273, -56, 1},
{383 643, -306 840, 95 147, -14 960, 1273, -56, 1},
{385 803, -307 224, 95 163, -14 960, 1273, -56, 1},
{385 451, -307 192, 95 163, -14 960, 1273, -56, 1},
{385 515, -307 192, 95 163, -14 960, 1273, -56, 1},
{385 099, -307 160, 95 163, -14 960, 1273, -56, 1},
{387 387, -307 544, 95 179, -14 960, 1273, -56, 1},
{373 923, -304 032, 94 883, -14 952, 1273, -56, 1},
{375 507, -304 352, 94 899, -14 952, 1273, -56, 1},
{375 219, -304 320, 94 899, -14 952, 1273, -56, 1},
{377 091, -304 672, 94 915, -14 952, 1273, -56, 1}};

```

A // MatrixForm

418 379	-317 208	96 155	-14 992	1273	-56	1
417 963	-317 176	96 155	-14 992	1273	-56	1
419 771	-317 528	96 171	-14 992	1273	-56	1
407 043	-314 048	95 875	-14 984	1273	-56	1
406 627	-314 016	95 875	-14 984	1273	-56	1
408 915	-314 400	95 891	-14 984	1273	-56	1
408 499	-314 368	95 891	-14 984	1273	-56	1
410 307	-314 720	95 907	-14 984	1273	-56	1
410 371	-314 720	95 907	-14 984	1273	-56	1
409 891	-314 688	95 907	-14 984	1273	-56	1
409 955	-314 688	95 907	-14 984	1273	-56	1
411 699	-315 040	95 923	-14 984	1273	-56	1
411 763	-315 040	95 923	-14 984	1273	-56	1
411 827	-315 040	95 923	-14 984	1273	-56	1
411 411	-315 008	95 923	-14 984	1273	-56	1
413 283	-315 360	95 939	-14 984	1273	-56	1
396 747	-311 176	95 611	-14 976	1273	-56	1
398 555	-311 528	95 627	-14 976	1273	-56	1
398 619	-311 528	95 627	-14 976	1273	-56	1
400 427	-311 880	95 643	-14 976	1273	-56	1
400 491	-311 880	95 643	-14 976	1273	-56	1
400 011	-311 848	95 643	-14 976	1273	-56	1
400 075	-311 848	95 643	-14 976	1273	-56	1
402 651	-312 264	95 659	-14 976	1273	-56	1
402 235	-312 232	95 659	-14 976	1273	-56	1
402 299	-312 232	95 659	-14 976	1273	-56	1
402 363	-312 232	95 659	-14 976	1273	-56	1
401 819	-312 200	95 659	-14 976	1273	-56	1
401 883	-312 200	95 659	-14 976	1273	-56	1
401 947	-312 200	95 659	-14 976	1273	-56	1
401 531	-312 168	95 659	-14 976	1273	-56	1
404 107	-312 584	95 675	-14 976	1273	-56	1
404 171	-312 584	95 675	-14 976	1273	-56	1
403 755	-312 552	95 675	-14 976	1273	-56	1
403 819	-312 552	95 675	-14 976	1273	-56	1
403 339	-312 520	95 675	-14 976	1273	-56	1
403 403	-312 520	95 675	-14 976	1273	-56	1
405 275	-312 872	95 691	-14 976	1273	-56	1
390 483	-309 040	95 379	-14 968	1273	-56	1
390 131	-309 008	95 379	-14 968	1273	-56	1
390 195	-309 008	95 379	-14 968	1273	-56	1
392 291	-309 392	95 395	-14 968	1273	-56	1
392 355	-309 392	95 395	-14 968	1273	-56	1
391 939	-309 360	95 395	-14 968	1273	-56	1
392 003	-309 360	95 395	-14 968	1273	-56	1
392 067	-309 360	95 395	-14 968	1273	-56	1
391 651	-309 328	95 395	-14 968	1273	-56	1
394 163	-309 744	95 411	-14 968	1273	-56	1
394 227	-309 744	95 411	-14 968	1273	-56	1
393 811	-309 712	95 411	-14 968	1273	-56	1
393 875	-309 712	95 411	-14 968	1273	-56	1
393 939	-309 712	95 411	-14 968	1273	-56	1
393 459	-309 680	95 411	-14 968	1273	-56	1

393 523	-309 680	95 411	-14 968	1273	-56	1
396 099	-310 096	95 427	-14 968	1273	-56	1
395 747	-310 064	95 427	-14 968	1273	-56	1
395 811	-310 064	95 427	-14 968	1273	-56	1
395 395	-310 032	95 427	-14 968	1273	-56	1
397 683	-310 416	95 443	-14 968	1273	-56	1
382 059	-306 520	95 131	-14 960	1273	-56	1
384 219	-306 904	95 147	-14 960	1273	-56	1
383 867	-306 872	95 147	-14 960	1273	-56	1
383 931	-306 872	95 147	-14 960	1273	-56	1
383 579	-306 840	95 147	-14 960	1273	-56	1
383 643	-306 840	95 147	-14 960	1273	-56	1
385 803	-307 224	95 163	-14 960	1273	-56	1
385 451	-307 192	95 163	-14 960	1273	-56	1
385 515	-307 192	95 163	-14 960	1273	-56	1
385 099	-307 160	95 163	-14 960	1273	-56	1
387 387	-307 544	95 179	-14 960	1273	-56	1
373 923	-304 032	94 883	-14 952	1273	-56	1
375 507	-304 352	94 899	-14 952	1273	-56	1
375 219	-304 320	94 899	-14 952	1273	-56	1
377 091	-304 672	94 915	-14 952	1273	-56	1

Dimensions[A]

{74, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{20 374 611, -15 498 944, 4 706 323, -734 408, 62 377, -2744, 49}

Array[c, 7].Transpose[A]

{418 379 c[1] - 317 208 c[2] + 96 155 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
417 963 c[1] - 317 176 c[2] + 96 155 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
419 771 c[1] - 317 528 c[2] + 96 171 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
407 043 c[1] - 314 048 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
406 627 c[1] - 314 016 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
408 915 c[1] - 314 400 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
408 499 c[1] - 314 368 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
410 307 c[1] - 314 720 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
410 371 c[1] - 314 720 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
409 891 c[1] - 314 688 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
409 955 c[1] - 314 688 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
411 699 c[1] - 315 040 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
411 763 c[1] - 315 040 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
411 827 c[1] - 315 040 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
411 411 c[1] - 315 008 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
413 283 c[1] - 315 360 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
396 747 c[1] - 311 176 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
398 555 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
398 619 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
400 427 c[1] - 311 880 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
400 491 c[1] - 311 880 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],

[illegible]

```

385 099 c[1] - 307 160 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
387 387 c[1] - 307 544 c[2] + 95 179 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
373 923 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
375 507 c[1] - 304 352 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
375 219 c[1] - 304 320 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
377 091 c[1] - 304 672 c[2] + 94 915 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 374 611 c[1] - 15 498 944 c[2] + 4 706 323 c[3] -
734 408 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 374 611 c[1] - 15 498 944 c[2] + 4 706 323 c[3] -
734 408 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
418 379 c[1] - 317 208 c[2] + 96 155 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 417 963 c[1] - 317 176 c[2] + 96 155 c[3] - 14 992 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 419 771 c[1] - 317 528 c[2] +
96 171 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
407 043 c[1] - 314 048 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 406 627 c[1] - 314 016 c[2] + 95 875 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 408 915 c[1] - 314 400 c[2] +
95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
408 499 c[1] - 314 368 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 410 307 c[1] - 314 720 c[2] + 95 907 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 410 371 c[1] - 314 720 c[2] +
95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
409 891 c[1] - 314 688 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 409 955 c[1] - 314 688 c[2] + 95 907 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 699 c[1] - 315 040 c[2] +
95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
411 763 c[1] - 315 040 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 827 c[1] - 315 040 c[2] + 95 923 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 411 411 c[1] - 315 008 c[2] +
95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
413 283 c[1] - 315 360 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 396 747 c[1] - 311 176 c[2] + 95 611 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 398 555 c[1] - 311 528 c[2] +
95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
398 619 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 400 427 c[1] - 311 880 c[2] + 95 643 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 400 491 c[1] - 311 880 c[2] +
95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
400 011 c[1] - 311 848 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 400 075 c[1] - 311 848 c[2] + 95 643 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 402 651 c[1] - 312 264 c[2] +
95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
402 235 c[1] - 312 232 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥

```

$$\begin{aligned}
& 0 \&\& 402\,299\,c[1] - 312\,232\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,363\,c[1] - 312\,232\,c[2] + \\
& 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 401\,819\,c[1] - 312\,200\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 401\,883\,c[1] - 312\,200\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 401\,947\,c[1] - 312\,200\,c[2] + \\
& 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 401\,531\,c[1] - 312\,168\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,107\,c[1] - 312\,584\,c[2] + 95\,675\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 404\,171\,c[1] - 312\,584\,c[2] + \\
& 95\,675\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 403\,755\,c[1] - 312\,552\,c[2] + 95\,675\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,819\,c[1] - 312\,552\,c[2] + 95\,675\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 403\,339\,c[1] - 312\,520\,c[2] + \\
& 95\,675\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 403\,403\,c[1] - 312\,520\,c[2] + 95\,675\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 405\,275\,c[1] - 312\,872\,c[2] + 95\,691\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,483\,c[1] - 309\,040\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 390\,131\,c[1] - 309\,008\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 390\,195\,c[1] - 309\,008\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 392\,291\,c[1] - 309\,392\,c[2] + \\
& 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 392\,355\,c[1] - 309\,392\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 391\,939\,c[1] - 309\,360\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 392\,003\,c[1] - 309\,360\,c[2] + \\
& 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 392\,067\,c[1] - 309\,360\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 391\,651\,c[1] - 309\,328\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 394\,163\,c[1] - 309\,744\,c[2] + \\
& 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 394\,227\,c[1] - 309\,744\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 393\,811\,c[1] - 309\,712\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 393\,875\,c[1] - 309\,712\,c[2] + \\
& 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 393\,939\,c[1] - 309\,712\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 393\,459\,c[1] - 309\,680\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 393\,523\,c[1] - 309\,680\,c[2] + \\
& 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 396\,099\,c[1] - 310\,096\,c[2] + 95\,427\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 395\,747\,c[1] - 310\,064\,c[2] + 95\,427\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 395\,811\,c[1] - 310\,064\,c[2] + \\
& 95\,427\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 395\,395\,c[1] - 310\,032\,c[2] + 95\,427\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,683\,c[1] - 310\,416\,c[2] + 95\,443\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 382\,059\,c[1] - 306\,520\,c[2] + \\
& 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\&
\end{aligned}$$

```

384 219 c[1] - 306 904 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 383 867 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 383 931 c[1] - 306 872 c[2] +
95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
383 579 c[1] - 306 840 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 383 643 c[1] - 306 840 c[2] + 95 147 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 385 803 c[1] - 307 224 c[2] +
95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
385 451 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 385 515 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 385 099 c[1] - 307 160 c[2] +
95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
387 387 c[1] - 307 544 c[2] + 95 179 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 373 923 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 375 507 c[1] - 304 352 c[2] +
94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
375 219 c[1] - 304 320 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 377 091 c[1] - 304 672 c[2] + 94 915 c[3] - 14 952 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{31 992, 240 786, 1 554 289, 5 766 425, 0, 0, 0}

GCD[31 992, 240 786, 1 554 289, 5 766 425, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 5 766 425, 1 554 289, 240 786, 31 992}

cert.g
-26 756 925

{31 992, 240 786, 1 554 289, 5 766 425, 0, 0, 0}.gpart[listdim17[[56]]]
-26 756 925

cert.Transpose[A]
{7 950 675, 2 347 155, 300 643, 17 103 603, 11 500 083, 17 104 579, 11 501 059, 9 454 547,
11 502 035, 3 851 027, 5 898 515, 1 804 515, 3 852 003, 5 899 491, 295 971, 296 947,
15 050 467, 13 003 955, 15 051 443, 13 004 931, 15 052 419, 7 401 411, 9 448 899,
16 561 939, 10 958 419, 13 005 907, 15 053 395, 5 354 899, 7 402 387, 9 449 875,
3 846 355, 10 959 395, 13 006 883, 7 403 363, 9 450 851, 1 799 843, 3 847 331, 3 848 307,
14 507 827, 10 951 795, 12 999 283, 12 461 315, 14 508 803, 8 905 283, 10 952 771,
13 000 259, 7 396 739, 12 462 291, 14 509 779, 8 906 259, 10 953 747, 13 001 235,
5 350 227, 7 397 715, 14 510 755, 10 954 723, 13 002 211, 7 398 691, 13 003 187,
12 455 667, 13 965 187, 10 409 155, 12 456 643, 8 900 611, 10 948 099, 12 457 619,
8 901 587, 10 949 075, 5 345 555, 10 950 051, 11 912 051, 10 404 483, 8 895 939, 8 896 915}

```

```
chi = listdim17[[57]]
```

$$(-9 + x)^{10} (-7 + x) (5 + x)^{32} (128 - 23x + x^2) (95 - 20x + x^2)^2$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{ {365085, -277310, 85183, -13580, 1187, -54, 1},
  {358533, -275142, 84951, -13572, 1187, -54, 1},
  {358245, -275110, 84951, -13572, 1187, -54, 1},
  {359765, -275430, 84967, -13572, 1187, -54, 1},
  {350685, -272686, 84703, -13564, 1187, -54, 1},
  {350397, -272654, 84703, -13564, 1187, -54, 1},
  {351981, -272974, 84719, -13564, 1187, -54, 1},
  {351693, -272942, 84719, -13564, 1187, -54, 1},
  {351405, -272910, 84719, -13564, 1187, -54, 1},
  {342549, -270198, 84455, -13556, 1187, -54, 1},
  {344133, -270518, 84471, -13556, 1187, -54, 1},
  {343845, -270486, 84471, -13556, 1187, -54, 1},
  {343557, -270454, 84471, -13556, 1187, -54, 1},
  {345429, -270806, 84487, -13556, 1187, -54, 1},
  {345141, -270774, 84487, -13556, 1187, -54, 1},
  {344853, -270742, 84487, -13556, 1187, -54, 1},
  {344565, -270710, 84487, -13556, 1187, -54, 1},
  {346437, -271062, 84503, -13556, 1187, -54, 1},
  {337005, -268286, 84239, -13548, 1187, -54, 1},
  {336717, -268254, 84239, -13548, 1187, -54, 1},
  {338301, -268574, 84255, -13548, 1187, -54, 1},
  {338013, -268542, 84255, -13548, 1187, -54, 1},
  {337725, -268510, 84255, -13548, 1187, -54, 1},
  {339597, -268862, 84271, -13548, 1187, -54, 1},
  {331173, -266342, 84023, -13540, 1187, -54, 1},
  {330885, -266310, 84023, -13540, 1187, -54, 1},
  {324045, -264110, 83791, -13532, 1187, -54, 1} }
```

```

A = {{365 085, -277 310, 85 183, -13 580, 1187, -54, 1},
      {358 533, -275 142, 84 951, -13 572, 1187, -54, 1},
      {358 245, -275 110, 84 951, -13 572, 1187, -54, 1},
      {359 765, -275 430, 84 967, -13 572, 1187, -54, 1},
      {350 685, -272 686, 84 703, -13 564, 1187, -54, 1},
      {350 397, -272 654, 84 703, -13 564, 1187, -54, 1},
      {351 981, -272 974, 84 719, -13 564, 1187, -54, 1},
      {351 693, -272 942, 84 719, -13 564, 1187, -54, 1},
      {351 405, -272 910, 84 719, -13 564, 1187, -54, 1},
      {342 549, -270 198, 84 455, -13 556, 1187, -54, 1},
      {344 133, -270 518, 84 471, -13 556, 1187, -54, 1},
      {343 845, -270 486, 84 471, -13 556, 1187, -54, 1},
      {343 557, -270 454, 84 471, -13 556, 1187, -54, 1},
      {345 429, -270 806, 84 487, -13 556, 1187, -54, 1},
      {345 141, -270 774, 84 487, -13 556, 1187, -54, 1},
      {344 853, -270 742, 84 487, -13 556, 1187, -54, 1},
      {344 565, -270 710, 84 487, -13 556, 1187, -54, 1},
      {346 437, -271 062, 84 503, -13 556, 1187, -54, 1},
      {337 005, -268 286, 84 239, -13 548, 1187, -54, 1},
      {336 717, -268 254, 84 239, -13 548, 1187, -54, 1},
      {338 301, -268 574, 84 255, -13 548, 1187, -54, 1},
      {338 013, -268 542, 84 255, -13 548, 1187, -54, 1},
      {337 725, -268 510, 84 255, -13 548, 1187, -54, 1},
      {339 597, -268 862, 84 271, -13 548, 1187, -54, 1},
      {331 173, -266 342, 84 023, -13 540, 1187, -54, 1},
      {330 885, -266 310, 84 023, -13 540, 1187, -54, 1},
      {324 045, -264 110, 83 791, -13 532, 1187, -54, 1}};

```

A // MatrixForm

$$\begin{pmatrix} 365085 & -277310 & 85183 & -13580 & 1187 & -54 & 1 \\ 358533 & -275142 & 84951 & -13572 & 1187 & -54 & 1 \\ 358245 & -275110 & 84951 & -13572 & 1187 & -54 & 1 \\ 359765 & -275430 & 84967 & -13572 & 1187 & -54 & 1 \\ 350685 & -272686 & 84703 & -13564 & 1187 & -54 & 1 \\ 350397 & -272654 & 84703 & -13564 & 1187 & -54 & 1 \\ 351981 & -272974 & 84719 & -13564 & 1187 & -54 & 1 \\ 351693 & -272942 & 84719 & -13564 & 1187 & -54 & 1 \\ 351405 & -272910 & 84719 & -13564 & 1187 & -54 & 1 \\ 342549 & -270198 & 84455 & -13556 & 1187 & -54 & 1 \\ 344133 & -270518 & 84471 & -13556 & 1187 & -54 & 1 \\ 343845 & -270486 & 84471 & -13556 & 1187 & -54 & 1 \\ 343557 & -270454 & 84471 & -13556 & 1187 & -54 & 1 \\ 345429 & -270806 & 84487 & -13556 & 1187 & -54 & 1 \\ 345141 & -270774 & 84487 & -13556 & 1187 & -54 & 1 \\ 344853 & -270742 & 84487 & -13556 & 1187 & -54 & 1 \\ 344565 & -270710 & 84487 & -13556 & 1187 & -54 & 1 \\ 346437 & -271062 & 84503 & -13556 & 1187 & -54 & 1 \\ 337005 & -268286 & 84239 & -13548 & 1187 & -54 & 1 \\ 336717 & -268254 & 84239 & -13548 & 1187 & -54 & 1 \\ 338301 & -268574 & 84255 & -13548 & 1187 & -54 & 1 \\ 338013 & -268542 & 84255 & -13548 & 1187 & -54 & 1 \\ 337725 & -268510 & 84255 & -13548 & 1187 & -54 & 1 \\ 339597 & -268862 & 84271 & -13548 & 1187 & -54 & 1 \\ 331173 & -266342 & 84023 & -13540 & 1187 & -54 & 1 \\ 330885 & -266310 & 84023 & -13540 & 1187 & -54 & 1 \\ 324045 & -264110 & 83791 & -13532 & 1187 & -54 & 1 \end{pmatrix}$$

Dimensions[A]

{27, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{17410285, -13429390, 4156879, -664828, 58163, -2646, 49}

Array[c, 7].Transpose[A]

```
{ 365 085 c[1] - 277 310 c[2] + 85 183 c[3] - 13 580 c[4] + 1187 c[5] - 54 c[6] + c[7],
  358 533 c[1] - 275 142 c[2] + 84 951 c[3] - 13 572 c[4] + 1187 c[5] - 54 c[6] + c[7],
  358 245 c[1] - 275 110 c[2] + 84 951 c[3] - 13 572 c[4] + 1187 c[5] - 54 c[6] + c[7],
  359 765 c[1] - 275 430 c[2] + 84 967 c[3] - 13 572 c[4] + 1187 c[5] - 54 c[6] + c[7],
  350 685 c[1] - 272 686 c[2] + 84 703 c[3] - 13 564 c[4] + 1187 c[5] - 54 c[6] + c[7],
  350 397 c[1] - 272 654 c[2] + 84 703 c[3] - 13 564 c[4] + 1187 c[5] - 54 c[6] + c[7],
  351 981 c[1] - 272 974 c[2] + 84 719 c[3] - 13 564 c[4] + 1187 c[5] - 54 c[6] + c[7],
  351 693 c[1] - 272 942 c[2] + 84 719 c[3] - 13 564 c[4] + 1187 c[5] - 54 c[6] + c[7],
  351 405 c[1] - 272 910 c[2] + 84 719 c[3] - 13 564 c[4] + 1187 c[5] - 54 c[6] + c[7],
  342 549 c[1] - 270 198 c[2] + 84 455 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7],
  344 133 c[1] - 270 518 c[2] + 84 471 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7],
  343 845 c[1] - 270 486 c[2] + 84 471 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7],
  343 557 c[1] - 270 454 c[2] + 84 471 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7],
  345 429 c[1] - 270 806 c[2] + 84 487 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7],
  345 141 c[1] - 270 774 c[2] + 84 487 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7],
  344 853 c[1] - 270 742 c[2] + 84 487 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7],
  344 565 c[1] - 270 710 c[2] + 84 487 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7],
  346 437 c[1] - 271 062 c[2] + 84 503 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7],
  337 005 c[1] - 268 286 c[2] + 84 239 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7],
  336 717 c[1] - 268 254 c[2] + 84 239 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7],
  338 301 c[1] - 268 574 c[2] + 84 255 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7],
  338 013 c[1] - 268 542 c[2] + 84 255 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7],
  337 725 c[1] - 268 510 c[2] + 84 255 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7],
  339 597 c[1] - 268 862 c[2] + 84 271 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7],
  331 173 c[1] - 266 342 c[2] + 84 023 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7],
  330 885 c[1] - 266 310 c[2] + 84 023 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7],
  324 045 c[1] - 264 110 c[2] + 83 791 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7]}
```

Array[c, 7].g

```
17 410 285 c[1] - 13 429 390 c[2] + 4 156 879 c[3] -
  664 828 c[4] + 58 163 c[5] - 2646 c[6] + 49 c[7]
```



```

cert =
  Flatten[Array[c, 7] /. FindInstance[17 410 285 c[1] - 13 429 390 c[2] + 4 156 879 c[3] -
    664 828 c[4] + 58 163 c[5] - 2646 c[6] + 49 c[7] < 0 && 365 085 c[1] -
    277 310 c[2] + 85 183 c[3] - 13 580 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
    358 533 c[1] - 275 142 c[2] + 84 951 c[3] - 13 572 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
    0 && 358 245 c[1] - 275 110 c[2] + 84 951 c[3] - 13 572 c[4] +
    1187 c[5] - 54 c[6] + c[7] ≥ 0 && 359 765 c[1] - 275 430 c[2] +
    84 967 c[3] - 13 572 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
    350 685 c[1] - 272 686 c[2] + 84 703 c[3] - 13 564 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
    0 && 350 397 c[1] - 272 654 c[2] + 84 703 c[3] - 13 564 c[4] +
    1187 c[5] - 54 c[6] + c[7] ≥ 0 && 351 981 c[1] - 272 974 c[2] +
    84 719 c[3] - 13 564 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
    351 693 c[1] - 272 942 c[2] + 84 719 c[3] - 13 564 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
    0 && 351 405 c[1] - 272 910 c[2] + 84 719 c[3] - 13 564 c[4] +
    1187 c[5] - 54 c[6] + c[7] ≥ 0 && 342 549 c[1] - 270 198 c[2] +
    84 455 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
    344 133 c[1] - 270 518 c[2] + 84 471 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
    0 && 343 845 c[1] - 270 486 c[2] + 84 471 c[3] - 13 556 c[4] +
    1187 c[5] - 54 c[6] + c[7] ≥ 0 && 343 557 c[1] - 270 454 c[2] +
    84 471 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
    345 429 c[1] - 270 806 c[2] + 84 487 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
    0 && 345 141 c[1] - 270 774 c[2] + 84 487 c[3] - 13 556 c[4] +
    1187 c[5] - 54 c[6] + c[7] ≥ 0 && 344 853 c[1] - 270 742 c[2] +
    84 487 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
    344 565 c[1] - 270 710 c[2] + 84 487 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
    0 && 346 437 c[1] - 271 062 c[2] + 84 503 c[3] - 13 556 c[4] +
    1187 c[5] - 54 c[6] + c[7] ≥ 0 && 337 005 c[1] - 268 286 c[2] +
    84 239 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
    336 717 c[1] - 268 254 c[2] + 84 239 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
    0 && 338 301 c[1] - 268 574 c[2] + 84 255 c[3] - 13 548 c[4] +
    1187 c[5] - 54 c[6] + c[7] ≥ 0 && 338 013 c[1] - 268 542 c[2] +
    84 255 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
    337 725 c[1] - 268 510 c[2] + 84 255 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
    0 && 339 597 c[1] - 268 862 c[2] + 84 271 c[3] - 13 548 c[4] +
    1187 c[5] - 54 c[6] + c[7] ≥ 0 && 331 173 c[1] - 266 342 c[2] +
    84 023 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
    330 885 c[1] - 266 310 c[2] + 84 023 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
    0 && 324 045 c[1] - 264 110 c[2] + 83 791 c[3] - 13 532 c[4] +
    1187 c[5] - 54 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{0, 186 053, 3 348 961, 46 699 387, 0, 0, 400 497 673 181}

GCD[0, 186 053, 3 348 961, 46 699 387, 0, 0, 400 497 673 181]
1

Reverse[cert]
{400 497 673 181, 0, 0, 46 699 387, 3 348 961, 186 053, 0}

```

cert.g

-26 719 518

{0, 186 053, 3 348 961, 46 699 387, 0, 0, 400 497 673 181}.gpart[listdim17[[57]]]

-26 719 518

cert.Transpose[A]

{185 154, 184 202, 6 137 898, 184 314, 183 138, 6 136 834, 183 250,
6 136 946, 12 090 642, 6 135 770, 182 186, 6 135 882, 12 089 578, 182 298,
6 135 994, 12 089 690, 18 043 386, 6 136 106, 12 088 626, 18 042 322, 12 088 738,
18 042 434, 23 996 130, 12 088 850, 23 995 178, 29 948 874, 35 901 618}

chi = listdim17[[58]]

$(-11 + x)^2 (-9 + x)^{12} (5 + x)^{32} (-812 + 281 x - 30 x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-37521, 25301, -6434, 778, -45, 1}, {-37761, 25317, -6434, 778, -45, 1},
  {-37729, 25317, -6434, 778, -45, 1}, {-37697, 25317, -6434, 778, -45, 1},
  {-37905, 25333, -6434, 778, -45, 1}, {-37873, 25333, -6434, 778, -45, 1},
  {-36441, 25109, -6426, 778, -45, 1}, {-36617, 25125, -6426, 778, -45, 1},
  {-36585, 25125, -6426, 778, -45, 1}, {-36793, 25141, -6426, 778, -45, 1},
  {-36761, 25141, -6426, 778, -45, 1}, {-36729, 25141, -6426, 778, -45, 1},
  {-36937, 25157, -6426, 778, -45, 1}, {-36905, 25157, -6426, 778, -45, 1},
  {-37113, 25173, -6426, 778, -45, 1}, {-37081, 25173, -6426, 778, -45, 1},
  {-37257, 25189, -6426, 778, -45, 1}, {-37433, 25205, -6426, 778, -45, 1},
  {-35505, 24933, -6418, 778, -45, 1}, {-35681, 24949, -6418, 778, -45, 1},
  {-35649, 24949, -6418, 778, -45, 1}, {-35825, 24965, -6418, 778, -45, 1},
  {-35793, 24965, -6418, 778, -45, 1}, {-36001, 24981, -6418, 778, -45, 1},
  {-35969, 24981, -6418, 778, -45, 1}, {-35937, 24981, -6418, 778, -45, 1},
  {-36145, 24997, -6418, 778, -45, 1}, {-36113, 24997, -6418, 778, -45, 1},
  {-36321, 25013, -6418, 778, -45, 1}, {-36289, 25013, -6418, 778, -45, 1},
  {-36465, 25029, -6418, 778, -45, 1}, {-34569, 24757, -6410, 778, -45, 1},
  {-34713, 24773, -6410, 778, -45, 1}, {-34889, 24789, -6410, 778, -45, 1},
  {-34857, 24789, -6410, 778, -45, 1}, {-35033, 24805, -6410, 778, -45, 1},
  {-35001, 24805, -6410, 778, -45, 1}, {-35177, 24821, -6410, 778, -45, 1},
  {-35145, 24821, -6410, 778, -45, 1}, {-35353, 24837, -6410, 778, -45, 1},
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  {-34065, 24629, -6402, 778, -45, 1}, {-34241, 24645, -6402, 778, -45, 1},
  {-34209, 24645, -6402, 778, -45, 1}, {-34385, 24661, -6402, 778, -45, 1},
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  {-34881, 24709, -6402, 778, -45, 1}, {-33129, 24453, -6394, 778, -45, 1},
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  {-33737, 24517, -6394, 778, -45, 1}, {-33913, 24533, -6394, 778, -45, 1},
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  {-32801, 24341, -6386, 778, -45, 1}, {-32769, 24341, -6386, 778, -45, 1},
  {-32945, 24357, -6386, 778, -45, 1}, {-33121, 24373, -6386, 778, -45, 1},
  {-31689, 24149, -6378, 778, -45, 1}, {-31833, 24165, -6378, 778, -45, 1},
  {-31977, 24181, -6378, 778, -45, 1}, {-32153, 24197, -6378, 778, -45, 1},
  {-31041, 24005, -6370, 778, -45, 1}, {-31185, 24021, -6370, 778, -45, 1},
  {-31361, 24037, -6370, 778, -45, 1}, {-30249, 23845, -6362, 778, -45, 1},
  {-30393, 23861, -6362, 778, -45, 1}, {-29601, 23701, -6354, 778, -45, 1}}
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A = {{-37521, 25301, -6434, 778, -45, 1}, {-37761, 25317, -6434, 778, -45, 1},
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      {-37905, 25333, -6434, 778, -45, 1}, {-37873, 25333, -6434, 778, -45, 1},
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      {-37257, 25189, -6426, 778, -45, 1}, {-37433, 25205, -6426, 778, -45, 1},
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      {-34529, 24677, -6402, 778, -45, 1}, {-34705, 24693, -6402, 778, -45, 1},
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      {-33737, 24517, -6394, 778, -45, 1}, {-33913, 24533, -6394, 778, -45, 1},
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      {-31689, 24149, -6378, 778, -45, 1}, {-31833, 24165, -6378, 778, -45, 1},
      {-31977, 24181, -6378, 778, -45, 1}, {-32153, 24197, -6378, 778, -45, 1},
      {-31041, 24005, -6370, 778, -45, 1}, {-31185, 24021, -6370, 778, -45, 1},
      {-31361, 24037, -6370, 778, -45, 1}, {-30249, 23845, -6362, 778, -45, 1},
      {-30393, 23861, -6362, 778, -45, 1}, {-29601, 23701, -6354, 778, -45, 1}};

```

```
A // MatrixForm
```

```

( -37521 25301 -6434 778 -45 1
  -37761 25317 -6434 778 -45 1
  -37729 25317 -6434 778 -45 1
  -37697 25317 -6434 778 -45 1
  -37905 25333 -6434 778 -45 1
  -37873 25333 -6434 778 -45 1
  -36441 25109 -6426 778 -45 1
  -36617 25125 -6426 778 -45 1
  -36585 25125 -6426 778 -45 1
  -36793 25141 -6426 778 -45 1
  -36761 25141 -6426 778 -45 1
  -36729 25141 -6426 778 -45 1
  -36937 25157 -6426 778 -45 1
  -36905 25157 -6426 778 -45 1
  -37113 25173 -6426 778 -45 1
  -37081 25173 -6426 778 -45 1
  -37257 25189 -6426 778 -45 1
  -37433 25205 -6426 778 -45 1
  -35505 24933 -6418 778 -45 1
  -35681 24949 -6418 778 -45 1
  -35649 24949 -6418 778 -45 1
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  -35793 24965 -6418 778 -45 1
  -36001 24981 -6418 778 -45 1
  -35969 24981 -6418 778 -45 1
  -35937 24981 -6418 778 -45 1
  -36145 24997 -6418 778 -45 1
  -36113 24997 -6418 778 -45 1
  -36321 25013 -6418 778 -45 1
  -36289 25013 -6418 778 -45 1
  -36465 25029 -6418 778 -45 1
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  -34713 24773 -6410 778 -45 1
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  -35145 24821 -6410 778 -45 1
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  -34353 24661 -6402 778 -45 1
  -34561 24677 -6402 778 -45 1
  -34529 24677 -6402 778 -45 1
  -34705 24693 -6402 778 -45 1
  -34881 24709 -6402 778 -45 1
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  -33273 24469 -6394 778 -45 1
  -33417 24485 -6394 778 -45 1
  -33593 24501 -6394 778 -45 1
  -33561 24501 -6394 778 -45 1
  -33737 24517 -6394 778 -45 1
  -33913 24533 -6394 778 -45 1
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  -32625 24325 -6386 778 -45 1
  -32801 24341 -6386 778 -45 1
  -32769 24341 -6386 778 -45 1
  -32945 24357 -6386 778 -45 1
  -33121 24373 -6386 778 -45 1
  -31689 24149 -6378 778 -45 1
  -31833 24165 -6378 778 -45 1
  -31977 24181 -6378 778 -45 1
  -32153 24197 -6378 778 -45 1
  -31041 24005 -6370 778 -45 1
  -31185 24021 -6370 778 -45 1
  -31361 24037 -6370 778 -45 1
  -30249 23845 -6362 778 -45 1
  -30393 23861 -6362 778 -45 1
  -29601 23701 -6354 778 -45 1 )

```

-36 793	25 141	-6426	778	-45	1
-36 761	25 141	-6426	778	-45	1
-36 729	25 141	-6426	778	-45	1
-36 937	25 157	-6426	778	-45	1
-36 905	25 157	-6426	778	-45	1
-37 113	25 173	-6426	778	-45	1
-37 081	25 173	-6426	778	-45	1
-37 257	25 189	-6426	778	-45	1
-37 433	25 205	-6426	778	-45	1
-35 505	24 933	-6418	778	-45	1
-35 681	24 949	-6418	778	-45	1
-35 649	24 949	-6418	778	-45	1
-35 825	24 965	-6418	778	-45	1
-35 793	24 965	-6418	778	-45	1
-36 001	24 981	-6418	778	-45	1
-35 969	24 981	-6418	778	-45	1
-35 937	24 981	-6418	778	-45	1
-36 145	24 997	-6418	778	-45	1
-36 113	24 997	-6418	778	-45	1
-36 321	25 013	-6418	778	-45	1
-36 289	25 013	-6418	778	-45	1
-36 465	25 029	-6418	778	-45	1
-34 569	24 757	-6410	778	-45	1
-34 713	24 773	-6410	778	-45	1
-34 889	24 789	-6410	778	-45	1
-34 857	24 789	-6410	778	-45	1
-35 033	24 805	-6410	778	-45	1
-35 001	24 805	-6410	778	-45	1
-35 177	24 821	-6410	778	-45	1
-35 145	24 821	-6410	778	-45	1
-35 353	24 837	-6410	778	-45	1
-35 321	24 837	-6410	778	-45	1
-35 497	24 853	-6410	778	-45	1
-35 673	24 869	-6410	778	-45	1
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-34 065	24 629	-6402	778	-45	1
-34 241	24 645	-6402	778	-45	1
-34 209	24 645	-6402	778	-45	1
-34 385	24 661	-6402	778	-45	1
-34 353	24 661	-6402	778	-45	1
-34 561	24 677	-6402	778	-45	1
-34 529	24 677	-6402	778	-45	1
-34 705	24 693	-6402	778	-45	1
-34 881	24 709	-6402	778	-45	1
-33 129	24 453	-6394	778	-45	1
-33 273	24 469	-6394	778	-45	1
-33 417	24 485	-6394	778	-45	1
-33 593	24 501	-6394	778	-45	1
-33 561	24 501	-6394	778	-45	1
-33 737	24 517	-6394	778	-45	1
-33 913	24 533	-6394	778	-45	1
-32 481	24 309	-6386	778	-45	1
-32 625	24 325	-6386	778	-45	1
-32 801	24 341	-6386	778	-45	1
-32 769	24 341	-6386	778	-45	1

$$\begin{pmatrix} -32109 & 24341 & -6386 & 778 & -45 & 1 \\ -32945 & 24357 & -6386 & 778 & -45 & 1 \\ -33121 & 24373 & -6386 & 778 & -45 & 1 \\ -31689 & 24149 & -6378 & 778 & -45 & 1 \\ -31833 & 24165 & -6378 & 778 & -45 & 1 \\ -31977 & 24181 & -6378 & 778 & -45 & 1 \\ -32153 & 24197 & -6378 & 778 & -45 & 1 \\ -31041 & 24005 & -6370 & 778 & -45 & 1 \\ -31185 & 24021 & -6370 & 778 & -45 & 1 \\ -31361 & 24037 & -6370 & 778 & -45 & 1 \\ -30249 & 23845 & -6362 & 778 & -45 & 1 \\ -30393 & 23861 & -6362 & 778 & -45 & 1 \\ -29601 & 23701 & -6354 & 778 & -45 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1824321, 1234117, -314882, 38122, -2205, 49}

Array[c, 6].Transpose[A]

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-37729 c[1] + 25317 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
-37697 c[1] + 25317 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
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-37873 c[1] + 25333 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
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-37081 c[1] + 25173 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
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-36465 c[1] + 25029 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],

```

-34 569 c[1] + 24 757 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 713 c[1] + 24 773 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 889 c[1] + 24 789 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 857 c[1] + 24 789 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 033 c[1] + 24 805 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
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-35 145 c[1] + 24 821 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 353 c[1] + 24 837 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 321 c[1] + 24 837 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 497 c[1] + 24 853 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 673 c[1] + 24 869 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 921 c[1] + 24 613 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 065 c[1] + 24 629 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 241 c[1] + 24 645 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 209 c[1] + 24 645 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 385 c[1] + 24 661 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 353 c[1] + 24 661 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 561 c[1] + 24 677 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 529 c[1] + 24 677 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 705 c[1] + 24 693 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 881 c[1] + 24 709 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 129 c[1] + 24 453 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 273 c[1] + 24 469 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 417 c[1] + 24 485 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 593 c[1] + 24 501 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 561 c[1] + 24 501 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 737 c[1] + 24 517 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 913 c[1] + 24 533 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 481 c[1] + 24 309 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 625 c[1] + 24 325 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 801 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 769 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 945 c[1] + 24 357 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 121 c[1] + 24 373 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 689 c[1] + 24 149 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 833 c[1] + 24 165 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 977 c[1] + 24 181 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 153 c[1] + 24 197 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 041 c[1] + 24 005 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 185 c[1] + 24 021 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 361 c[1] + 24 037 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-30 249 c[1] + 23 845 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-30 393 c[1] + 23 861 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-29 601 c[1] + 23 701 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] }

```

Array[c, 6].g

$$-1\,824\,321\,c[1] + 1\,234\,117\,c[2] - 314\,882\,c[3] + 38\,122\,c[4] - 2205\,c[5] + 49\,c[6]$$

cert = Flatten[Array[c, 6] /. FindInstance[

```

-1 824 321 c[1] + 1 234 117 c[2] - 314 882 c[3] + 38 122 c[4] - 2205 c[5] + 49 c[6] < 0 &&
-37 521 c[1] + 25 301 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37 761 c[1] + 25 317 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37 729 c[1] + 25 317 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37 697 c[1] + 25 317 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37 905 c[1] + 25 333 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37 873 c[1] + 25 333 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 441 c[1] + 25 109 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 617 c[1] + 25 125 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 585 c[1] + 25 125 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 793 c[1] + 25 141 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 761 c[1] + 25 141 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 729 c[1] + 25 141 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 937 c[1] + 25 157 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 905 c[1] + 25 157 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37 113 c[1] + 25 173 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37 081 c[1] + 25 173 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37 257 c[1] + 25 189 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-37 433 c[1] + 25 205 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 505 c[1] + 24 933 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 681 c[1] + 24 949 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 649 c[1] + 24 949 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 825 c[1] + 24 965 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 793 c[1] + 24 965 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 001 c[1] + 24 981 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 969 c[1] + 24 981 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
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-36 113 c[1] + 24 997 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 321 c[1] + 25 013 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 289 c[1] + 25 013 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-36 465 c[1] + 25 029 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
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-35 145 c[1] + 24 821 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 353 c[1] + 24 837 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 321 c[1] + 24 837 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 497 c[1] + 24 853 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-35 673 c[1] + 24 869 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&

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-33 921 c[1] + 24 613 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 065 c[1] + 24 629 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 241 c[1] + 24 645 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 209 c[1] + 24 645 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 385 c[1] + 24 661 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 353 c[1] + 24 661 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 561 c[1] + 24 677 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 529 c[1] + 24 677 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
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-33 129 c[1] + 24 453 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-33 273 c[1] + 24 469 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-33 417 c[1] + 24 485 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
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-33 913 c[1] + 24 533 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 481 c[1] + 24 309 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 625 c[1] + 24 325 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 801 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 769 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 945 c[1] + 24 357 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
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-31 689 c[1] + 24 149 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 833 c[1] + 24 165 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 977 c[1] + 24 181 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 153 c[1] + 24 197 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 041 c[1] + 24 005 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 185 c[1] + 24 021 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 361 c[1] + 24 037 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-30 249 c[1] + 23 845 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-30 393 c[1] + 23 861 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-29 601 c[1] + 23 701 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[59]]
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$$(-11 + x)^2 (-9 + x)^{11} (5 + x)^{32} (7340 - 3341 x + 551 x^2 - 39 x^3 + x^4)$$

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CoefficientList[feasibleinterlacingpolylist[chi], x]
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{308 033, -255 318, 82 111, -13 396, 1183, -54, 1},
{309 969, -255 670, 82 127, -13 396, 1183, -54, 1},
{309 617, -255 638, 82 127, -13 396, 1183, -54, 1},
{309 265, -255 606, 82 127, -13 396, 1183, -54, 1},
{311 553, -255 990, 82 143, -13 396, 1183, -54, 1},
{311 201, -255 958, 82 143, -13 396, 1183, -54, 1},
{313 137, -256 310, 82 159, -13 396, 1183, -54, 1},
{298 089, -252 478, 81 847, -13 388, 1183, -54, 1},
{299 673, -252 798, 81 863, -13 388, 1183, -54, 1},
{299 321, -252 766, 81 863, -13 388, 1183, -54, 1},
{301 257, -253 118, 81 879, -13 388, 1183, -54, 1},
{300 905, -253 086, 81 879, -13 388, 1183, -54, 1},
{302 841, -253 438, 81 895, -13 388, 1183, -54, 1},
{302 489, -253 406, 81 895, -13 388, 1183, -54, 1},
{304 425, -253 758, 81 911, -13 388, 1183, -54, 1},
{290 961, -250 246, 81 615, -13 380, 1183, -54, 1},
{292 545, -250 566, 81 631, -13 380, 1183, -54, 1},
{294 129, -250 886, 81 647, -13 380, 1183, -54, 1},
{293 777, -250 854, 81 647, -13 380, 1183, -54, 1},
{295 713, -251 206, 81 663, -13 380, 1183, -54, 1},
{285 417, -248 334, 81 399, -13 372, 1183, -54, 1},
{287 001, -248 654, 81 415, -13 372, 1183, -54, 1},
{278 289, -246 102, 81 167, -13 364, 1183, -54, 1}];

```

```
A // MatrixForm
```

```

( 331 793 -263 286 82 991 -13 428 1183 -54 1 )
( 333 025 -263 574 83 007 -13 428 1183 -54 1 )
( 341 737 -266 126 83 255 -13 436 1183 -54 1 )
( 333 729 -263 638 83 007 -13 428 1183 -54 1 )
( 333 377 -263 606 83 007 -13 428 1183 -54 1 )
( 335 313 -263 958 83 073 -13 428 1183 -54 1 )

```

334 961	-263 926	83 023	-13 428	1183	-54	1
334 609	-263 894	83 023	-13 428	1183	-54	1
336 545	-264 246	83 039	-13 428	1183	-54	1
336 193	-264 214	83 039	-13 428	1183	-54	1
335 841	-264 182	83 039	-13 428	1183	-54	1
337 425	-264 502	83 055	-13 428	1183	-54	1
338 657	-264 790	83 071	-13 428	1183	-54	1
321 849	-260 446	82 727	-13 420	1183	-54	1
323 433	-260 766	82 743	-13 420	1183	-54	1
325 017	-261 086	82 759	-13 420	1183	-54	1
324 665	-261 054	82 759	-13 420	1183	-54	1
326 601	-261 406	82 775	-13 420	1183	-54	1
326 249	-261 374	82 775	-13 420	1183	-54	1
328 185	-261 726	82 791	-13 420	1183	-54	1
327 833	-261 694	82 791	-13 420	1183	-54	1
327 481	-261 662	82 791	-13 420	1183	-54	1
329 769	-262 046	82 807	-13 420	1183	-54	1
329 417	-262 014	82 807	-13 420	1183	-54	1
329 065	-261 982	82 807	-13 420	1183	-54	1
331 001	-262 334	82 823	-13 420	1183	-54	1
330 649	-262 302	82 823	-13 420	1183	-54	1
330 297	-262 270	82 823	-13 420	1183	-54	1
332 233	-262 622	82 839	-13 420	1183	-54	1
331 881	-262 590	82 839	-13 420	1183	-54	1
316 305	-258 534	82 511	-13 412	1183	-54	1
317 889	-258 854	82 527	-13 412	1183	-54	1
319 473	-259 174	82 543	-13 412	1183	-54	1
319 121	-259 142	82 543	-13 412	1183	-54	1
321 057	-259 494	82 559	-13 412	1183	-54	1
320 705	-259 462	82 559	-13 412	1183	-54	1
322 641	-259 814	82 575	-13 412	1183	-54	1
322 289	-259 782	82 575	-13 412	1183	-54	1
321 937	-259 750	82 575	-13 412	1183	-54	1
324 225	-260 134	82 591	-13 412	1183	-54	1
323 873	-260 102	82 591	-13 412	1183	-54	1
323 521	-260 070	82 591	-13 412	1183	-54	1
323 169	-260 038	82 591	-13 412	1183	-54	1
325 809	-260 454	82 607	-13 412	1183	-54	1
325 457	-260 422	82 607	-13 412	1183	-54	1
325 105	-260 390	82 607	-13 412	1183	-54	1
327 041	-260 742	82 623	-13 412	1183	-54	1
310 761	-256 622	82 295	-13 404	1183	-54	1
312 345	-256 942	82 311	-13 404	1183	-54	1
311 993	-256 910	82 311	-13 404	1183	-54	1
313 929	-257 262	82 327	-13 404	1183	-54	1
313 577	-257 230	82 327	-13 404	1183	-54	1
315 513	-257 582	82 343	-13 404	1183	-54	1
315 161	-257 550	82 343	-13 404	1183	-54	1
314 809	-257 518	82 343	-13 404	1183	-54	1
317 097	-257 902	82 359	-13 404	1183	-54	1
316 745	-257 870	82 359	-13 404	1183	-54	1
316 393	-257 838	82 359	-13 404	1183	-54	1
318 681	-258 222	82 375	-13 404	1183	-54	1
318 329	-258 190	82 375	-13 404	1183	-54	1

```

320 265 -258 542 82 391 -13 404 1183 -54 1
319 913 -258 510 82 391 -13 404 1183 -54 1
303 633 -254 390 82 063 -13 396 1183 -54 1
305 217 -254 710 82 079 -13 396 1183 -54 1
306 801 -255 030 82 095 -13 396 1183 -54 1
306 449 -254 998 82 095 -13 396 1183 -54 1
308 385 -255 350 82 111 -13 396 1183 -54 1
308 033 -255 318 82 111 -13 396 1183 -54 1
309 969 -255 670 82 127 -13 396 1183 -54 1
309 617 -255 638 82 127 -13 396 1183 -54 1
309 265 -255 606 82 127 -13 396 1183 -54 1
311 553 -255 990 82 143 -13 396 1183 -54 1
311 201 -255 958 82 143 -13 396 1183 -54 1
313 137 -256 310 82 159 -13 396 1183 -54 1
298 089 -252 478 81 847 -13 388 1183 -54 1
299 673 -252 798 81 863 -13 388 1183 -54 1
299 321 -252 766 81 863 -13 388 1183 -54 1
301 257 -253 118 81 879 -13 388 1183 -54 1
300 905 -253 086 81 879 -13 388 1183 -54 1
302 841 -253 438 81 895 -13 388 1183 -54 1
302 489 -253 406 81 895 -13 388 1183 -54 1
304 425 -253 758 81 911 -13 388 1183 -54 1
290 961 -250 246 81 615 -13 380 1183 -54 1
292 545 -250 566 81 631 -13 380 1183 -54 1
294 129 -250 886 81 647 -13 380 1183 -54 1
293 777 -250 854 81 647 -13 380 1183 -54 1
295 713 -251 206 81 663 -13 380 1183 -54 1
285 417 -248 334 81 399 -13 372 1183 -54 1
287 001 -248 654 81 415 -13 372 1183 -54 1
278 289 -246 102 81 167 -13 364 1183 -54 1

```

Dimensions[A]

```
{90, 7}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{16 498 025, -12 954 222, 4 069 495, -657 980, 57 967, -2646, 49}
```

Array[c, 7].Transpose[A]

```

{331 793 c[1] - 263 286 c[2] + 82 991 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 333 025 c[1] - 263 574 c[2] + 83 007 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 341 737 c[1] - 266 126 c[2] + 83 255 c[3] - 13 436 c[4] + 1183 c[5] - 54 c[6] + c[7],
 333 729 c[1] - 263 638 c[2] + 83 007 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 333 377 c[1] - 263 606 c[2] + 83 007 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 335 313 c[1] - 263 958 c[2] + 83 023 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 334 961 c[1] - 263 926 c[2] + 83 023 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 334 609 c[1] - 263 894 c[2] + 83 023 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 336 545 c[1] - 264 246 c[2] + 83 039 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 336 193 c[1] - 264 214 c[2] + 83 039 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 335 841 c[1] - 264 182 c[2] + 83 039 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 337 425 c[1] - 264 502 c[2] + 83 055 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 338 657 c[1] - 264 790 c[2] + 83 071 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 321 849 c[1] - 260 446 c[2] + 82 727 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7],

```

$323\,433\,c[1] - 260\,766\,c[2] + 82\,743\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $325\,017\,c[1] - 261\,086\,c[2] + 82\,759\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $324\,665\,c[1] - 261\,054\,c[2] + 82\,759\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $326\,601\,c[1] - 261\,406\,c[2] + 82\,775\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $326\,249\,c[1] - 261\,374\,c[2] + 82\,775\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $328\,185\,c[1] - 261\,726\,c[2] + 82\,791\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $327\,833\,c[1] - 261\,694\,c[2] + 82\,791\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $327\,481\,c[1] - 261\,662\,c[2] + 82\,791\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $329\,769\,c[1] - 262\,046\,c[2] + 82\,807\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $329\,417\,c[1] - 262\,014\,c[2] + 82\,807\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $329\,065\,c[1] - 261\,982\,c[2] + 82\,807\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $331\,001\,c[1] - 262\,334\,c[2] + 82\,823\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $330\,649\,c[1] - 262\,302\,c[2] + 82\,823\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $330\,297\,c[1] - 262\,270\,c[2] + 82\,823\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $332\,233\,c[1] - 262\,622\,c[2] + 82\,839\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $331\,881\,c[1] - 262\,590\,c[2] + 82\,839\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $316\,305\,c[1] - 258\,534\,c[2] + 82\,511\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $317\,889\,c[1] - 258\,854\,c[2] + 82\,527\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $319\,473\,c[1] - 259\,174\,c[2] + 82\,543\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $319\,121\,c[1] - 259\,142\,c[2] + 82\,543\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $321\,057\,c[1] - 259\,494\,c[2] + 82\,559\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $320\,705\,c[1] - 259\,462\,c[2] + 82\,559\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $322\,641\,c[1] - 259\,814\,c[2] + 82\,575\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $322\,289\,c[1] - 259\,782\,c[2] + 82\,575\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $321\,937\,c[1] - 259\,750\,c[2] + 82\,575\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $324\,225\,c[1] - 260\,134\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $323\,873\,c[1] - 260\,102\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $323\,521\,c[1] - 260\,070\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $323\,169\,c[1] - 260\,038\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $325\,809\,c[1] - 260\,454\,c[2] + 82\,607\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $325\,457\,c[1] - 260\,422\,c[2] + 82\,607\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $325\,105\,c[1] - 260\,390\,c[2] + 82\,607\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $327\,041\,c[1] - 260\,742\,c[2] + 82\,623\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $310\,761\,c[1] - 256\,622\,c[2] + 82\,295\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $312\,345\,c[1] - 256\,942\,c[2] + 82\,311\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $311\,993\,c[1] - 256\,910\,c[2] + 82\,311\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $313\,929\,c[1] - 257\,262\,c[2] + 82\,327\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $313\,577\,c[1] - 257\,230\,c[2] + 82\,327\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $315\,513\,c[1] - 257\,582\,c[2] + 82\,343\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $315\,161\,c[1] - 257\,550\,c[2] + 82\,343\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $314\,809\,c[1] - 257\,518\,c[2] + 82\,343\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $317\,097\,c[1] - 257\,902\,c[2] + 82\,359\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $316\,745\,c[1] - 257\,870\,c[2] + 82\,359\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $316\,393\,c[1] - 257\,838\,c[2] + 82\,359\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $318\,681\,c[1] - 258\,222\,c[2] + 82\,375\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $318\,329\,c[1] - 258\,190\,c[2] + 82\,375\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $320\,265\,c[1] - 258\,542\,c[2] + 82\,391\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$


```

319 913 c[1] - 258 510 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
303 633 c[1] - 254 390 c[2] + 82 063 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
305 217 c[1] - 254 710 c[2] + 82 079 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
306 801 c[1] - 255 030 c[2] + 82 095 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
306 449 c[1] - 254 998 c[2] + 82 095 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
308 385 c[1] - 255 350 c[2] + 82 111 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
308 033 c[1] - 255 318 c[2] + 82 111 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
309 969 c[1] - 255 670 c[2] + 82 127 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
309 617 c[1] - 255 638 c[2] + 82 127 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
309 265 c[1] - 255 606 c[2] + 82 127 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
311 553 c[1] - 255 990 c[2] + 82 143 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
311 201 c[1] - 255 958 c[2] + 82 143 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
313 137 c[1] - 256 310 c[2] + 82 159 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
298 089 c[1] - 252 478 c[2] + 81 847 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
299 673 c[1] - 252 798 c[2] + 81 863 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
299 321 c[1] - 252 766 c[2] + 81 863 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
301 257 c[1] - 253 118 c[2] + 81 879 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
300 905 c[1] - 253 086 c[2] + 81 879 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
302 841 c[1] - 253 438 c[2] + 81 895 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
302 489 c[1] - 253 406 c[2] + 81 895 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
304 425 c[1] - 253 758 c[2] + 81 911 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
290 961 c[1] - 250 246 c[2] + 81 615 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
292 545 c[1] - 250 566 c[2] + 81 631 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
294 129 c[1] - 250 886 c[2] + 81 647 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
293 777 c[1] - 250 854 c[2] + 81 647 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
295 713 c[1] - 251 206 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
285 417 c[1] - 248 334 c[2] + 81 399 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
287 001 c[1] - 248 654 c[2] + 81 415 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
278 289 c[1] - 246 102 c[2] + 81 167 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7] }

```

Array[c, 7].g

```

16 498 025 c[1] - 12 954 222 c[2] + 4 069 495 c[3] -
657 980 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[16 498 025 c[1] - 12 954 222 c[2] + 4 069 495 c[3] -
657 980 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7] < 0 &&
331 793 c[1] - 263 286 c[2] + 82 991 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 333 025 c[1] - 263 574 c[2] + 83 007 c[3] - 13 428 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 341 737 c[1] - 266 126 c[2] +
83 255 c[3] - 13 436 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
333 729 c[1] - 263 638 c[2] + 83 007 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 333 377 c[1] - 263 606 c[2] + 83 007 c[3] - 13 428 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 335 313 c[1] - 263 958 c[2] +
83 023 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
334 961 c[1] - 263 926 c[2] + 83 023 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 334 609 c[1] - 263 894 c[2] + 83 023 c[3] - 13 428 c[4] +

```

$$\begin{aligned}
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 336\,545\,c[1] - 264\,246\,c[2] + \\
& 83\,039\,c[3] - 13\,428\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 336\,193\,c[1] - 264\,214\,c[2] + 83\,039\,c[3] - 13\,428\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 335\,841\,c[1] - 264\,182\,c[2] + 83\,039\,c[3] - 13\,428\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 337\,425\,c[1] - 264\,502\,c[2] + \\
& 83\,055\,c[3] - 13\,428\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 338\,657\,c[1] - 264\,790\,c[2] + 83\,071\,c[3] - 13\,428\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 321\,849\,c[1] - 260\,446\,c[2] + 82\,727\,c[3] - 13\,420\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 323\,433\,c[1] - 260\,766\,c[2] + \\
& 82\,743\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 325\,017\,c[1] - 261\,086\,c[2] + 82\,759\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 324\,665\,c[1] - 261\,054\,c[2] + 82\,759\,c[3] - 13\,420\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 326\,601\,c[1] - 261\,406\,c[2] + \\
& 82\,775\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 326\,249\,c[1] - 261\,374\,c[2] + 82\,775\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 328\,185\,c[1] - 261\,726\,c[2] + 82\,791\,c[3] - 13\,420\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 327\,833\,c[1] - 261\,694\,c[2] + \\
& 82\,791\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 327\,481\,c[1] - 261\,662\,c[2] + 82\,791\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 329\,769\,c[1] - 262\,046\,c[2] + 82\,807\,c[3] - 13\,420\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 329\,417\,c[1] - 262\,014\,c[2] + \\
& 82\,807\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 329\,065\,c[1] - 261\,982\,c[2] + 82\,807\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 331\,001\,c[1] - 262\,334\,c[2] + 82\,823\,c[3] - 13\,420\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 330\,649\,c[1] - 262\,302\,c[2] + \\
& 82\,823\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 330\,297\,c[1] - 262\,270\,c[2] + 82\,823\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 332\,233\,c[1] - 262\,622\,c[2] + 82\,839\,c[3] - 13\,420\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 331\,881\,c[1] - 262\,590\,c[2] + \\
& 82\,839\,c[3] - 13\,420\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 316\,305\,c[1] - 258\,534\,c[2] + 82\,511\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 317\,889\,c[1] - 258\,854\,c[2] + 82\,527\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 319\,473\,c[1] - 259\,174\,c[2] + \\
& 82\,543\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 319\,121\,c[1] - 259\,142\,c[2] + 82\,543\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 321\,057\,c[1] - 259\,494\,c[2] + 82\,559\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 320\,705\,c[1] - 259\,462\,c[2] + \\
& 82\,559\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 322\,641\,c[1] - 259\,814\,c[2] + 82\,575\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 322\,289\,c[1] - 259\,782\,c[2] + 82\,575\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 321\,937\,c[1] - 259\,750\,c[2] + \\
& 82\,575\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 324\,225\,c[1] - 260\,134\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 323\,873\,c[1] - 260\,102\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 323\,521\,c[1] - 260\,070\,c[2] + \\
& 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 323\,169\,c[1] - 260\,038\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq
\end{aligned}$$

$$\begin{aligned}
& 0 \&\& 325\,809\,c[1] - 260\,454\,c[2] + 82\,607\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 325\,457\,c[1] - 260\,422\,c[2] + \\
& 82\,607\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 325\,105\,c[1] - 260\,390\,c[2] + 82\,607\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 327\,041\,c[1] - 260\,742\,c[2] + 82\,623\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 310\,761\,c[1] - 256\,622\,c[2] + \\
& 82\,295\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 312\,345\,c[1] - 256\,942\,c[2] + 82\,311\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 311\,993\,c[1] - 256\,910\,c[2] + 82\,311\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 313\,929\,c[1] - 257\,262\,c[2] + \\
& 82\,327\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 313\,577\,c[1] - 257\,230\,c[2] + 82\,327\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 315\,513\,c[1] - 257\,582\,c[2] + 82\,343\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 315\,161\,c[1] - 257\,550\,c[2] + \\
& 82\,343\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 314\,809\,c[1] - 257\,518\,c[2] + 82\,343\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 317\,097\,c[1] - 257\,902\,c[2] + 82\,359\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 316\,745\,c[1] - 257\,870\,c[2] + \\
& 82\,359\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 316\,393\,c[1] - 257\,838\,c[2] + 82\,359\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 318\,681\,c[1] - 258\,222\,c[2] + 82\,375\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 318\,329\,c[1] - 258\,190\,c[2] + \\
& 82\,375\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 320\,265\,c[1] - 258\,542\,c[2] + 82\,391\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 319\,913\,c[1] - 258\,510\,c[2] + 82\,391\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 303\,633\,c[1] - 254\,390\,c[2] + \\
& 82\,063\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 305\,217\,c[1] - 254\,710\,c[2] + 82\,079\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 306\,801\,c[1] - 255\,030\,c[2] + 82\,095\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 306\,449\,c[1] - 254\,998\,c[2] + \\
& 82\,095\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 308\,385\,c[1] - 255\,350\,c[2] + 82\,111\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 308\,033\,c[1] - 255\,318\,c[2] + 82\,111\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 309\,969\,c[1] - 255\,670\,c[2] + \\
& 82\,127\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 309\,617\,c[1] - 255\,638\,c[2] + 82\,127\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 309\,265\,c[1] - 255\,606\,c[2] + 82\,127\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 311\,553\,c[1] - 255\,990\,c[2] + \\
& 82\,143\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 311\,201\,c[1] - 255\,958\,c[2] + 82\,143\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 313\,137\,c[1] - 256\,310\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 298\,089\,c[1] - 252\,478\,c[2] + \\
& 81\,847\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 299\,673\,c[1] - 252\,798\,c[2] + 81\,863\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 299\,321\,c[1] - 252\,766\,c[2] + 81\,863\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 301\,257\,c[1] - 253\,118\,c[2] + \\
& 81\,879\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\&
\end{aligned}$$

```

300 905 c[1] - 253 086 c[2] + 81 879 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 302 841 c[1] - 253 438 c[2] + 81 895 c[3] - 13 388 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 302 489 c[1] - 253 406 c[2] +
81 895 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
304 425 c[1] - 253 758 c[2] + 81 911 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 290 961 c[1] - 250 246 c[2] + 81 615 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 292 545 c[1] - 250 566 c[2] +
81 631 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
294 129 c[1] - 250 886 c[2] + 81 647 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 293 777 c[1] - 250 854 c[2] + 81 647 c[3] -
13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
295 713 c[1] - 251 206 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 285 417 c[1] - 248 334 c[2] + 81 399 c[3] -
13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
287 001 c[1] - 248 654 c[2] + 81 415 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 278 289 c[1] - 246 102 c[2] + 81 167 c[3] - 13 364 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{66 876, 735 633, 8 091 966, 89 011 625, 0, 0, 695 180 798 312}

GCD[66 876, 735 633, 8 091 966, 89 011 625, 0, 0, 695 180 798 312]
1

Reverse[cert]
{695 180 798 312, 0, 0, 89 011 625, 8 091 966, 735 633, 66 876}

cert.g
-25 995 668

{66 876, 735 633, 8 091 966, 89 011 625, 0, 0, 695 180 798 312}.gpart[listdim17[[59]]]
-25 995 668

cert.Transpose[A]
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164 844, 165 420, 165 324, 165 228, 165 900, 165 804, 165 708, 166 284, 166 188,
166 092, 166 668, 166 572, 161 596, 162 076, 162 556, 162 460, 163 036, 162 940,
163 516, 163 420, 163 324, 163 996, 163 900, 163 804, 163 708, 164 476, 164 380,
164 284, 164 860, 159 692, 160 172, 160 076, 160 652, 160 556, 161 132, 161 036,
160 940, 161 612, 161 516, 161 420, 162 092, 161 996, 162 572, 162 476, 157 308,
157 788, 158 268, 158 172, 158 748, 158 652, 159 228, 159 132, 159 036, 159 708,
159 612, 160 188, 155 404, 155 884, 155 788, 156 364, 156 268, 156 844, 156 748,
157 324, 153 020, 153 500, 153 980, 153 884, 154 460, 151 116, 151 596, 148 732}

```

```
chi = listdim17[[60]]
```

$$(-11 + x) (-9 + x)^{11} (5 + x)^{32} (-80708 + 44091x - 9402x^2 + 980x^3 - 50x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

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 231067 c[5] - 1182363 c[6] + 3273011 c[7] - 3770899 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] + 231067 c[5] - 1182331 c[6] +
 3272371 c[7] - 3767731 c[8], c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +
 230699 c[5] - 1176155 c[6] + 3227427 c[7] - 3647835 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230699 c[5] - 1176123 c[6] +

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$3\,226\,723\,c[7] - 3\,644\,091\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
 $230\,715\,c[5] - 1\,176\,683\,c[6] + 3\,233\,107\,c[7] - 3\,667\,851\,c[8],$
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 $3\,232\,467\,c[7] - 3\,664\,683\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
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 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,731\,c[5] - 1\,177\,211\,c[6] +$
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 $230\,363\,c[5] - 1\,170\,875\,c[6] + 3\,190\,643\,c[7] - 3\,552\,003\,c[8],$

$c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230379 c[5] - 1171467 c[6] +$
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 $3196323 c[7] - 3572019 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230379 c[5] - 1171403 c[6] + 3196387 c[7] - 3572595 c[8],$
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 $3201363 c[7] - 3588739 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230395 c[5] - 1171899 c[6] + 3201427 c[7] - 3589443 c[8],$
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 $3207171 c[7] - 3610035 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
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 $3205187 c[7] - 3599827 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
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 $3204611 c[7] - 3597363 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
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 $230427 c[5] - 1172859 c[6] + 3210931 c[7] - 3620419 c[8],$
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 $3210995 c[7] - 3621123 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
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 $3216739 c[7] - 3641715 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$
 $230443 c[5] - 1173355 c[6] + 3216099 c[7] - 3638547 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230443 c[5] - 1173323 c[6] +$
 $3215395 c[7] - 3634675 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +$

$$\begin{aligned}
& 230\,443\,c[5] - 1\,173\,323\,c[6] + 3\,215\,459\,c[7] - 3\,635\,379\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,291\,c[6] + \\
& \quad 3\,214\,755\,c[7] - 3\,631\,507\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,851\,c[6] + 3\,221\,203\,c[7] - 3\,655\,971\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,819\,c[6] + \\
& \quad 3\,220\,499\,c[7] - 3\,652\,099\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,819\,c[6] + 3\,220\,563\,c[7] - 3\,652\,803\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,011\,c[5] - 1\,165\,195\,c[6] + \\
& \quad 3\,150\,675\,c[7] - 3\,448\,251\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,027\,c[5] - 1\,165\,723\,c[6] + 3\,156\,355\,c[7] - 3\,468\,267\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,027\,c[5] - 1\,165\,691\,c[6] + \\
& \quad 3\,155\,715\,c[7] - 3\,465\,099\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,027\,c[5] - 1\,165\,659\,c[6] + 3\,155\,139\,c[7] - 3\,462\,507\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,219\,c[6] + \\
& \quad 3\,161\,459\,c[7] - 3\,485\,691\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,043\,c[5] - 1\,166\,187\,c[6] + 3\,160\,819\,c[7] - 3\,482\,523\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,155\,c[6] + \\
& \quad 3\,160\,179\,c[7] - 3\,479\,355\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,043\,c[5] - 1\,166\,155\,c[6] + 3\,160\,243\,c[7] - 3\,479\,931\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,123\,c[6] + \\
& \quad 3\,159\,539\,c[7] - 3\,476\,187\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,043\,c[5] - 1\,166\,123\,c[6] + 3\,159\,603\,c[7] - 3\,476\,763\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,683\,c[6] + \\
& \quad 3\,165\,923\,c[7] - 3\,499\,947\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,059\,c[5] - 1\,166\,651\,c[6] + 3\,165\,283\,c[7] - 3\,496\,779\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,619\,c[6] + \\
& \quad 3\,164\,643\,c[7] - 3\,493\,611\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,059\,c[5] - 1\,166\,619\,c[6] + 3\,164\,707\,c[7] - 3\,494\,187\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,587\,c[6] + \\
& \quad 3\,164\,003\,c[7] - 3\,490\,443\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,075\,c[5] - 1\,167\,147\,c[6] + 3\,170\,387\,c[7] - 3\,514\,203\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,115\,c[6] + \\
& \quad 3\,169\,747\,c[7] - 3\,511\,035\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,075\,c[5] - 1\,167\,115\,c[6] + 3\,169\,811\,c[7] - 3\,511\,611\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,083\,c[6] + \\
& \quad 3\,169\,107\,c[7] - 3\,507\,867\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,075\,c[5] - 1\,167\,051\,c[6] + 3\,168\,467\,c[7] - 3\,504\,699\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,643\,c[6] + \\
& \quad 3\,175\,491\,c[7] - 3\,531\,627\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,091\,c[5] - 1\,167\,611\,c[6] + 3\,174\,851\,c[7] - 3\,528\,459\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,579\,c[6] + \\
& \quad 3\,174\,147\,c[7] - 3\,524\,587\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,091\,c[5] - 1\,167\,579\,c[6] + 3\,174\,211\,c[7] - 3\,525\,291\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,547\,c[6] + \\
& \quad 3\,173\,571\,c[7] - 3\,522\,123\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,168\,107\,c[6] + 3\,179\,955\,c[7] - 3\,545\,883\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,075\,c[6] +
\end{aligned}$$

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 $3\,185\,059\,c[7] - 3\,563\,307\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,123\,c[5] - 1\,168\,571\,c[6] + 3\,184\,419\,c[7] - 3\,560\,139\,c[8],$
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 $3\,183\,715\,c[7] - 3\,556\,267\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,139\,c[5] - 1\,169\,067\,c[6] + 3\,189\,523\,c[7] - 3\,577\,563\,c[8],$
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 $3\,194\,627\,c[7] - 3\,594\,987\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
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 $3\,124\,035\,c[7] - 3\,386\,691\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,723\,c[5] - 1\,161\,403\,c[6] + 3\,129\,139\,c[7] - 3\,404\,115\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,723\,c[5] - 1\,161\,371\,c[6] +$
 $3\,128\,499\,c[7] - 3\,400\,947\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,723\,c[5] - 1\,161\,339\,c[6] + 3\,127\,923\,c[7] - 3\,398\,355\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,899\,c[6] +$
 $3\,134\,243\,c[7] - 3\,421\,539\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,739\,c[5] - 1\,161\,867\,c[6] + 3\,133\,603\,c[7] - 3\,418\,371\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,835\,c[6] +$
 $3\,132\,963\,c[7] - 3\,415\,203\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,739\,c[5] - 1\,161\,803\,c[6] + 3\,132\,323\,c[7] - 3\,412\,035\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,363\,c[6] +$
 $3\,138\,707\,c[7] - 3\,435\,795\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,755\,c[5] - 1\,162\,331\,c[6] + 3\,138\,067\,c[7] - 3\,432\,627\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,299\,c[6] +$
 $3\,137\,427\,c[7] - 3\,429\,459\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,755\,c[5] - 1\,162\,267\,c[6] + 3\,136\,787\,c[7] - 3\,426\,291\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,859\,c[6] +$
 $3\,143\,811\,c[7] - 3\,453\,219\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,771\,c[5] - 1\,162\,827\,c[6] + 3\,143\,171\,c[7] - 3\,450\,051\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,795\,c[6] +$
 $3\,142\,467\,c[7] - 3\,446\,179\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,771\,c[5] - 1\,162\,795\,c[6] + 3\,142\,531\,c[7] - 3\,446\,883\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,763\,c[6] +$
 $3\,141\,891\,c[7] - 3\,443\,715\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,787\,c[5] - 1\,163\,323\,c[6] + 3\,148\,275\,c[7] - 3\,467\,475\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,291\,c[6] +$
 $3\,147\,635\,c[7] - 3\,464\,307\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,787\,c[5] - 1\,163\,259\,c[6] + 3\,146\,931\,c[7] - 3\,460\,435\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,819\,c[6] +$
 $3\,153\,379\,c[7] - 3\,484\,899\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,803\,c[5] - 1\,163\,787\,c[6] + 3\,152\,739\,c[7] - 3\,481\,731\,c[8],$

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c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 803 c[5] - 1 163 755 c[6] +
  3 152 035 c[7] - 3 477 859 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
  229 819 c[5] - 1 164 283 c[6] + 3 157 843 c[7] - 3 499 155 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 387 c[5] - 1 156 155 c[6] +
  3 092 995 c[7] - 3 311 451 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 403 c[5] - 1 156 619 c[6] + 3 097 459 c[7] - 3 325 707 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 403 c[5] - 1 156 587 c[6] +
  3 096 819 c[7] - 3 322 539 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 419 c[5] - 1 157 083 c[6] + 3 101 923 c[7] - 3 339 963 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 419 c[5] - 1 157 051 c[6] +
  3 101 283 c[7] - 3 336 795 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 435 c[5] - 1 157 579 c[6] + 3 107 027 c[7] - 3 357 387 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 435 c[5] - 1 157 547 c[6] +
  3 106 387 c[7] - 3 354 219 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 435 c[5] - 1 157 515 c[6] + 3 105 747 c[7] - 3 351 051 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 451 c[5] - 1 158 043 c[6] +
  3 111 491 c[7] - 3 371 643 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 451 c[5] - 1 158 011 c[6] + 3 110 851 c[7] - 3 368 475 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 467 c[5] - 1 158 539 c[6] +
  3 116 595 c[7] - 3 389 067 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 467 c[5] - 1 158 507 c[6] + 3 115 955 c[7] - 3 385 899 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 467 c[5] - 1 158 475 c[6] +
  3 115 251 c[7] - 3 382 027 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 483 c[5] - 1 159 003 c[6] + 3 121 059 c[7] - 3 403 323 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 083 c[5] - 1 151 835 c[6] +
  3 065 779 c[7] - 3 247 299 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 099 c[5] - 1 152 299 c[6] + 3 070 243 c[7] - 3 261 555 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 115 c[5] - 1 152 795 c[6] +
  3 075 347 c[7] - 3 278 979 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 115 c[5] - 1 152 763 c[6] + 3 074 707 c[7] - 3 275 811 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 115 c[5] - 1 152 731 c[6] +
  3 074 067 c[7] - 3 272 643 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 131 c[5] - 1 153 259 c[6] + 3 079 811 c[7] - 3 293 235 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 227 c[6] +
  3 079 171 c[7] - 3 290 067 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 147 c[5] - 1 153 755 c[6] + 3 084 915 c[7] - 3 310 659 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 763 c[5] - 1 147 051 c[6] +
  3 034 099 c[7] - 3 168 891 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
  228 779 c[5] - 1 147 515 c[6] + 3 038 563 c[7] - 3 183 147 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 795 c[5] - 1 147 979 c[6] +
  3 043 027 c[7] - 3 197 403 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
  228 811 c[5] - 1 148 475 c[6] + 3 048 131 c[7] - 3 214 827 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 475 c[5] - 1 143 195 c[6] +
  3 011 347 c[7] - 3 118 995 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
  228 491 c[5] - 1 143 691 c[6] + 3 016 451 c[7] - 3 136 419 c[8] }

```

Array[c, 8].g

$49 c[1] - 3185 c[2] + 87073 c[3] - 1295617 c[4] +$
 $11307275 c[5] - 57717259 c[6] + 158971747 c[7] - 181397699 c[8]$

cert =

Flatten[Array[c, 8] /. FindInstance[$49 c[1] - 3185 c[2] + 87073 c[3] - 1295617 c[4] +$
 $11307275 c[5] - 57717259 c[6] + 158971747 c[7] - 181397699 c[8] < 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] + 231035 c[5] - 1181339 c[6] +$
 $3262227 c[7] - 3733587 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] +$
 $231051 c[5] - 1181867 c[6] + 3267907 c[7] - 3753475 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] + 231051 c[5] - 1181867 c[6] +$
 $3267971 c[7] - 3754179 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] +$
 $231051 c[5] - 1181835 c[6] + 3267331 c[7] - 3751011 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] + 231067 c[5] - 1182363 c[6] +$
 $3273011 c[7] - 3770899 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26449 c[4] +$
 $231067 c[5] - 1182331 c[6] + 3272371 c[7] - 3767731 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230699 c[5] - 1176155 c[6] +$
 $3227427 c[7] - 3647835 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230699 c[5] - 1176123 c[6] + 3226723 c[7] - 3644091 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230715 c[5] - 1176683 c[6] +$
 $3233107 c[7] - 3667851 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230715 c[5] - 1176683 c[6] + 3233171 c[7] - 3668427 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230715 c[5] - 1176651 c[6] +$
 $3232403 c[7] - 3663979 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230715 c[5] - 1176651 c[6] + 3232467 c[7] - 3664683 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230715 c[5] - 1176651 c[6] +$
 $3232531 c[7] - 3665259 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230715 c[5] - 1176619 c[6] + 3231827 c[7] - 3661515 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230715 c[5] - 1176587 c[6] +$
 $3231187 c[7] - 3658347 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230731 c[5] - 1177211 c[6] + 3238851 c[7] - 3688443 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230731 c[5] - 1177179 c[6] +$
 $3238211 c[7] - 3685275 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230731 c[5] - 1177179 c[6] + 3238275 c[7] - 3685851 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230731 c[5] - 1177147 c[6] +$
 $3237507 c[7] - 3681403 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230731 c[5] - 1177147 c[6] + 3237571 c[7] - 3682107 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230731 c[5] - 1177115 c[6] +$
 $3236867 c[7] - 3678235 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230731 c[5] - 1177115 c[6] + 3236931 c[7] - 3678939 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230731 c[5] - 1177083 c[6] +$
 $3236291 c[7] - 3675771 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230747 c[5] - 1177675 c[6] + 3243315 c[7] - 3702699 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230747 c[5] - 1177643 c[6] +$
 $3242611 c[7] - 3698827 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$
 $230747 c[5] - 1177643 c[6] + 3242675 c[7] - 3699531 c[8] \geq 0 \&\&$
 $c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230747 c[5] - 1177611 c[6] +$
 $3241971 c[7] - 3695659 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +$

$$\begin{aligned}
& 230\,747\,c[5] - 1\,177\,611\,c[6] + 3\,242\,035\,c[7] - 3\,696\,363\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,747\,c[5] - 1\,177\,579\,c[6] + \\
& \quad 3\,241\,331\,c[7] - 3\,692\,491\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,747\,c[5] - 1\,177\,579\,c[6] + 3\,241\,395\,c[7] - 3\,693\,195\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,763\,c[5] - 1\,178\,107\,c[6] + \\
& \quad 3\,247\,075\,c[7] - 3\,713\,083\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,763\,c[5] - 1\,178\,075\,c[6] + 3\,246\,435\,c[7] - 3\,709\,915\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,779\,c[5] - 1\,178\,539\,c[6] + \\
& \quad 3\,250\,835\,c[7] - 3\,723\,467\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,347\,c[5] - 1\,170\,411\,c[6] + 3\,186\,179\,c[7] - 3\,537\,747\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,363\,c[5] - 1\,170\,939\,c[6] + \\
& \quad 3\,191\,859\,c[7] - 3\,557\,763\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,363\,c[5] - 1\,170\,939\,c[6] + 3\,191\,923\,c[7] - 3\,558\,339\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,363\,c[5] - 1\,170\,907\,c[6] + \\
& \quad 3\,191\,219\,c[7] - 3\,554\,595\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,363\,c[5] - 1\,170\,907\,c[6] + 3\,191\,283\,c[7] - 3\,555\,171\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,363\,c[5] - 1\,170\,875\,c[6] + \\
& \quad 3\,190\,643\,c[7] - 3\,552\,003\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,379\,c[5] - 1\,171\,467\,c[6] + 3\,197\,603\,c[7] - 3\,578\,355\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,435\,c[6] + \\
& \quad 3\,196\,963\,c[7] - 3\,575\,187\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,379\,c[5] - 1\,171\,403\,c[6] + 3\,196\,323\,c[7] - 3\,572\,019\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,403\,c[6] + \\
& \quad 3\,196\,387\,c[7] - 3\,572\,595\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,379\,c[5] - 1\,171\,371\,c[6] + 3\,195\,683\,c[7] - 3\,568\,851\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,379\,c[5] - 1\,171\,339\,c[6] + \\
& \quad 3\,195\,043\,c[7] - 3\,565\,683\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,963\,c[6] + 3\,202\,707\,c[7] - 3\,595\,779\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,931\,c[6] + \\
& \quad 3\,202\,067\,c[7] - 3\,592\,611\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,899\,c[6] + 3\,201\,363\,c[7] - 3\,588\,739\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,899\,c[6] + \\
& \quad 3\,201\,427\,c[7] - 3\,589\,443\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,899\,c[6] + 3\,201\,491\,c[7] - 3\,590\,019\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,867\,c[6] + \\
& \quad 3\,200\,787\,c[7] - 3\,586\,275\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,395\,c[5] - 1\,171\,835\,c[6] + 3\,200\,147\,c[7] - 3\,583\,107\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,803\,c[6] + \\
& \quad 3\,199\,507\,c[7] - 3\,579\,939\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,427\,c[6] + 3\,207\,171\,c[7] - 3\,610\,035\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,395\,c[6] + \\
& \quad 3\,206\,531\,c[7] - 3\,606\,867\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,363\,c[6] + 3\,205\,827\,c[7] - 3\,602\,995\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,363\,c[6] + \\
& \quad 3\,205\,891\,c[7] - 3\,603\,699\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,331\,c[6] + 3\,205\,187\,c[7] - 3\,599\,827\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,331\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,205\,251\,c[7] - 3\,600\,531\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,411\,c[5] - 1\,172\,299\,c[6] + 3\,204\,611\,c[7] - 3\,597\,363\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,923\,c[6] + \\
& 3\,212\,275\,c[7] - 3\,627\,459\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,891\,c[6] + 3\,211\,635\,c[7] - 3\,624\,291\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,859\,c[6] + \\
& 3\,210\,931\,c[7] - 3\,620\,419\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,859\,c[6] + 3\,210\,995\,c[7] - 3\,621\,123\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,827\,c[6] + \\
& 3\,210\,291\,c[7] - 3\,617\,251\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,827\,c[6] + 3\,210\,355\,c[7] - 3\,617\,955\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,795\,c[6] + \\
& 3\,209\,651\,c[7] - 3\,614\,083\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,387\,c[6] + 3\,216\,739\,c[7] - 3\,641\,715\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,355\,c[6] + \\
& 3\,216\,099\,c[7] - 3\,638\,547\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,323\,c[6] + 3\,215\,395\,c[7] - 3\,634\,675\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,323\,c[6] + \\
& 3\,215\,459\,c[7] - 3\,635\,379\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,291\,c[6] + 3\,214\,755\,c[7] - 3\,631\,507\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,851\,c[6] + \\
& 3\,221\,203\,c[7] - 3\,655\,971\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,819\,c[6] + 3\,220\,499\,c[7] - 3\,652\,099\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,819\,c[6] + \\
& 3\,220\,563\,c[7] - 3\,652\,803\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,011\,c[5] - 1\,165\,195\,c[6] + 3\,150\,675\,c[7] - 3\,448\,251\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,027\,c[5] - 1\,165\,723\,c[6] + \\
& 3\,156\,355\,c[7] - 3\,468\,267\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,027\,c[5] - 1\,165\,691\,c[6] + 3\,155\,715\,c[7] - 3\,465\,099\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,027\,c[5] - 1\,165\,659\,c[6] + \\
& 3\,155\,139\,c[7] - 3\,462\,507\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,043\,c[5] - 1\,166\,219\,c[6] + 3\,161\,459\,c[7] - 3\,485\,691\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,187\,c[6] + \\
& 3\,160\,819\,c[7] - 3\,482\,523\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,043\,c[5] - 1\,166\,155\,c[6] + 3\,160\,179\,c[7] - 3\,479\,355\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,155\,c[6] + \\
& 3\,160\,243\,c[7] - 3\,479\,931\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,043\,c[5] - 1\,166\,123\,c[6] + 3\,159\,539\,c[7] - 3\,476\,187\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,123\,c[6] + \\
& 3\,159\,603\,c[7] - 3\,476\,763\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,059\,c[5] - 1\,166\,683\,c[6] + 3\,165\,923\,c[7] - 3\,499\,947\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,651\,c[6] + \\
& 3\,165\,283\,c[7] - 3\,496\,779\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,059\,c[5] - 1\,166\,619\,c[6] + 3\,164\,643\,c[7] - 3\,493\,611\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,619\,c[6] + \\
& 3\,164\,707\,c[7] - 3\,494\,187\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,059\,c[5] - 1\,166\,587\,c[6] + 3\,164\,003\,c[7] - 3\,490\,443\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230075 c[5] - 1167147 c[6] + \\
& \quad 3170387 c[7] - 3514203 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230075 c[5] - 1167115 c[6] + 3169747 c[7] - 3511035 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230075 c[5] - 1167115 c[6] + \\
& \quad 3169811 c[7] - 3511611 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230075 c[5] - 1167083 c[6] + 3169107 c[7] - 3507867 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230075 c[5] - 1167051 c[6] + \\
& \quad 3168467 c[7] - 3504699 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167643 c[6] + 3175491 c[7] - 3531627 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167611 c[6] + \\
& \quad 3174851 c[7] - 3528459 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167579 c[6] + 3174147 c[7] - 3524587 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167579 c[6] + \\
& \quad 3174211 c[7] - 3525291 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167547 c[6] + 3173571 c[7] - 3522123 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168107 c[6] + \\
& \quad 3179955 c[7] - 3545883 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1168075 c[6] + 3179315 c[7] - 3542715 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168043 c[6] + \\
& \quad 3178611 c[7] - 3538843 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1168043 c[6] + 3178675 c[7] - 3539547 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168011 c[6] + \\
& \quad 3177971 c[7] - 3535675 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168603 c[6] + 3185059 c[7] - 3563307 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168571 c[6] + \\
& \quad 3184419 c[7] - 3560139 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168539 c[6] + 3183715 c[7] - 3556267 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1169067 c[6] + \\
& \quad 3189523 c[7] - 3577563 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169563 c[6] + 3194627 c[7] - 3594987 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229707 c[5] - 1160939 c[6] + \\
& \quad 3124675 c[7] - 3389859 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229707 c[5] - 1160907 c[6] + 3124035 c[7] - 3386691 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229723 c[5] - 1161403 c[6] + \\
& \quad 3129139 c[7] - 3404115 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229723 c[5] - 1161371 c[6] + 3128499 c[7] - 3400947 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229723 c[5] - 1161339 c[6] + \\
& \quad 3127923 c[7] - 3398355 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229739 c[5] - 1161899 c[6] + 3134243 c[7] - 3421539 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229739 c[5] - 1161867 c[6] + \\
& \quad 3133603 c[7] - 3418371 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229739 c[5] - 1161835 c[6] + 3132963 c[7] - 3415203 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229739 c[5] - 1161803 c[6] + \\
& \quad 3132323 c[7] - 3412035 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229755 c[5] - 1162363 c[6] + 3138707 c[7] - 3435795 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229755 c[5] - 1162331 c[6] + \\
& \quad 3138067 c[7] - 3432627 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 229\,755\,c[5] - 1\,162\,299\,c[6] + 3\,137\,427\,c[7] - 3\,429\,459\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,267\,c[6] + \\
& \quad 3\,136\,787\,c[7] - 3\,426\,291\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,859\,c[6] + 3\,143\,811\,c[7] - 3\,453\,219\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,827\,c[6] + \\
& \quad 3\,143\,171\,c[7] - 3\,450\,051\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,795\,c[6] + 3\,142\,467\,c[7] - 3\,446\,179\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,795\,c[6] + \\
& \quad 3\,142\,531\,c[7] - 3\,446\,883\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,763\,c[6] + 3\,141\,891\,c[7] - 3\,443\,715\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,323\,c[6] + \\
& \quad 3\,148\,275\,c[7] - 3\,467\,475\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,291\,c[6] + 3\,147\,635\,c[7] - 3\,464\,307\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,259\,c[6] + \\
& \quad 3\,146\,931\,c[7] - 3\,460\,435\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,819\,c[6] + 3\,153\,379\,c[7] - 3\,484\,899\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,787\,c[6] + \\
& \quad 3\,152\,739\,c[7] - 3\,481\,731\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,035\,c[7] - 3\,477\,859\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,283\,c[6] + \\
& \quad 3\,157\,843\,c[7] - 3\,499\,155\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,387\,c[5] - 1\,156\,155\,c[6] + 3\,092\,995\,c[7] - 3\,311\,451\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,403\,c[5] - 1\,156\,619\,c[6] + \\
& \quad 3\,097\,459\,c[7] - 3\,325\,707\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,403\,c[5] - 1\,156\,587\,c[6] + 3\,096\,819\,c[7] - 3\,322\,539\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,419\,c[5] - 1\,157\,083\,c[6] + \\
& \quad 3\,101\,923\,c[7] - 3\,339\,963\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,419\,c[5] - 1\,157\,051\,c[6] + 3\,101\,283\,c[7] - 3\,336\,795\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,435\,c[5] - 1\,157\,579\,c[6] + \\
& \quad 3\,107\,027\,c[7] - 3\,357\,387\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,435\,c[5] - 1\,157\,547\,c[6] + 3\,106\,387\,c[7] - 3\,354\,219\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,435\,c[5] - 1\,157\,515\,c[6] + \\
& \quad 3\,105\,747\,c[7] - 3\,351\,051\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,451\,c[5] - 1\,158\,043\,c[6] + 3\,111\,491\,c[7] - 3\,371\,643\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,158\,011\,c[6] + \\
& \quad 3\,110\,851\,c[7] - 3\,368\,475\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,467\,c[5] - 1\,158\,539\,c[6] + 3\,116\,595\,c[7] - 3\,389\,067\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,507\,c[6] + \\
& \quad 3\,115\,955\,c[7] - 3\,385\,899\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,251\,c[7] - 3\,382\,027\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,159\,003\,c[6] + \\
& \quad 3\,121\,059\,c[7] - 3\,403\,323\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& \quad 229\,083\,c[5] - 1\,151\,835\,c[6] + 3\,065\,779\,c[7] - 3\,247\,299\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,099\,c[5] - 1\,152\,299\,c[6] + \\
& \quad 3\,070\,243\,c[7] - 3\,261\,555\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& \quad 229\,115\,c[5] - 1\,152\,795\,c[6] + 3\,075\,347\,c[7] - 3\,278\,979\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,115\,c[5] - 1\,152\,763\,c[6] +
\end{aligned}$$

```

3 074 707 c[7] - 3 275 811 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 115 c[5] - 1 152 731 c[6] + 3 074 067 c[7] - 3 272 643 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 259 c[6] +
3 079 811 c[7] - 3 293 235 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 131 c[5] - 1 153 227 c[6] + 3 079 171 c[7] - 3 290 067 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 755 c[6] +
3 084 915 c[7] - 3 310 659 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 763 c[5] - 1 147 051 c[6] + 3 034 099 c[7] - 3 168 891 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 779 c[5] - 1 147 515 c[6] +
3 038 563 c[7] - 3 183 147 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 795 c[5] - 1 147 979 c[6] + 3 043 027 c[7] - 3 197 403 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 811 c[5] - 1 148 475 c[6] +
3 048 131 c[7] - 3 214 827 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 475 c[5] - 1 143 195 c[6] + 3 011 347 c[7] - 3 118 995 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 491 c[5] - 1 143 691 c[6] +
3 016 451 c[7] - 3 136 419 c[8] ≥ 0, Array[c, 8], Integers]]

{0, 0, -83 458 849 775, -11 996 698 757,
-1 188 052 506, -118 190 915, -11 828 260, -1 191 996}

GCD[0, 0, -83 458 849 775, -11 996 698 757,
-1 188 052 506, -118 190 915, -11 828 260, -1 191 996]

1

cert.g

-144 842 687

{0, 0, -83 458 849 775, -11 996 698 757, -1 188 052 506,
-118 190 915, -11 828 260, -1 191 996}.Reverse[gpart[listdim17[[60]]]]

-144 842 687

```

cert.Transpose[A]

```
{87 619 825, 5 482 497, 87 639 041, 99 372 833, 17 235 505, 28 969 297, 5 375 433,
87 528 169, 75 813 593, 5 394 649, 5 390 841, 87 547 385, 17 128 441, 99 281 177,
111 014 969, 75 832 809, 87 566 601, 17 147 657, 17 143 849, 99 300 393, 28 877 641,
111 034 185, 122 767 977, 99 319 609, 28 896 857, 111 053 401, 40 630 649, 122 787 193,
52 364 441, 134 520 985, 52 383 657, 64 117 449, 5 447 705, 5 264 561, 75 702 721,
5 283 777, 87 436 513, 17 017 569, 28 751 361, 75 721 937, 87 455 729, 99 189 521,
28 770 577, 110 923 313, 122 657 105, 87 474 945, 99 208 737, 28 785 985, 110 942 529,
40 523 585, 122 676 321, 134 410 113, 146 143 905, 110 961 745, 122 695 537, 52 272 785,
134 429 329, 64 006 577, 146 163 121, 157 896 913, 122 714 753, 134 448 545,
64 025 793, 146 182 337, 75 759 585, 157 916 129, 87 493 377, 146 201 553, 157 935 345,
87 512 593, 169 669 137, 99 246 385, 169 688 353, 99 265 601, 181 422 145, 5 172 905,
75 611 065, 87 344 857, 28 659 705, 87 364 073, 99 097 865, 110 831 657, 40 412 713,
122 565 449, 52 146 505, 110 850 873, 122 584 665, 134 318 457, 63 899 513, 146 052 249,
134 337 673, 146 071 465, 75 652 521, 157 805 257, 169 539 049, 146 090 681,
157 824 473, 87 401 721, 169 558 265, 181 292 057, 169 577 481, 181 311 273,
110 888 521, 193 045 065, 122 622 313, 181 330 489, 193 064 281, 122 641 529,
204 817 289, 216 570 297, 110 740 001, 122 473 793, 134 226 801, 145 960 593, 87 275 441,
145 979 809, 157 713 601, 169 447 393, 181 181 185, 169 466 609, 181 200 401,
192 934 193, 204 667 985, 181 219 617, 192 953 409, 122 530 657, 204 687 201,
216 420 993, 204 706 417, 216 440 209, 146 017 457, 216 459 425, 228 193 217,
157 770 465, 239 946 225, 145 868 937, 169 355 737, 181 089 529, 192 842 537,
204 576 329, 204 595 545, 216 329 337, 228 063 129, 228 082 345, 239 816 137,
239 835 353, 251 569 145, 181 146 393, 263 322 153, 204 484 673, 227 971 473,
239 724 481, 251 458 273, 263 192 065, 263 211 281, 274 945 073, 274 964 289,
239 613 609, 263 100 409, 286 587 209, 298 340 217, 321 716 145, 333 469 153}
```

chi = listdim17[[61]]

$(-12 + x) (-11 + x) (-9 + x)^{13} (5 + x)^{32} (83 - 20x + x^2)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-46563, 30061, -7342, 850, -47, 1},
  {-46531, 30061, -7342, 850, -47, 1}, {-45211, 29853, -7334, 850, -47, 1},
  {-45419, 29869, -7334, 850, -47, 1}, {-45387, 29869, -7334, 850, -47, 1},
  {-45595, 29885, -7334, 850, -47, 1}, {-45771, 29901, -7334, 850, -47, 1},
  {-43651, 29629, -7326, 850, -47, 1}, {-43859, 29645, -7326, 850, -47, 1},
  {-44099, 29661, -7326, 850, -47, 1}, {-44067, 29661, -7326, 850, -47, 1},
  {-44035, 29661, -7326, 850, -47, 1}, {-44275, 29677, -7326, 850, -47, 1},
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  {-42891, 29469, -7318, 850, -47, 1}, {-43131, 29485, -7318, 850, -47, 1},
  {-43099, 29485, -7318, 850, -47, 1}, {-43307, 29501, -7318, 850, -47, 1},
  {-43275, 29501, -7318, 850, -47, 1}, {-43483, 29517, -7318, 850, -47, 1},
  {-43659, 29533, -7318, 850, -47, 1}, {-41635, 29261, -7310, 850, -47, 1},
  {-41603, 29261, -7310, 850, -47, 1}, {-41571, 29261, -7310, 850, -47, 1},
  {-41811, 29277, -7310, 850, -47, 1}, {-41779, 29277, -7310, 850, -47, 1},
  {-41747, 29277, -7310, 850, -47, 1}, {-41987, 29293, -7310, 850, -47, 1},
  {-41955, 29293, -7310, 850, -47, 1}, {-41923, 29293, -7310, 850, -47, 1},
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  {-42339, 29325, -7310, 850, -47, 1}, {-42307, 29325, -7310, 850, -47, 1},
  {-42515, 29341, -7310, 850, -47, 1}, {-42691, 29357, -7310, 850, -47, 1},
  {-40491, 29069, -7302, 850, -47, 1}, {-40667, 29085, -7302, 850, -47, 1},
  {-40635, 29085, -7302, 850, -47, 1}, {-40843, 29101, -7302, 850, -47, 1},
  {-40811, 29101, -7302, 850, -47, 1}, {-40779, 29101, -7302, 850, -47, 1},
  {-41019, 29117, -7302, 850, -47, 1}, {-40987, 29117, -7302, 850, -47, 1},
  {-41195, 29133, -7302, 850, -47, 1}, {-41163, 29133, -7302, 850, -47, 1},
  {-41371, 29149, -7302, 850, -47, 1}, {-41547, 29165, -7302, 850, -47, 1},
  {-39699, 28909, -7294, 850, -47, 1}, {-39875, 28925, -7294, 850, -47, 1},
  {-39843, 28925, -7294, 850, -47, 1}, {-40051, 28941, -7294, 850, -47, 1},
  {-40019, 28941, -7294, 850, -47, 1}, {-40227, 28957, -7294, 850, -47, 1},
  {-40195, 28957, -7294, 850, -47, 1}, {-40403, 28973, -7294, 850, -47, 1},
  {-40579, 28989, -7294, 850, -47, 1}, {-38907, 28749, -7286, 850, -47, 1},
  {-39083, 28765, -7286, 850, -47, 1}, {-39051, 28765, -7286, 850, -47, 1},
  {-39259, 28781, -7286, 850, -47, 1}, {-39435, 28797, -7286, 850, -47, 1},
  {-38115, 28589, -7278, 850, -47, 1}, {-38291, 28605, -7278, 850, -47, 1},
  {-38467, 28621, -7278, 850, -47, 1}, {-37323, 28429, -7270, 850, -47, 1}}
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A = {{-46563, 30061, -7342, 850, -47, 1},
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      {-45595, 29885, -7334, 850, -47, 1}, {-45771, 29901, -7334, 850, -47, 1},
      {-43651, 29629, -7326, 850, -47, 1}, {-43859, 29645, -7326, 850, -47, 1},
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      {-44035, 29661, -7326, 850, -47, 1}, {-44275, 29677, -7326, 850, -47, 1},
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      {-44419, 29693, -7326, 850, -47, 1}, {-44627, 29709, -7326, 850, -47, 1},
      {-44803, 29725, -7326, 850, -47, 1}, {-42507, 29437, -7318, 850, -47, 1},
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      {-43099, 29485, -7318, 850, -47, 1}, {-43307, 29501, -7318, 850, -47, 1},
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      {-43659, 29533, -7318, 850, -47, 1}, {-41635, 29261, -7310, 850, -47, 1},
      {-41603, 29261, -7310, 850, -47, 1}, {-41571, 29261, -7310, 850, -47, 1},
      {-41811, 29277, -7310, 850, -47, 1}, {-41779, 29277, -7310, 850, -47, 1},
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      {-42163, 29309, -7310, 850, -47, 1}, {-42131, 29309, -7310, 850, -47, 1},
      {-42339, 29325, -7310, 850, -47, 1}, {-42307, 29325, -7310, 850, -47, 1},
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      {-39259, 28781, -7286, 850, -47, 1}, {-39435, 28797, -7286, 850, -47, 1},
      {-38115, 28589, -7278, 850, -47, 1}, {-38291, 28605, -7278, 850, -47, 1},
      {-38467, 28621, -7278, 850, -47, 1}, {-37323, 28429, -7270, 850, -47, 1}}};

```

```
A // MatrixForm
```

```

( -46563 30061 -7342 850 -47 1
  -46531 30061 -7342 850 -47 1
  -45211 29853 -7334 850 -47 1
  -45419 29869 -7334 850 -47 1
  -45387 29869 -7334 850 -47 1
  -45595 29885 -7334 850 -47 1
  -45771 29901 -7334 850 -47 1
  -43651 29629 -7326 850 -47 1
  -43859 29645 -7326 850 -47 1
  -43859 29645 -7326 850 -47 1

```

-44 099	29 661	-7326	850	-47	1
-44 067	29 661	-7326	850	-47	1
-44 035	29 661	-7326	850	-47	1
-44 275	29 677	-7326	850	-47	1
-44 243	29 677	-7326	850	-47	1
-44 451	29 693	-7326	850	-47	1
-44 419	29 693	-7326	850	-47	1
-44 627	29 709	-7326	850	-47	1
-44 803	29 725	-7326	850	-47	1
-42 507	29 437	-7318	850	-47	1
-42 747	29 453	-7318	850	-47	1
-42 715	29 453	-7318	850	-47	1
-42 955	29 469	-7318	850	-47	1
-42 923	29 469	-7318	850	-47	1
-42 891	29 469	-7318	850	-47	1
-43 131	29 485	-7318	850	-47	1
-43 099	29 485	-7318	850	-47	1
-43 307	29 501	-7318	850	-47	1
-43 275	29 501	-7318	850	-47	1
-43 483	29 517	-7318	850	-47	1
-43 659	29 533	-7318	850	-47	1
-41 635	29 261	-7310	850	-47	1
-41 603	29 261	-7310	850	-47	1
-41 571	29 261	-7310	850	-47	1
-41 811	29 277	-7310	850	-47	1
-41 779	29 277	-7310	850	-47	1
-41 747	29 277	-7310	850	-47	1
-41 987	29 293	-7310	850	-47	1
-41 955	29 293	-7310	850	-47	1
-41 923	29 293	-7310	850	-47	1
-42 163	29 309	-7310	850	-47	1
-42 131	29 309	-7310	850	-47	1
-42 339	29 325	-7310	850	-47	1
-42 307	29 325	-7310	850	-47	1
-42 515	29 341	-7310	850	-47	1
-42 691	29 357	-7310	850	-47	1
-40 491	29 069	-7302	850	-47	1
-40 667	29 085	-7302	850	-47	1
-40 635	29 085	-7302	850	-47	1
-40 843	29 101	-7302	850	-47	1
-40 811	29 101	-7302	850	-47	1
-40 779	29 101	-7302	850	-47	1
-41 019	29 117	-7302	850	-47	1
-40 987	29 117	-7302	850	-47	1
-41 195	29 133	-7302	850	-47	1
-41 163	29 133	-7302	850	-47	1
-41 371	29 149	-7302	850	-47	1
-41 547	29 165	-7302	850	-47	1
-39 699	28 909	-7294	850	-47	1
-39 875	28 925	-7294	850	-47	1
-39 843	28 925	-7294	850	-47	1
-40 051	28 941	-7294	850	-47	1
-40 019	28 941	-7294	850	-47	1
-40 227	28 957	-7294	850	-47	1
-40 105	28 957	-7294	850	-47	1

```

-40193 28937 -7294 850 -47 1
-40403 28973 -7294 850 -47 1
-40579 28989 -7294 850 -47 1
-38907 28749 -7286 850 -47 1
-39083 28765 -7286 850 -47 1
-39051 28765 -7286 850 -47 1
-39259 28781 -7286 850 -47 1
-39435 28797 -7286 850 -47 1
-38115 28589 -7278 850 -47 1
-38291 28605 -7278 850 -47 1
-38467 28621 -7278 850 -47 1
-37323 28429 -7270 850 -47 1

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-2238483, 1464893, -359374, 41650, -2303, 49}
```

```
Array[c, 6].Transpose[A]
```

```

{-46563 c[1] + 30061 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
 -46531 c[1] + 30061 c[2] - 7342 c[3] + 850 c[4] - 47 c[5] + c[6],
 -45211 c[1] + 29853 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
 -45419 c[1] + 29869 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
 -45387 c[1] + 29869 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
 -45595 c[1] + 29885 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
 -45771 c[1] + 29901 c[2] - 7334 c[3] + 850 c[4] - 47 c[5] + c[6],
 -43651 c[1] + 29629 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6],
 -43859 c[1] + 29645 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6],
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 -44419 c[1] + 29693 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6],
 -44627 c[1] + 29709 c[2] - 7326 c[3] + 850 c[4] - 47 c[5] + c[6],
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 -43131 c[1] + 29485 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6],
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 -43483 c[1] + 29517 c[2] - 7318 c[3] + 850 c[4] - 47 c[5] + c[6],
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 -41635 c[1] + 29261 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6],
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```

```

-41 571 c[1] + 29 261 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 811 c[1] + 29 277 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 779 c[1] + 29 277 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 747 c[1] + 29 277 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 987 c[1] + 29 293 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 955 c[1] + 29 293 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-41 923 c[1] + 29 293 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 163 c[1] + 29 309 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-42 131 c[1] + 29 309 c[2] - 7310 c[3] + 850 c[4] - 47 c[5] + c[6] ,
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-40 019 c[1] + 28 941 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 227 c[1] + 28 957 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 195 c[1] + 28 957 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 403 c[1] + 28 973 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-40 579 c[1] + 28 989 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-38 907 c[1] + 28 749 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-39 083 c[1] + 28 765 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-39 051 c[1] + 28 765 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-39 259 c[1] + 28 781 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-39 435 c[1] + 28 797 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-38 115 c[1] + 28 589 c[2] - 7278 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-38 291 c[1] + 28 605 c[2] - 7278 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-38 467 c[1] + 28 621 c[2] - 7278 c[3] + 850 c[4] - 47 c[5] + c[6] ,
-37 323 c[1] + 28 429 c[2] - 7270 c[3] + 850 c[4] - 47 c[5] + c[6] }

```

Array[c, 6].g

```
-2 238 483 c[1] + 1 464 893 c[2] - 359 374 c[3] + 41 650 c[4] - 2303 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```
-2 238 483 c[1] + 1 464 893 c[2] - 359 374 c[3] + 41 650 c[4] - 2303 c[5] + 49 c[6] < 0 &&
```

[illegible]

```

-40 635 c[1] + 29 085 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 843 c[1] + 29 101 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 811 c[1] + 29 101 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 779 c[1] + 29 101 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 019 c[1] + 29 117 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 987 c[1] + 29 117 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 195 c[1] + 29 133 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 163 c[1] + 29 133 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 371 c[1] + 29 149 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-41 547 c[1] + 29 165 c[2] - 7302 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 699 c[1] + 28 909 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 875 c[1] + 28 925 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 843 c[1] + 28 925 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 051 c[1] + 28 941 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 019 c[1] + 28 941 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 227 c[1] + 28 957 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 195 c[1] + 28 957 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 403 c[1] + 28 973 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-40 579 c[1] + 28 989 c[2] - 7294 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-38 907 c[1] + 28 749 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 083 c[1] + 28 765 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 051 c[1] + 28 765 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 259 c[1] + 28 781 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-39 435 c[1] + 28 797 c[2] - 7286 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-38 115 c[1] + 28 589 c[2] - 7278 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-38 291 c[1] + 28 605 c[2] - 7278 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-38 467 c[1] + 28 621 c[2] - 7278 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0 &&
-37 323 c[1] + 28 429 c[2] - 7270 c[3] + 850 c[4] - 47 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[62]]
```

```
(-9 + x)12 (5 + x)32 (-98 572 + 51 897 x - 10 624 x2 + 1062 x3 - 52 x4 + x5)
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {416 331, -316 664, 96 123, -14 992, 1273, -56, 1},
  {418 267, -317 016, 96 139, -14 992, 1273, -56, 1},
  {404 163, -313 440, 95 843, -14 984, 1273, -56, 1},
  {406 035, -313 792, 95 859, -14 984, 1273, -56, 1},
  {408 259, -314 176, 95 875, -14 984, 1273, -56, 1},
  {407 971, -314 144, 95 875, -14 984, 1273, -56, 1},
  {407 619, -314 112, 95 875, -14 984, 1273, -56, 1},
  {394 155, -310 600, 95 579, -14 976, 1273, -56, 1},
  {396 027, -310 952, 95 595, -14 976, 1273, -56, 1},
  {395 739, -310 920, 95 595, -14 976, 1273, -56, 1},
  {398 251, -311 336, 95 611, -14 976, 1273, -56, 1},
  {397 611, -311 272, 95 611, -14 976, 1273, -56, 1},
  {397 323, -311 240, 95 611, -14 976, 1273, -56, 1},
  {399 547, -311 624, 95 627, -14 976, 1273, -56, 1},
  {401 131, -311 944, 95 643, -14 976, 1273, -56, 1},
  {386 019, -308 112, 95 331, -14 968, 1273, -56, 1},
  {385 731, -308 080, 95 331, -14 968, 1273, -56, 1},
  {387 315, -308 400, 95 347, -14 968, 1273, -56, 1},
  {387 027, -308 368, 95 347, -14 968, 1273, -56, 1},
  {389 539, -308 784, 95 363, -14 968, 1273, -56, 1},
  {388 899, -308 720, 95 363, -14 968, 1273, -56, 1},
  {390 835, -309 072, 95 379, -14 968, 1273, -56, 1},
  {375 723, -305 240, 95 067, -14 960, 1273, -56, 1},
  {377 307, -305 560, 95 083, -14 960, 1273, -56, 1},
  {377 019, -305 528, 95 083, -14 960, 1273, -56, 1},
  {378 891, -305 880, 95 099, -14 960, 1273, -56, 1},
  {378 603, -305 848, 95 099, -14 960, 1273, -56, 1},
  {380 187, -306 168, 95 115, -14 960, 1273, -56, 1},
  {365 715, -302 400, 94 803, -14 952, 1273, -56, 1},
  {367 299, -302 720, 94 819, -14 952, 1273, -56, 1},
  {368 595, -303 008, 94 835, -14 952, 1273, -56, 1},
  {370 179, -303 328, 94 851, -14 952, 1273, -56, 1},
  {369 891, -303 296, 94 851, -14 952, 1273, -56, 1},
  {358 587, -300 168, 94 571, -14 944, 1273, -56, 1},
  {359 883, -300 456, 94 587, -14 944, 1273, -56, 1},
  {361 467, -300 776, 94 603, -14 944, 1273, -56, 1},
  {348 579, -297 328, 94 307, -14 936, 1273, -56, 1},
  {351 459, -297 936, 94 339, -14 936, 1273, -56, 1},
  {352 755, -298 224, 94 355, -14 936, 1273, -56, 1} }
```

```

A = {{416 331, -316 664, 96 123, -14 992, 1273, -56, 1},
      {418 267, -317 016, 96 139, -14 992, 1273, -56, 1},
      {404 163, -313 440, 95 843, -14 984, 1273, -56, 1},
      {406 035, -313 792, 95 859, -14 984, 1273, -56, 1},
      {408 259, -314 176, 95 875, -14 984, 1273, -56, 1},
      {407 971, -314 144, 95 875, -14 984, 1273, -56, 1},
      {407 619, -314 112, 95 875, -14 984, 1273, -56, 1},
      {394 155, -310 600, 95 579, -14 976, 1273, -56, 1},
      {396 027, -310 952, 95 595, -14 976, 1273, -56, 1},
      {395 739, -310 920, 95 595, -14 976, 1273, -56, 1},
      {398 251, -311 336, 95 611, -14 976, 1273, -56, 1},
      {397 611, -311 272, 95 611, -14 976, 1273, -56, 1},
      {397 323, -311 240, 95 611, -14 976, 1273, -56, 1},
      {399 547, -311 624, 95 627, -14 976, 1273, -56, 1},
      {401 131, -311 944, 95 643, -14 976, 1273, -56, 1},
      {386 019, -308 112, 95 331, -14 968, 1273, -56, 1},
      {385 731, -308 080, 95 331, -14 968, 1273, -56, 1},
      {387 315, -308 400, 95 347, -14 968, 1273, -56, 1},
      {387 027, -308 368, 95 347, -14 968, 1273, -56, 1},
      {389 539, -308 784, 95 363, -14 968, 1273, -56, 1},
      {388 899, -308 720, 95 363, -14 968, 1273, -56, 1},
      {390 835, -309 072, 95 379, -14 968, 1273, -56, 1},
      {375 723, -305 240, 95 067, -14 960, 1273, -56, 1},
      {377 307, -305 560, 95 083, -14 960, 1273, -56, 1},
      {377 019, -305 528, 95 083, -14 960, 1273, -56, 1},
      {378 891, -305 880, 95 099, -14 960, 1273, -56, 1},
      {378 603, -305 848, 95 099, -14 960, 1273, -56, 1},
      {380 187, -306 168, 95 115, -14 960, 1273, -56, 1},
      {365 715, -302 400, 94 803, -14 952, 1273, -56, 1},
      {367 299, -302 720, 94 819, -14 952, 1273, -56, 1},
      {368 595, -303 008, 94 835, -14 952, 1273, -56, 1},
      {370 179, -303 328, 94 851, -14 952, 1273, -56, 1},
      {369 891, -303 296, 94 851, -14 952, 1273, -56, 1},
      {358 587, -300 168, 94 571, -14 944, 1273, -56, 1},
      {359 883, -300 456, 94 587, -14 944, 1273, -56, 1},
      {361 467, -300 776, 94 603, -14 944, 1273, -56, 1},
      {348 579, -297 328, 94 307, -14 936, 1273, -56, 1},
      {351 459, -297 936, 94 339, -14 936, 1273, -56, 1},
      {352 755, -298 224, 94 355, -14 936, 1273, -56, 1}};

```


A // MatrixForm

```
( 416 331 -316 664 96 123 -14 992 1273 -56 1 )
( 418 267 -317 016 96 139 -14 992 1273 -56 1 )
( 404 163 -313 440 95 843 -14 984 1273 -56 1 )
( 406 035 -313 792 95 859 -14 984 1273 -56 1 )
( 408 259 -314 176 95 875 -14 984 1273 -56 1 )
( 407 971 -314 144 95 875 -14 984 1273 -56 1 )
( 407 619 -314 112 95 875 -14 984 1273 -56 1 )
( 394 155 -310 600 95 579 -14 976 1273 -56 1 )
( 396 027 -310 952 95 595 -14 976 1273 -56 1 )
( 395 739 -310 920 95 595 -14 976 1273 -56 1 )
( 398 251 -311 336 95 611 -14 976 1273 -56 1 )
( 397 611 -311 272 95 611 -14 976 1273 -56 1 )
( 397 323 -311 240 95 611 -14 976 1273 -56 1 )
( 399 547 -311 624 95 627 -14 976 1273 -56 1 )
( 401 131 -311 944 95 643 -14 976 1273 -56 1 )
( 386 019 -308 112 95 331 -14 968 1273 -56 1 )
( 385 731 -308 080 95 331 -14 968 1273 -56 1 )
( 387 315 -308 400 95 347 -14 968 1273 -56 1 )
( 387 027 -308 368 95 347 -14 968 1273 -56 1 )
( 389 539 -308 784 95 363 -14 968 1273 -56 1 )
( 388 899 -308 720 95 363 -14 968 1273 -56 1 )
( 390 835 -309 072 95 379 -14 968 1273 -56 1 )
( 375 723 -305 240 95 067 -14 960 1273 -56 1 )
( 377 307 -305 560 95 083 -14 960 1273 -56 1 )
( 377 019 -305 528 95 083 -14 960 1273 -56 1 )
( 378 891 -305 880 95 099 -14 960 1273 -56 1 )
( 378 603 -305 848 95 099 -14 960 1273 -56 1 )
( 380 187 -306 168 95 115 -14 960 1273 -56 1 )
( 365 715 -302 400 94 803 -14 952 1273 -56 1 )
( 367 299 -302 720 94 819 -14 952 1273 -56 1 )
( 368 595 -303 008 94 835 -14 952 1273 -56 1 )
( 370 179 -303 328 94 851 -14 952 1273 -56 1 )
( 369 891 -303 296 94 851 -14 952 1273 -56 1 )
( 358 587 -300 168 94 571 -14 944 1273 -56 1 )
( 359 883 -300 456 94 587 -14 944 1273 -56 1 )
( 361 467 -300 776 94 603 -14 944 1273 -56 1 )
( 348 579 -297 328 94 307 -14 936 1273 -56 1 )
( 351 459 -297 936 94 339 -14 936 1273 -56 1 )
( 352 755 -298 224 94 355 -14 936 1273 -56 1 )
```

Dimensions[A]

```
{39, 7}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{20 139 051, -15 421 112, 4 699 259, -734 224, 62 377, -2744, 49}
```

Array[c, 7].Transpose[A]

```
{416 331 c[1] - 316 664 c[2] + 96 123 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 418 267 c[1] - 317 016 c[2] + 96 139 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 163 c[1] - 313 440 c[2] + 95 843 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 406 035 c[1] - 313 792 c[2] + 95 859 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 408 259 c[1] - 314 176 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 971 c[1] - 314 144 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 619 c[1] - 314 112 c[2] + 95 875 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 394 155 c[1] - 310 600 c[2] + 95 579 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 396 027 c[1] - 310 952 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 395 739 c[1] - 310 920 c[2] + 95 595 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 398 251 c[1] - 311 336 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 611 c[1] - 311 272 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 323 c[1] - 311 240 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 399 547 c[1] - 311 624 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 401 131 c[1] - 311 944 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 386 019 c[1] - 308 112 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 385 731 c[1] - 308 080 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 387 315 c[1] - 308 400 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 387 027 c[1] - 308 368 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 389 539 c[1] - 308 784 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 388 899 c[1] - 308 720 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 390 835 c[1] - 309 072 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 375 723 c[1] - 305 240 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 377 019 c[1] - 305 528 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 378 603 c[1] - 305 848 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 380 187 c[1] - 306 168 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 365 715 c[1] - 302 400 c[2] + 94 803 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 367 299 c[1] - 302 720 c[2] + 94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 368 595 c[1] - 303 008 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 370 179 c[1] - 303 328 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 369 891 c[1] - 303 296 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 358 587 c[1] - 300 168 c[2] + 94 571 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
 359 883 c[1] - 300 456 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
 361 467 c[1] - 300 776 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
 348 579 c[1] - 297 328 c[2] + 94 307 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7],
 351 459 c[1] - 297 936 c[2] + 94 339 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7],
 352 755 c[1] - 298 224 c[2] + 94 355 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7]}
```

Array[c, 7].g

```
20 139 051 c[1] - 15 421 112 c[2] + 4 699 259 c[3] -
 734 224 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]
```

cert =

```
Flatten[Array[c, 7] /. FindInstance[20 139 051 c[1] - 15 421 112 c[2] + 4 699 259 c[3] -
```

$$\begin{aligned}
& 734\,224\,c[4] + 62\,377\,c[5] - 2744\,c[6] + 49\,c[7] < 0 \&\& 416\,331\,c[1] - \\
& 316\,664\,c[2] + 96\,123\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 418\,267\,c[1] - 317\,016\,c[2] + 96\,139\,c[3] - 14\,992\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,163\,c[1] - 313\,440\,c[2] + 95\,843\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 406\,035\,c[1] - 313\,792\,c[2] + \\
& 95\,859\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 408\,259\,c[1] - 314\,176\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 407\,971\,c[1] - 314\,144\,c[2] + 95\,875\,c[3] - 14\,984\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 407\,619\,c[1] - 314\,112\,c[2] + \\
& 95\,875\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 394\,155\,c[1] - 310\,600\,c[2] + 95\,579\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 396\,027\,c[1] - 310\,952\,c[2] + 95\,595\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 395\,739\,c[1] - 310\,920\,c[2] + \\
& 95\,595\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 398\,251\,c[1] - 311\,336\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 397\,611\,c[1] - 311\,272\,c[2] + 95\,611\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,323\,c[1] - 311\,240\,c[2] + \\
& 95\,611\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 399\,547\,c[1] - 311\,624\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 401\,131\,c[1] - 311\,944\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 386\,019\,c[1] - 308\,112\,c[2] + \\
& 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 385\,731\,c[1] - 308\,080\,c[2] + 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 387\,315\,c[1] - 308\,400\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 387\,027\,c[1] - 308\,368\,c[2] + \\
& 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 389\,539\,c[1] - 308\,784\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 388\,899\,c[1] - 308\,720\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,835\,c[1] - 309\,072\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 375\,723\,c[1] - 305\,240\,c[2] + 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 377\,307\,c[1] - 305\,560\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 377\,019\,c[1] - 305\,528\,c[2] + \\
& 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 378\,891\,c[1] - 305\,880\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 378\,603\,c[1] - 305\,848\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 380\,187\,c[1] - 306\,168\,c[2] + \\
& 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 365\,715\,c[1] - 302\,400\,c[2] + 94\,803\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 367\,299\,c[1] - 302\,720\,c[2] + 94\,819\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 368\,595\,c[1] - 303\,008\,c[2] + \\
& 94\,835\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 370\,179\,c[1] - 303\,328\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 369\,891\,c[1] - 303\,296\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 358\,587\,c[1] - 300\,168\,c[2] + \\
& 94\,571\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 359\,883\,c[1] - 300\,456\,c[2] + 94\,587\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq
\end{aligned}$$

```

0 && 361 467 c[1] - 300 776 c[2] + 94 603 c[3] - 14 944 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 348 579 c[1] - 297 328 c[2] +
94 307 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
351 459 c[1] - 297 936 c[2] + 94 339 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 352 755 c[1] - 298 224 c[2] + 94 355 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-2128, -9279, -21 332, 0, 0, 0, 0}

```

```
GCD[-2128, -9279, -21 332, 0, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 0, -21 332, -9279, -2128}
```

```
cert.g
```

```
-7 995 268
```

```
{-2128, -9279, -21 332, 0, 0, 0, 0}.gpart[listdim17[[62]]]
```

```
-7 995 268
```

```
cert.Transpose[A]
```

```

{1 877 052, 682 140, 3 828 020, 2 769 300, 1 258 452, 1 574 388, 2 026 516, 4 404 332,
3 345 612, 3 661 548, 1 834 764, 2 602 828, 2 918 764, 1 407 916, 665 132, 3 921 924,
4 237 860, 3 495 076, 3 811 012, 1 984 228, 2 752 292, 1 557 380, 4 814 172, 4 071 388,
4 387 324, 3 328 604, 3 644 540, 2 901 756, 5 390 484, 4 647 700, 4 220 852, 3 478 068,
3 794 004, 4 797 164, 4 370 316, 3 627 532, 5 373 476, 4 203 844, 3 776 996}

```

```
chi = listdim17[[63]]
```

```
 $(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-66 316 + 37 441 x - 8300 x^2 + 902 x^3 - 48 x^4 + x^5)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -63, 1669, -24 075, 203 891, -1 011 469, 2 712 391, -3 017 961},
{1, -63, 1669, -24 075, 203 907, -1 011 933, 2 716 791, -3 031 641},
{1, -63, 1669, -24 075, 203 907, -1 011 901, 2 716 151, -3 028 601},
{1, -63, 1669, -24 075, 203 907, -1 011 869, 2 715 575, -3 026 009},
{1, -63, 1669, -24 075, 203 923, -1 012 365, 2 720 551, -3 042 281},
{1, -63, 1669, -24 075, 203 923, -1 012 333, 2 719 975, -3 039 689},
{1, -63, 1669, -24 067, 203 571, -1 006 749, 2 681 863, -2 944 737},
{1, -63, 1669, -24 067, 203 571, -1 006 749, 2 681 927, -2 945 313},
{1, -63, 1669, -24 067, 203 571, -1 006 717, 2 681 351, -2 942 721},
{1, -63, 1669, -24 067, 203 587, -1 007 245, 2 686 903, -2 961 585},
{1, -63, 1669, -24 067, 203 587, -1 007 213, 2 686 263, -2 958 417},

```

```

{1, -63, 1669, -24 067, 203 587, -1 007 213, 2 686 327, -2 958 993},
{1, -63, 1669, -24 067, 203 587, -1 007 181, 2 685 751, -2 956 401},
{1, -63, 1669, -24 067, 203 603, -1 007 677, 2 690 727, -2 972 673},
{1, -63, 1669, -24 067, 203 603, -1 007 677, 2 690 791, -2 973 249},
{1, -63, 1669, -24 067, 203 603, -1 007 645, 2 690 151, -2 970 081},
{1, -63, 1669, -24 067, 203 603, -1 007 645, 2 690 215, -2 970 657},
{1, -63, 1669, -24 067, 203 603, -1 007 613, 2 689 575, -2 967 489},
{1, -63, 1669, -24 067, 203 619, -1 008 109, 2 694 551, -2 983 761},
{1, -63, 1669, -24 067, 203 619, -1 008 109, 2 694 615, -2 984 337},
{1, -63, 1669, -24 067, 203 619, -1 008 077, 2 693 975, -2 981 169},
{1, -63, 1669, -24 067, 203 619, -1 008 077, 2 694 039, -2 981 745},
{1, -63, 1669, -24 067, 203 619, -1 008 045, 2 693 335, -2 978 129},
{1, -63, 1669, -24 067, 203 635, -1 008 541, 2 698 375, -2 994 849},
{1, -63, 1669, -24 067, 203 635, -1 008 509, 2 697 799, -2 992 385},
{1, -63, 1669, -24 067, 203 651, -1 008 941, 2 701 623, -3 003 473},
{1, -63, 1669, -24 059, 203 251, -1 002 029, 2 651 399, -2 872 089},
{1, -63, 1669, -24 059, 203 267, -1 002 461, 2 655 223, -2 883 177},
{1, -63, 1669, -24 059, 203 267, -1 002 429, 2 654 711, -2 881 161},
{1, -63, 1669, -24 059, 203 283, -1 002 925, 2 659 687, -2 897 433},
{1, -63, 1669, -24 059, 203 283, -1 002 893, 2 659 111, -2 894 841},
{1, -63, 1669, -24 059, 203 299, -1 003 357, 2 663 511, -2 908 521},
{1, -63, 1669, -24 059, 203 299, -1 003 357, 2 663 575, -2 909 097},
{1, -63, 1669, -24 059, 203 299, -1 003 325, 2 662 935, -2 905 929},
{1, -63, 1669, -24 059, 203 299, -1 003 325, 2 662 999, -2 906 505},
{1, -63, 1669, -24 059, 203 315, -1 003 821, 2 667 975, -2 922 777},
{1, -63, 1669, -24 059, 203 315, -1 003 789, 2 667 335, -2 919 609},
{1, -63, 1669, -24 059, 203 315, -1 003 789, 2 667 399, -2 920 185},
{1, -63, 1669, -24 059, 203 331, -1 004 253, 2 671 799, -2 933 865},
{1, -63, 1669, -24 059, 203 331, -1 004 253, 2 671 863, -2 934 441},
{1, -63, 1669, -24 059, 203 331, -1 004 221, 2 671 223, -2 931 273},
{1, -63, 1669, -24 059, 203 331, -1 004 189, 2 670 583, -2 928 233},
{1, -63, 1669, -24 059, 203 347, -1 004 685, 2 675 623, -2 944 953},
{1, -63, 1669, -24 059, 203 347, -1 004 653, 2 675 047, -2 942 489},
{1, -63, 1669, -24 051, 202 963, -998 141, 2 628 071, -2 819 601},
{1, -63, 1669, -24 051, 202 979, -998 605, 2 632 471, -2 833 281},
{1, -63, 1669, -24 051, 202 995, -999 069, 2 636 935, -2 847 537},
{1, -63, 1669, -24 051, 202 995, -999 037, 2 636 359, -2 844 945},
{1, -63, 1669, -24 051, 203 011, -999 501, 2 640 759, -2 858 625},
{1, -63, 1669, -24 051, 203 011, -999 501, 2 640 823, -2 859 201},
{1, -63, 1669, -24 051, 203 011, -999 469, 2 640 183, -2 856 033},
{1, -63, 1669, -24 051, 203 027, -999 965, 2 645 223, -2 872 881},
{1, -63, 1669, -24 051, 203 027, -999 933, 2 644 583, -2 869 713},
{1, -63, 1669, -24 051, 203 043, -1 000 429, 2 649 687, -2 887 137},
{1, -63, 1669, -24 051, 203 043, -1 000 397, 2 649 047, -2 883 969},
{1, -63, 1669, -24 051, 203 043, -1 000 365, 2 648 407, -2 880 801},
{1, -63, 1669, -24 051, 203 059, -1 000 861, 2 653 511, -2 898 225},
{1, -63, 1669, -24 043, 202 691, -994 749, 2 609 719, -2 783 385},

```

```
{1, -63, 1669, -24 043, 202 691, -994 717, 2 609 143, -2 780 793},
{1, -63, 1669, -24 043, 202 707, -995 181, 2 613 543, -2 794 473},
{1, -63, 1669, -24 043, 202 707, -995 181, 2 613 607, -2 795 049},
{1, -63, 1669, -24 043, 202 723, -995 645, 2 618 007, -2 808 729},
{1, -63, 1669, -24 043, 202 739, -996 109, 2 622 471, -2 822 985},
{1, -63, 1669, -24 035, 202 387, -990 429, 2 582 503, -2 719 233},
{1, -63, 1669, -24 035, 202 403, -990 893, 2 586 967, -2 733 489},
{1, -63, 1669, -24 035, 202 419, -991 325, 2 590 791, -2 744 577},
{1, -63, 1669, -24 027, 202 099, -986 573, 2 559 751, -2 669 337}};
```

```
A // MatrixForm
```

```
( 1 -63 1669 -24 075 203 891 -1 011 469 2 712 391 -3 017 961
 1 -63 1669 -24 075 203 907 -1 011 933 2 716 791 -3 031 641
 1 -63 1669 -24 075 203 907 -1 011 901 2 716 151 -3 028 601
 1 -63 1669 -24 075 203 907 -1 011 869 2 715 575 -3 026 009
 1 -63 1669 -24 075 203 923 -1 012 365 2 720 551 -3 042 281
 1 -63 1669 -24 075 203 923 -1 012 333 2 719 975 -3 039 689
 1 -63 1669 -24 067 203 571 -1 006 749 2 681 863 -2 944 737
 1 -63 1669 -24 067 203 571 -1 006 749 2 681 927 -2 945 313
 1 -63 1669 -24 067 203 571 -1 006 717 2 681 351 -2 942 721
 1 -63 1669 -24 067 203 587 -1 007 245 2 686 903 -2 961 585
 1 -63 1669 -24 067 203 587 -1 007 213 2 686 263 -2 958 417
 1 -63 1669 -24 067 203 587 -1 007 213 2 686 327 -2 958 993
 1 -63 1669 -24 067 203 587 -1 007 181 2 685 751 -2 956 401
 1 -63 1669 -24 067 203 603 -1 007 677 2 690 727 -2 972 673
 1 -63 1669 -24 067 203 603 -1 007 677 2 690 791 -2 973 249
 1 -63 1669 -24 067 203 603 -1 007 645 2 690 151 -2 970 081
 1 -63 1669 -24 067 203 603 -1 007 645 2 690 215 -2 970 657
 1 -63 1669 -24 067 203 603 -1 007 613 2 689 575 -2 967 489
 1 -63 1669 -24 067 203 619 -1 008 109 2 694 551 -2 983 761
 1 -63 1669 -24 067 203 619 -1 008 109 2 694 615 -2 984 337
 1 -63 1669 -24 067 203 619 -1 008 077 2 693 975 -2 981 169
 1 -63 1669 -24 067 203 619 -1 008 077 2 694 039 -2 981 745
 1 -63 1669 -24 067 203 619 -1 008 045 2 693 335 -2 978 129
 1 -63 1669 -24 067 203 635 -1 008 541 2 698 375 -2 994 849
 1 -63 1669 -24 067 203 635 -1 008 509 2 697 799 -2 992 385
 1 -63 1669 -24 067 203 651 -1 008 941 2 701 623 -3 003 473
 1 -63 1669 -24 059 203 251 -1 002 029 2 651 399 -2 872 089
 1 -63 1669 -24 059 203 267 -1 002 461 2 655 223 -2 883 177
 1 -63 1669 -24 059 203 267 -1 002 429 2 654 711 -2 881 161
 1 -63 1669 -24 059 203 283 -1 002 925 2 659 687 -2 897 433
 1 -63 1669 -24 059 203 283 -1 002 893 2 659 111 -2 894 841
 1 -63 1669 -24 059 203 299 -1 003 357 2 663 511 -2 908 521
 1 -63 1669 -24 059 203 299 -1 003 357 2 663 575 -2 909 097
 1 -63 1669 -24 059 203 299 -1 003 325 2 662 935 -2 905 929
 1 -63 1669 -24 059 203 299 -1 003 325 2 662 999 -2 906 505
 1 -63 1669 -24 059 203 315 -1 003 821 2 667 975 -2 922 777
 1 -63 1669 -24 059 203 315 -1 003 789 2 667 335 -2 919 609
 1 -63 1669 -24 059 203 315 -1 003 789 2 667 399 -2 920 185
 1 -63 1669 -24 059 203 331 -1 004 253 2 671 799 -2 933 865
 1 -63 1669 -24 059 203 331 -1 004 253 2 671 863 -2 934 441
 1 -63 1669 -24 059 203 331 -1 004 221 2 671 223 -2 931 273
 1 -63 1669 -24 059 203 331 -1 004 189 2 670 583 -2 928 233
 1 -63 1669 -24 059 203 347 -1 004 685 2 675 672 -2 944 952)
```

1	-63	1669	-24059	203347	-1004653	2675047	-2942489
1	-63	1669	-24051	202963	-998141	2628071	-2819601
1	-63	1669	-24051	202979	-998605	2632471	-2833281
1	-63	1669	-24051	202995	-999069	2636935	-2847537
1	-63	1669	-24051	202995	-999037	2636359	-2844945
1	-63	1669	-24051	203011	-999501	2640759	-2858625
1	-63	1669	-24051	203011	-999501	2640823	-2859201
1	-63	1669	-24051	203011	-999469	2640183	-2856033
1	-63	1669	-24051	203027	-999965	2645223	-2872881
1	-63	1669	-24051	203027	-999933	2644583	-2869713
1	-63	1669	-24051	203043	-1000429	2649687	-2887137
1	-63	1669	-24051	203043	-1000397	2649047	-2883969
1	-63	1669	-24051	203043	-1000365	2648407	-2880801
1	-63	1669	-24051	203059	-1000861	2653511	-2898225
1	-63	1669	-24043	202691	-994749	2609719	-2783385
1	-63	1669	-24043	202691	-994717	2609143	-2780793
1	-63	1669	-24043	202707	-995181	2613543	-2794473
1	-63	1669	-24043	202707	-995181	2613607	-2795049
1	-63	1669	-24043	202723	-995645	2618007	-2808729
1	-63	1669	-24043	202739	-996109	2622471	-2822985
1	-63	1669	-24035	202387	-990429	2582503	-2719233
1	-63	1669	-24035	202403	-990893	2586967	-2733489
1	-63	1669	-24035	202419	-991325	2590791	-2744577
1	-63	1669	-24027	202099	-986573	2559751	-2669337

Dimensions[A]

{67, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1179683, 9992755, -49614077, 133348135, -149113553}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] + 203891 c[5] -
 1011469 c[6] + 2712391 c[7] - 3017961 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24075 c[4] + 203907 c[5] - 1011933 c[6] + 2716791 c[7] - 3031641 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] + 203907 c[5] - 1011901 c[6] +
 2716151 c[7] - 3028601 c[8], c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] +
 203907 c[5] - 1011869 c[6] + 2715575 c[7] - 3026009 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] + 203923 c[5] - 1012365 c[6] +
 2720551 c[7] - 3042281 c[8], c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] +
 203923 c[5] - 1012333 c[6] + 2719975 c[7] - 3039689 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203571 c[5] - 1006749 c[6] +
 2681863 c[7] - 2944737 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
 203571 c[5] - 1006749 c[6] + 2681927 c[7] - 2945313 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203571 c[5] - 1006717 c[6] +
 2681351 c[7] - 2942721 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
 203587 c[5] - 1007245 c[6] + 2686903 c[7] - 2961585 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203587 c[5] - 1007213 c[6] +
 2686263 c[7] - 2958417 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
 203587 c[5] - 1007213 c[6] + 2686327 c[7] - 2958993 c[8],

$c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,587 c[5] - 1\,007\,181 c[6] +$
 $2\,685\,751 c[7] - 2\,956\,401 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,603 c[5] - 1\,007\,677 c[6] + 2\,690\,727 c[7] - 2\,972\,673 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,603 c[5] - 1\,007\,677 c[6] +$
 $2\,690\,791 c[7] - 2\,973\,249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,603 c[5] - 1\,007\,645 c[6] + 2\,690\,151 c[7] - 2\,970\,081 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,603 c[5] - 1\,007\,645 c[6] +$
 $2\,690\,215 c[7] - 2\,970\,657 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,603 c[5] - 1\,007\,613 c[6] + 2\,689\,575 c[7] - 2\,967\,489 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,619 c[5] - 1\,008\,109 c[6] +$
 $2\,694\,551 c[7] - 2\,983\,761 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,619 c[5] - 1\,008\,109 c[6] + 2\,694\,615 c[7] - 2\,984\,337 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,619 c[5] - 1\,008\,077 c[6] +$
 $2\,693\,975 c[7] - 2\,981\,169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,619 c[5] - 1\,008\,077 c[6] + 2\,694\,039 c[7] - 2\,981\,745 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,619 c[5] - 1\,008\,045 c[6] +$
 $2\,693\,335 c[7] - 2\,978\,129 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,635 c[5] - 1\,008\,541 c[6] + 2\,698\,375 c[7] - 2\,994\,849 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,635 c[5] - 1\,008\,509 c[6] +$
 $2\,697\,799 c[7] - 2\,992\,385 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,651 c[5] - 1\,008\,941 c[6] + 2\,701\,623 c[7] - 3\,003\,473 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,251 c[5] - 1\,002\,029 c[6] +$
 $2\,651\,399 c[7] - 2\,872\,089 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,267 c[5] - 1\,002\,461 c[6] + 2\,655\,223 c[7] - 2\,883\,177 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,267 c[5] - 1\,002\,429 c[6] +$
 $2\,654\,711 c[7] - 2\,881\,161 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,283 c[5] - 1\,002\,925 c[6] + 2\,659\,687 c[7] - 2\,897\,433 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,283 c[5] - 1\,002\,893 c[6] +$
 $2\,659\,111 c[7] - 2\,894\,841 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,299 c[5] - 1\,003\,357 c[6] + 2\,663\,511 c[7] - 2\,908\,521 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,299 c[5] - 1\,003\,357 c[6] +$
 $2\,663\,575 c[7] - 2\,909\,097 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,299 c[5] - 1\,003\,325 c[6] + 2\,662\,935 c[7] - 2\,905\,929 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,299 c[5] - 1\,003\,325 c[6] +$
 $2\,662\,999 c[7] - 2\,906\,505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,315 c[5] - 1\,003\,821 c[6] + 2\,667\,975 c[7] - 2\,922\,777 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,315 c[5] - 1\,003\,789 c[6] +$
 $2\,667\,335 c[7] - 2\,919\,609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,315 c[5] - 1\,003\,789 c[6] + 2\,667\,399 c[7] - 2\,920\,185 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,253 c[6] +$
 $2\,671\,799 c[7] - 2\,933\,865 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,331 c[5] - 1\,004\,253 c[6] + 2\,671\,863 c[7] - 2\,934\,441 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,221 c[6] +$
 $2\,671\,223 c[7] - 2\,931\,273 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,331 c[5] - 1\,004\,189 c[6] + 2\,670\,583 c[7] - 2\,928\,233 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,685 c[6] +$
 $2\,675\,623 c[7] - 2\,944\,953 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$

$203\,347\,c[5] - 1\,004\,653\,c[6] + 2\,675\,047\,c[7] - 2\,942\,489\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,963\,c[5] - 998\,141\,c[6] + 2\,628\,071\,c[7] -$
 $2\,819\,601\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] -$
 $998\,605\,c[6] + 2\,632\,471\,c[7] - 2\,833\,281\,c[8], c[1] - 63\,c[2] + 1669\,c[3] -$
 $24\,051\,c[4] + 202\,995\,c[5] - 999\,069\,c[6] + 2\,636\,935\,c[7] - 2\,847\,537\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,037\,c[6] +$
 $2\,636\,359\,c[7] - 2\,844\,945\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] +$
 $203\,011\,c[5] - 999\,501\,c[6] + 2\,640\,759\,c[7] - 2\,858\,625\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,501\,c[6] +$
 $2\,640\,823\,c[7] - 2\,859\,201\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] +$
 $203\,011\,c[5] - 999\,469\,c[6] + 2\,640\,183\,c[7] - 2\,856\,033\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,965\,c[6] +$
 $2\,645\,223\,c[7] - 2\,872\,881\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] +$
 $203\,027\,c[5] - 999\,933\,c[6] + 2\,644\,583\,c[7] - 2\,869\,713\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,429\,c[6] +$
 $2\,649\,687\,c[7] - 2\,887\,137\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] +$
 $203\,043\,c[5] - 1\,000\,397\,c[6] + 2\,649\,047\,c[7] - 2\,883\,969\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,365\,c[6] +$
 $2\,648\,407\,c[7] - 2\,880\,801\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] +$
 $203\,059\,c[5] - 1\,000\,861\,c[6] + 2\,653\,511\,c[7] - 2\,898\,225\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,749\,c[6] +$
 $2\,609\,719\,c[7] - 2\,783\,385\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,691\,c[5] - 994\,717\,c[6] + 2\,609\,143\,c[7] - 2\,780\,793\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] +$
 $2\,613\,543\,c[7] - 2\,794\,473\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,707\,c[5] - 995\,181\,c[6] + 2\,613\,607\,c[7] - 2\,795\,049\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] +$
 $2\,618\,007\,c[7] - 2\,808\,729\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,471\,c[7] - 2\,822\,985\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,429\,c[6] +$
 $2\,582\,503\,c[7] - 2\,719\,233\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,403\,c[5] - 990\,893\,c[6] + 2\,586\,967\,c[7] - 2\,733\,489\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,325\,c[6] +$
 $2\,590\,791\,c[7] - 2\,744\,577\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] +$
 $202\,099\,c[5] - 986\,573\,c[6] + 2\,559\,751\,c[7] - 2\,669\,337\,c[8]\}$

Array[c, 8].g

$49\,c[1] - 3087\,c[2] + 81\,781\,c[3] - 1\,179\,683\,c[4] +$
 $9\,992\,755\,c[5] - 49\,614\,077\,c[6] + 133\,348\,135\,c[7] - 149\,113\,553\,c[8]$

cert =

Flatten[Array[c, 8] /. FindInstance[$49\,c[1] - 3087\,c[2] + 81\,781\,c[3] - 1\,179\,683\,c[4] +$
 $9\,992\,755\,c[5] - 49\,614\,077\,c[6] + 133\,348\,135\,c[7] - 149\,113\,553\,c[8] < 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,891\,c[5] - 1\,011\,469\,c[6] +$
 $2\,712\,391\,c[7] - 3\,017\,961\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] +$
 $203\,907\,c[5] - 1\,011\,933\,c[6] + 2\,716\,791\,c[7] - 3\,031\,641\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,907\,c[5] - 1\,011\,901\,c[6] +$

$$\begin{aligned}
& 2\,716\,151\,c[7] - 3\,028\,601\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& 203\,907\,c[5] - 1\,011\,869\,c[6] + 2\,715\,575\,c[7] - 3\,026\,009\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,923\,c[5] - 1\,012\,365\,c[6] + \\
& 2\,720\,551\,c[7] - 3\,042\,281\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& 203\,923\,c[5] - 1\,012\,333\,c[6] + 2\,719\,975\,c[7] - 3\,039\,689\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,571\,c[5] - 1\,006\,749\,c[6] + \\
& 2\,681\,863\,c[7] - 2\,944\,737\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,571\,c[5] - 1\,006\,749\,c[6] + 2\,681\,927\,c[7] - 2\,945\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,571\,c[5] - 1\,006\,717\,c[6] + \\
& 2\,681\,351\,c[7] - 2\,942\,721\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,587\,c[5] - 1\,007\,245\,c[6] + 2\,686\,903\,c[7] - 2\,961\,585\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,587\,c[5] - 1\,007\,213\,c[6] + \\
& 2\,686\,263\,c[7] - 2\,958\,417\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,587\,c[5] - 1\,007\,213\,c[6] + 2\,686\,327\,c[7] - 2\,958\,993\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,587\,c[5] - 1\,007\,181\,c[6] + \\
& 2\,685\,751\,c[7] - 2\,956\,401\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,603\,c[5] - 1\,007\,677\,c[6] + 2\,690\,727\,c[7] - 2\,972\,673\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,603\,c[5] - 1\,007\,677\,c[6] + \\
& 2\,690\,791\,c[7] - 2\,973\,249\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,603\,c[5] - 1\,007\,645\,c[6] + 2\,690\,151\,c[7] - 2\,970\,081\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,603\,c[5] - 1\,007\,645\,c[6] + \\
& 2\,690\,215\,c[7] - 2\,970\,657\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,603\,c[5] - 1\,007\,613\,c[6] + 2\,689\,575\,c[7] - 2\,967\,489\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,619\,c[5] - 1\,008\,109\,c[6] + \\
& 2\,694\,551\,c[7] - 2\,983\,761\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,619\,c[5] - 1\,008\,109\,c[6] + 2\,694\,615\,c[7] - 2\,984\,337\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,619\,c[5] - 1\,008\,077\,c[6] + \\
& 2\,693\,975\,c[7] - 2\,981\,169\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,619\,c[5] - 1\,008\,077\,c[6] + 2\,694\,039\,c[7] - 2\,981\,745\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,619\,c[5] - 1\,008\,045\,c[6] + \\
& 2\,693\,335\,c[7] - 2\,978\,129\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,635\,c[5] - 1\,008\,541\,c[6] + 2\,698\,375\,c[7] - 2\,994\,849\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,635\,c[5] - 1\,008\,509\,c[6] + \\
& 2\,697\,799\,c[7] - 2\,992\,385\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,651\,c[5] - 1\,008\,941\,c[6] + 2\,701\,623\,c[7] - 3\,003\,473\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,251\,c[5] - 1\,002\,029\,c[6] + \\
& 2\,651\,399\,c[7] - 2\,872\,089\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,267\,c[5] - 1\,002\,461\,c[6] + 2\,655\,223\,c[7] - 2\,883\,177\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,267\,c[5] - 1\,002\,429\,c[6] + \\
& 2\,654\,711\,c[7] - 2\,881\,161\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,925\,c[6] + 2\,659\,687\,c[7] - 2\,897\,433\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,893\,c[6] + \\
& 2\,659\,111\,c[7] - 2\,894\,841\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,357\,c[6] + 2\,663\,511\,c[7] - 2\,908\,521\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,357\,c[6] + \\
& 2\,663\,575\,c[7] - 2\,909\,097\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,325\,c[6] + 2\,662\,935\,c[7] - 2\,905\,929\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,299 c[5] - 1\,003\,325 c[6] + \\
& \quad 2\,662\,999 c[7] - 2\,906\,505 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,315 c[5] - 1\,003\,821 c[6] + 2\,667\,975 c[7] - 2\,922\,777 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,315 c[5] - 1\,003\,789 c[6] + \\
& \quad 2\,667\,335 c[7] - 2\,919\,609 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,315 c[5] - 1\,003\,789 c[6] + 2\,667\,399 c[7] - 2\,920\,185 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,253 c[6] + \\
& \quad 2\,671\,799 c[7] - 2\,933\,865 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,331 c[5] - 1\,004\,253 c[6] + 2\,671\,863 c[7] - 2\,934\,441 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,221 c[6] + \\
& \quad 2\,671\,223 c[7] - 2\,931\,273 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,331 c[5] - 1\,004\,189 c[6] + 2\,670\,583 c[7] - 2\,928\,233 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,685 c[6] + \\
& \quad 2\,675\,623 c[7] - 2\,944\,953 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,347 c[5] - 1\,004\,653 c[6] + 2\,675\,047 c[7] - 2\,942\,489 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,963 c[5] - 998\,141 c[6] + \\
& \quad 2\,628\,071 c[7] - 2\,819\,601 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 202\,979 c[5] - 998\,605 c[6] + 2\,632\,471 c[7] - 2\,833\,281 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,995 c[5] - 999\,069 c[6] + \\
& \quad 2\,636\,935 c[7] - 2\,847\,537 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 202\,995 c[5] - 999\,037 c[6] + 2\,636\,359 c[7] - 2\,844\,945 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,501 c[6] + \\
& \quad 2\,640\,759 c[7] - 2\,858\,625 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,501 c[6] + 2\,640\,823 c[7] - 2\,859\,201 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,469 c[6] + \\
& \quad 2\,640\,183 c[7] - 2\,856\,033 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,965 c[6] + 2\,645\,223 c[7] - 2\,872\,881 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& \quad 2\,644\,583 c[7] - 2\,869\,713 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,687 c[7] - 2\,887\,137 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] + \\
& \quad 2\,649\,047 c[7] - 2\,883\,969 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,365 c[6] + 2\,648\,407 c[7] - 2\,880\,801 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,861 c[6] + \\
& \quad 2\,653\,511 c[7] - 2\,898\,225 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,691 c[5] - 994\,749 c[6] + 2\,609\,719 c[7] - 2\,783\,385 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,717 c[6] + \\
& \quad 2\,609\,143 c[7] - 2\,780\,793 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,181 c[6] + 2\,613\,543 c[7] - 2\,794\,473 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,181 c[6] + \\
& \quad 2\,613\,607 c[7] - 2\,795\,049 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,645 c[6] + 2\,618\,007 c[7] - 2\,808\,729 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,109 c[6] + \\
& \quad 2\,622\,471 c[7] - 2\,822\,985 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,387 c[5] - 990\,429 c[6] + 2\,582\,503 c[7] - 2\,719\,233 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,893 c[6] + \\
& \quad 2\,586\,967 c[7] - 2\,733\,489 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] +
\end{aligned}$$

```

202 419 c[5] - 991 325 c[6] + 2 590 791 c[7] - 2 744 577 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 573 c[6] +
2 559 751 c[7] - 2 669 337 c[8] ≥ 0, Array[c, 8], Integers]]
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GCD[0, 0, 0, 0, 0, -48 253, -17 954, 0]
1

cert.g
-104 358 309

{0, 0, 0, 0, 0, -48 253, -17 954, 0}.Reverse[gpart[listdim17[[63]]]]
-104 358 309

cert.Transpose[A]
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314 125 723, 312 976 667, 322 923 131, 321 774 075, 331 720 539, 266 314 923,
265 165 867, 275 112 331, 273 963 275, 285 058 795, 218 504 123, 227 301 531,
179 490 731, 747 687 691, 699 876 891, 707 525 243, 642 119 627, 650 917 035,
594 308 827, 593 159 771, 603 106 235, 601 957 179, 536 551 563, 546 498 027,
545 348 971, 488 740 763, 487 591 707, 497 538 171, 507 484 635, 440 929 963,
449 727 371, 978 910 939, 922 302 731, 864 545 467, 873 342 875, 816 734 667,
815 585 611, 825 532 075, 758 977 403, 768 923 867, 701 220 139, 711 166 603,
721 113 067, 653 409 339, 1 144 728 571, 1 153 525 979, 1 096 917 771, 1 095 768 715,
1 039 160 507, 981 403 243, 1 424 911 675, 1 367 154 411, 1 319 343 611, 1 647 337 515}

chi = listdim17[[64]]
(-12 + x) (-11 + x) (-9 + x)11 (-7 + x) (5 + x)32 (-965 + 307 x - 31 x2 + x3)

CoefficientList[feasibleinterlacingpolylist[chi], x]
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A // MatrixForm
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{ 1 -65 1777 -26 433 230 411 -1 172 363 3 205 955 -3 604 275 }
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Dimensions[A]

{89, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

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Array[c, 8].Transpose[A]

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 231099 c[5] - 1183195 c[6] + 3279763 c[7] - 3787091 c[8],
 c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230747 c[5] - 1177547 c[6] +
 3240691 c[7] - 3689195 c[8], c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +
 230747 c[5] - 1177515 c[6] + 3239987 c[7] - 3685451 c[8],
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 c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230763 c[5] - 1178011 c[6] +
 3244963 c[7] - 3701467 c[8], c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +
 230763 c[5] - 1178011 c[6] + 3245027 c[7] - 3702171 c[8],
 c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230763 c[5] - 1177979 c[6] +
 3244387 c[7] - 3699003 c[8], c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +
 230763 c[5] - 1177979 c[6] + 3244451 c[7] - 3699707 c[8],
 c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230779 c[5] - 1178475 c[6] +
 3249363 c[7] - 3715019 c[8], c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +
 230779 c[5] - 1178443 c[6] + 3248787 c[7] - 3712555 c[8],
 c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172363 c[6] +
 3205955 c[7] - 3604275 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +

$$\begin{aligned}
& 230\,411\,c[5] - 1\,172\,331\,c[6] + 3\,205\,251\,c[7] - 3\,600\,531\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,331\,c[6] + \\
& 3\,205\,315\,c[7] - 3\,601\,107\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,411\,c[5] - 1\,172\,299\,c[6] + 3\,204\,611\,c[7] - 3\,597\,363\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,299\,c[6] + \\
& 3\,204\,675\,c[7] - 3\,597\,939\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,859\,c[6] + 3\,210\,867\,c[7] - 3\,619\,715\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,827\,c[6] + \\
& 3\,210\,227\,c[7] - 3\,616\,547\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,827\,c[6] + 3\,210\,291\,c[7] - 3\,617\,251\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,795\,c[6] + \\
& 3\,209\,587\,c[7] - 3\,613\,379\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,795\,c[6] + 3\,209\,651\,c[7] - 3\,614\,083\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,795\,c[6] + \\
& 3\,209\,715\,c[7] - 3\,614\,787\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,795\,c[6] + 3\,209\,715\,c[7] - 3\,614\,659\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,763\,c[6] + \\
& 3\,209\,011\,c[7] - 3\,610\,915\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,763\,c[6] + 3\,209\,075\,c[7] - 3\,611\,619\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,731\,c[6] + \\
& 3\,208\,435\,c[7] - 3\,608\,451\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,291\,c[6] + 3\,214\,627\,c[7] - 3\,630\,099\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,259\,c[6] + \\
& 3\,213\,987\,c[7] - 3\,626\,931\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,259\,c[6] + 3\,214\,051\,c[7] - 3\,627\,635\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,227\,c[6] + \\
& 3\,213\,411\,c[7] - 3\,624\,467\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,227\,c[6] + 3\,213\,475\,c[7] - 3\,625\,171\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,723\,c[6] + \\
& 3\,218\,387\,c[7] - 3\,640\,483\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,723\,c[6] + 3\,218\,451\,c[7] - 3\,641\,187\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] + \\
& 3\,217\,811\,c[7] - 3\,638\,019\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,222\,851\,c[7] - 3\,654\,739\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,675\,c[6] + \\
& 3\,176\,131\,c[7] - 3\,534\,795\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,643\,c[6] + 3\,175\,491\,c[7] - 3\,531\,627\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,611\,c[6] + \\
& 3\,174\,787\,c[7] - 3\,527\,755\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,611\,c[6] + 3\,174\,851\,c[7] - 3\,528\,459\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,579\,c[6] + \\
& 3\,174\,211\,c[7] - 3\,525\,291\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,107\,c[6] + 3\,179\,891\,c[7] - 3\,545\,179\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,075\,c[6] + \\
& 3\,179\,251\,c[7] - 3\,542\,011\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,075\,c[6] + 3\,179\,315\,c[7] - 3\,542\,715\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,043\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,178\,611\,c[7] - 3\,538\,843\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,675\,c[7] - 3\,539\,547\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,043\,c[6] + \\
& 3\,178\,739\,c[7] - 3\,540\,123\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,011\,c[6] + 3\,178\,035\,c[7] - 3\,536\,379\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,539\,c[6] + \\
& 3\,183\,651\,c[7] - 3\,555\,563\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,539\,c[6] + 3\,183\,715\,c[7] - 3\,556\,267\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,507\,c[6] + \\
& 3\,183\,011\,c[7] - 3\,552\,395\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,507\,c[6] + 3\,183\,075\,c[7] - 3\,553\,099\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,507\,c[6] + \\
& 3\,183\,139\,c[7] - 3\,553\,803\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,475\,c[6] + 3\,182\,435\,c[7] - 3\,549\,931\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,003\,c[6] + \\
& 3\,188\,115\,c[7] - 3\,569\,819\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,411\,c[7] - 3\,565\,947\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& 3\,187\,475\,c[7] - 3\,566\,651\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,539\,c[7] - 3\,567\,355\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,859\,c[6] + \\
& 3\,143\,811\,c[7] - 3\,453\,219\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,355\,c[6] + 3\,148\,915\,c[7] - 3\,470\,643\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,323\,c[6] + \\
& 3\,148\,211\,c[7] - 3\,466\,771\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,323\,c[6] + 3\,148\,275\,c[7] - 3\,467\,475\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,291\,c[6] + \\
& 3\,147\,635\,c[7] - 3\,464\,307\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,819\,c[6] + 3\,153\,379\,c[7] - 3\,484\,899\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,787\,c[6] + \\
& 3\,152\,675\,c[7] - 3\,481\,027\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,787\,c[6] + 3\,152\,739\,c[7] - 3\,481\,731\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& 3\,152\,035\,c[7] - 3\,477\,859\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,099\,c[7] - 3\,478\,563\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] + \\
& 3\,151\,459\,c[7] - 3\,475\,395\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,251\,c[6] + 3\,157\,139\,c[7] - 3\,495\,283\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& 3\,157\,203\,c[7] - 3\,495\,987\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,435\,c[7] - 3\,491\,411\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& 3\,156\,499\,c[7] - 3\,492\,115\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,715\,c[6] + 3\,161\,539\,c[7] - 3\,508\,835\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,683\,c[6] + \\
& 3\,160\,835\,c[7] - 3\,504\,963\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,571\,c[6] + 3\,117\,235\,c[7] - 3\,392\,235\,c[8],
\end{aligned}$$

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c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 159 035 c[6] +
  3 121 699 c[7] - 3 406 491 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 483 c[5] - 1 159 003 c[6] + 3 121 059 c[7] - 3 403 323 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 531 c[6] +
  3 126 803 c[7] - 3 423 915 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 499 c[5] - 1 159 499 c[6] + 3 126 099 c[7] - 3 420 043 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 499 c[6] +
  3 126 163 c[7] - 3 420 747 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 499 c[5] - 1 159 467 c[6] + 3 125 459 c[7] - 3 416 875 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 963 c[6] +
  3 130 563 c[7] - 3 434 299 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 179 c[5] - 1 154 747 c[6] + 3 095 123 c[7] - 3 345 507 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 715 c[6] +
  3 094 483 c[7] - 3 342 339 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 195 c[5] - 1 155 243 c[6] + 3 100 227 c[7] - 3 362 931 c[8] }

```

Array[c, 8].g

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49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 617 c[4] +
  11 308 715 c[5] - 57 755 947 c[6] + 159 302 211 c[7] - 182 268 195 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 617 c[4] +
  11 308 715 c[5] - 57 755 947 c[6] + 159 302 211 c[7] - 182 268 195 c[8] < 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 083 c[5] - 1 182 699 c[6] +
  3 274 787 c[7] - 3 771 075 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
  231 099 c[5] - 1 183 227 c[6] + 3 280 339 c[7] - 3 789 555 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 099 c[5] - 1 183 195 c[6] +
  3 279 763 c[7] - 3 787 091 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 747 c[5] - 1 177 547 c[6] + 3 240 691 c[7] - 3 689 195 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 515 c[6] +
  3 239 987 c[7] - 3 685 451 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 747 c[5] - 1 177 515 c[6] + 3 240 051 c[7] - 3 686 155 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 515 c[6] +
  3 240 051 c[7] - 3 686 027 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 747 c[5] - 1 177 483 c[6] + 3 239 411 c[7] - 3 682 987 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 178 043 c[6] +
  3 245 603 c[7] - 3 704 635 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 763 c[5] - 1 178 011 c[6] + 3 244 963 c[7] - 3 701 467 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 178 011 c[6] +
  3 245 027 c[7] - 3 702 171 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 763 c[5] - 1 177 979 c[6] + 3 244 387 c[7] - 3 699 003 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 177 979 c[6] +
  3 244 451 c[7] - 3 699 707 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 779 c[5] - 1 178 475 c[6] + 3 249 363 c[7] - 3 715 019 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 779 c[5] - 1 178 443 c[6] +
  3 248 787 c[7] - 3 712 555 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
  230 411 c[5] - 1 172 363 c[6] + 3 205 955 c[7] - 3 604 275 c[8] ≥ 0 &&

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$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172331 c[6] + \\
& \quad 3205251 c[7] - 3600531 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230411 c[5] - 1172331 c[6] + 3205315 c[7] - 3601107 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172299 c[6] + \\
& \quad 3204611 c[7] - 3597363 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230411 c[5] - 1172299 c[6] + 3204675 c[7] - 3597939 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172859 c[6] + \\
& \quad 3210867 c[7] - 3619715 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230427 c[5] - 1172827 c[6] + 3210227 c[7] - 3616547 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172827 c[6] + \\
& \quad 3210291 c[7] - 3617251 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230427 c[5] - 1172795 c[6] + 3209587 c[7] - 3613379 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172795 c[6] + \\
& \quad 3209651 c[7] - 3614083 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230427 c[5] - 1172795 c[6] + 3209715 c[7] - 3614787 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172795 c[6] + \\
& \quad 3209715 c[7] - 3614659 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230427 c[5] - 1172763 c[6] + 3209011 c[7] - 3610915 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172763 c[6] + \\
& \quad 3209075 c[7] - 3611619 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230427 c[5] - 1172731 c[6] + 3208435 c[7] - 3608451 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230443 c[5] - 1173291 c[6] + \\
& \quad 3214627 c[7] - 3630099 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230443 c[5] - 1173259 c[6] + 3213987 c[7] - 3626931 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230443 c[5] - 1173259 c[6] + \\
& \quad 3214051 c[7] - 3627635 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230443 c[5] - 1173227 c[6] + 3213411 c[7] - 3624467 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230443 c[5] - 1173227 c[6] + \\
& \quad 3213475 c[7] - 3625171 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230459 c[5] - 1173723 c[6] + 3218387 c[7] - 3640483 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230459 c[5] - 1173723 c[6] + \\
& \quad 3218451 c[7] - 3641187 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230459 c[5] - 1173691 c[6] + 3217811 c[7] - 3638019 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230475 c[5] - 1174187 c[6] + \\
& \quad 3222851 c[7] - 3654739 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167675 c[6] + 3176131 c[7] - 3534795 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167643 c[6] + \\
& \quad 3175491 c[7] - 3531627 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167611 c[6] + 3174787 c[7] - 3527755 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167611 c[6] + \\
& \quad 3174851 c[7] - 3528459 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167579 c[6] + 3174211 c[7] - 3525291 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168107 c[6] + \\
& \quad 3179891 c[7] - 3545179 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1168075 c[6] + 3179251 c[7] - 3542011 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168075 c[6] + \\
& \quad 3179315 c[7] - 3542715 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,611\,c[7] - 3\,538\,843\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,043\,c[6] + \\
& \quad 3\,178\,675\,c[7] - 3\,539\,547\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,739\,c[7] - 3\,540\,123\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,011\,c[6] + \\
& \quad 3\,178\,035\,c[7] - 3\,536\,379\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,539\,c[6] + 3\,183\,651\,c[7] - 3\,555\,563\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,539\,c[6] + \\
& \quad 3\,183\,715\,c[7] - 3\,556\,267\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,507\,c[6] + 3\,183\,011\,c[7] - 3\,552\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,507\,c[6] + \\
& \quad 3\,183\,075\,c[7] - 3\,553\,099\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,507\,c[6] + 3\,183\,139\,c[7] - 3\,553\,803\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,475\,c[6] + \\
& \quad 3\,182\,435\,c[7] - 3\,549\,931\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,169\,003\,c[6] + 3\,188\,115\,c[7] - 3\,569\,819\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& \quad 3\,187\,411\,c[7] - 3\,565\,947\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,475\,c[7] - 3\,566\,651\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& \quad 3\,187\,539\,c[7] - 3\,567\,355\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,859\,c[6] + 3\,143\,811\,c[7] - 3\,453\,219\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,355\,c[6] + \\
& \quad 3\,148\,915\,c[7] - 3\,470\,643\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,323\,c[6] + 3\,148\,211\,c[7] - 3\,466\,771\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,323\,c[6] + \\
& \quad 3\,148\,275\,c[7] - 3\,467\,475\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,291\,c[6] + 3\,147\,635\,c[7] - 3\,464\,307\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,819\,c[6] + \\
& \quad 3\,153\,379\,c[7] - 3\,484\,899\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,787\,c[6] + 3\,152\,675\,c[7] - 3\,481\,027\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,787\,c[6] + \\
& \quad 3\,152\,739\,c[7] - 3\,481\,731\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,035\,c[7] - 3\,477\,859\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& \quad 3\,152\,099\,c[7] - 3\,478\,563\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,459\,c[7] - 3\,475\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& \quad 3\,157\,139\,c[7] - 3\,495\,283\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,251\,c[6] + 3\,157\,203\,c[7] - 3\,495\,987\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& \quad 3\,156\,435\,c[7] - 3\,491\,411\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,499\,c[7] - 3\,492\,115\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,715\,c[6] + \\
& \quad 3\,161\,539\,c[7] - 3\,508\,835\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,683\,c[6] + 3\,160\,835\,c[7] - 3\,504\,963\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,571\,c[6] +
\end{aligned}$$

```

3 117 235 c[7] - 3 392 235 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 483 c[5] - 1 159 035 c[6] + 3 121 699 c[7] - 3 406 491 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 159 003 c[6] +
3 121 059 c[7] - 3 403 323 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 531 c[6] + 3 126 803 c[7] - 3 423 915 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 499 c[6] +
3 126 099 c[7] - 3 420 043 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 499 c[6] + 3 126 163 c[7] - 3 420 747 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 467 c[6] +
3 125 459 c[7] - 3 416 875 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 159 963 c[6] + 3 130 563 c[7] - 3 434 299 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 747 c[6] +
3 095 123 c[7] - 3 345 507 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 179 c[5] - 1 154 715 c[6] + 3 094 483 c[7] - 3 342 339 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 195 c[5] - 1 155 243 c[6] +
3 100 227 c[7] - 3 362 931 c[8] ≥ 0, Array[c, 8], Integers]]
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GCD[0, 0, -61 036 254 227, -8 328 939 996,
-759 497 210, -69 872 634, -6 493 326, -610 484]
1

cert.g
-230 428 197

{0, 0, -61 036 254 227, -8 328 939 996, -759 497 210, -69 872 634, -6 493 326, -610 484}.
Reverse[gpart[listdim17[[64]]]]
-230 428 197

cert.Transpose[A]
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10 806 187, 67 576 491, 117 301 611, 53 367 531, 103 092 651, 39 158 571, 103 103 243,
88 894 283, 103 102 155, 74 685 323, 88 893 195, 103 101 067, 24 959 115, 74 684 235,
88 892 107, 74 683 147, 60 485 867, 46 276 907, 60 484 779, 46 275 819, 60 483 691,
17 868 491, 32 076 363, 17 867 403, 3 667 947, 152 781 835, 138 572 875, 110 156 043,
124 363 915, 110 154 955, 110 164 459, 95 955 499, 110 163 371, 81 746 539,
95 954 411, 32 020 331, 81 745 451, 67 547 083, 81 754 955, 53 338 123, 67 545 995,
81 753 867, 53 337 035, 53 346 539, 24 929 707, 39 137 579, 53 345 451, 117 217 259,
117 225 675, 88 808 843, 103 016 715, 88 807 755, 103 025 131, 74 608 299,
88 816 171, 60 399 339, 74 607 211, 60 398 251, 60 407 755, 74 615 627, 31 990 923,
46 198 795, 31 999 339, 3 582 507, 95 870 059, 81 669 515, 67 460 555, 81 677 931,
53 261 099, 67 468 971, 39 052 139, 39 060 555, 60 322 315, 46 113 355, 60 330 731}

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chi = listdim17[[65]]
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$$(-11 + x) (-9 + x)^{11} (5 + x)^{32} (-81028 + 44123x - 9402x^2 + 980x^3 - 50x^4 + x^5)$$

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CoefficientList[feasibleinterlacingpolylist[chi], x]
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```

Dimensions[A]

{210, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3185, 87073, -1295617, 11308715, -57754539, 159279491, -182187619}

Array[c, 8].Transpose[A]

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$$\begin{aligned}
& 230\,747\,c[5] - 1\,177\,451\,c[6] + 3\,238\,899\,c[7] - 3\,681\,099\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,747\,c[5] - 1\,177\,419\,c[6] + \\
& 3\,238\,195\,c[7] - 3\,677\,355\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& 230\,763\,c[5] - 1\,177\,979\,c[6] + 3\,244\,451\,c[7] - 3\,699\,707\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,763\,c[5] - 1\,177\,979\,c[6] + \\
& 3\,244\,515\,c[7] - 3\,700\,411\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& 230\,763\,c[5] - 1\,177\,979\,c[6] + 3\,244\,515\,c[7] - 3\,700\,283\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,763\,c[5] - 1\,177\,979\,c[6] + \\
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\end{aligned}$$

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 $3115315 c[7] - 3382731 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229467 c[5] - 1158475 c[6] + 3115379 c[7] - 3383307 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229483 c[5] - 1159003 c[6] +$
 $3121059 c[7] - 3403323 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229483 c[5] - 1158971 c[6] + 3120419 c[7] - 3400155 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229483 c[5] - 1158971 c[6] +$
 $3120483 c[7] - 3400731 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$

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229 483 c[5] - 1 158 939 c[6] + 3 119 715 c[7] - 3 396 283 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 158 939 c[6] +
3 119 779 c[7] - 3 396 987 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 499 c[6] + 3 126 163 c[7] - 3 420 747 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 467 c[6] +
3 125 523 c[7] - 3 417 579 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 435 c[6] + 3 124 819 c[7] - 3 413 707 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 435 c[6] +
3 124 883 c[7] - 3 414 411 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 159 963 c[6] + 3 130 627 c[7] - 3 435 003 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 755 c[6] +
3 084 915 c[7] - 3 310 659 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 723 c[6] + 3 084 275 c[7] - 3 307 491 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 219 c[6] +
3 089 379 c[7] - 3 324 915 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 187 c[6] + 3 088 739 c[7] - 3 321 747 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 715 c[6] +
3 094 483 c[7] - 3 342 339 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 843 c[5] - 1 149 435 c[6] + 3 057 699 c[7] - 3 246 507 c[8]}

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Array[c, 8].g

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49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 617 c[4] +
11 308 715 c[5] - 57 754 539 c[6] + 159 279 491 c[7] - 182 187 619 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 617 c[4] +
11 308 715 c[5] - 57 754 539 c[6] + 159 279 491 c[7] - 182 187 619 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 083 c[5] - 1 182 667 c[6] +
3 274 275 c[7] - 3 769 315 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
231 083 c[5] - 1 182 667 c[6] + 3 274 339 c[7] - 3 770 019 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 099 c[5] - 1 183 163 c[6] +
3 279 251 c[7] - 3 785 331 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 747 c[5] - 1 177 515 c[6] + 3 240 243 c[7] - 3 688 011 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 483 c[6] +
3 239 475 c[7] - 3 683 563 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 747 c[5] - 1 177 483 c[6] + 3 239 539 c[7] - 3 684 267 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 483 c[6] +
3 239 539 c[7] - 3 684 139 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 747 c[5] - 1 177 451 c[6] + 3 238 835 c[7] - 3 680 523 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 451 c[6] +
3 238 835 c[7] - 3 680 395 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 747 c[5] - 1 177 451 c[6] + 3 238 899 c[7] - 3 681 099 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 419 c[6] +
3 238 195 c[7] - 3 677 355 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 763 c[5] - 1 177 979 c[6] + 3 244 451 c[7] - 3 699 707 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 177 979 c[6] +
3 244 515 c[7] - 3 700 411 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +

```

$$\begin{aligned}
& 230\,763\,c[5] - 1\,177\,979\,c[6] + 3\,244\,515\,c[7] - 3\,700\,283\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,763\,c[5] - 1\,177\,979\,c[6] + \\
& \quad 3\,244\,579\,c[7] - 3\,701\,115\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,763\,c[5] - 1\,177\,979\,c[6] + 3\,244\,579\,c[7] - 3\,700\,987\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,763\,c[5] - 1\,177\,979\,c[6] + \\
& \quad 3\,244\,643\,c[7] - 3\,701\,691\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,763\,c[5] - 1\,177\,947\,c[6] + 3\,243\,811\,c[7] - 3\,696\,539\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,763\,c[5] - 1\,177\,947\,c[6] + \\
& \quad 3\,243\,875\,c[7] - 3\,697\,243\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,763\,c[5] - 1\,177\,947\,c[6] + 3\,243\,875\,c[7] - 3\,697\,115\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,763\,c[5] - \\
& \quad 1\,177\,947\,c[6] + 3\,243\,939\,c[7] - 3\,697\,947\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,763\,c[5] - 1\,177\,947\,c[6] + \\
& \quad 3\,243\,939\,c[7] - 3\,697\,819\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,763\,c[5] - 1\,177\,915\,c[6] + 3\,243\,235\,c[7] - 3\,694\,075\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,763\,c[5] - 1\,177\,915\,c[6] + \\
& \quad 3\,243\,299\,c[7] - 3\,694\,779\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,779\,c[5] - 1\,178\,475\,c[6] + 3\,249\,491\,c[7] - 3\,716\,427\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,779\,c[5] - 1\,178\,443\,c[6] + \\
& \quad 3\,248\,851\,c[7] - 3\,713\,259\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,779\,c[5] - 1\,178\,443\,c[6] + 3\,248\,915\,c[7] - 3\,713\,963\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,779\,c[5] - 1\,178\,443\,c[6] + \\
& \quad 3\,248\,979\,c[7] - 3\,714\,539\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,779\,c[5] - 1\,178\,411\,c[6] + 3\,248\,275\,c[7] - 3\,710\,795\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,779\,c[5] - 1\,178\,411\,c[6] + \\
& \quad 3\,248\,339\,c[7] - 3\,711\,499\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,795\,c[5] - 1\,178\,907\,c[6] + 3\,253\,315\,c[7] - 3\,727\,515\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,771\,c[6] + \\
& \quad 3\,199\,059\,c[7] - 3\,578\,499\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,299\,c[6] + 3\,204\,739\,c[7] - 3\,598\,515\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,267\,c[6] + \\
& \quad 3\,203\,971\,c[7] - 3\,594\,067\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,267\,c[6] + 3\,204\,035\,c[7] - 3\,594\,771\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,267\,c[6] + \\
& \quad 3\,204\,099\,c[7] - 3\,595\,347\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,411\,c[5] - 1\,172\,235\,c[6] + 3\,203\,395\,c[7] - 3\,591\,603\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,235\,c[6] + \\
& \quad 3\,203\,459\,c[7] - 3\,592\,179\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,427\,c[5] - 1\,172\,795\,c[6] + 3\,209\,715\,c[7] - 3\,614\,787\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,795\,c[6] + \\
& \quad 3\,209\,715\,c[7] - 3\,614\,659\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,427\,c[5] - 1\,172\,795\,c[6] + 3\,209\,779\,c[7] - 3\,615\,363\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,795\,c[6] + \\
& \quad 3\,209\,843\,c[7] - 3\,615\,939\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,427\,c[5] - 1\,172\,763\,c[6] + 3\,208\,947\,c[7] - 3\,610\,211\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,763\,c[6] + \\
& \quad 3\,209\,011\,c[7] - 3\,610\,915\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,427\,c[5] - 1\,172\,763\,c[6] + 3\,209\,075\,c[7] - 3\,611\,619\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,763\,c[6] + \\
& 3\,209\,075\,c[7] - 3\,611\,491\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,763\,c[6] + 3\,209\,139\,c[7] - 3\,612\,195\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,763\,c[6] + \\
& 3\,209\,203\,c[7] - 3\,612\,771\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,731\,c[6] + 3\,208\,371\,c[7] - 3\,607\,747\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,731\,c[6] + \\
& 3\,208\,435\,c[7] - 3\,608\,451\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,731\,c[6] + 3\,208\,435\,c[7] - 3\,608\,323\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,731\,c[6] + \\
& 3\,208\,499\,c[7] - 3\,609\,027\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,731\,c[6] + 3\,208\,499\,c[7] - 3\,608\,899\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,699\,c[6] + \\
& 3\,207\,795\,c[7] - 3\,605\,283\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,699\,c[6] + 3\,207\,859\,c[7] - 3\,605\,859\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,323\,c[6] + \\
& 3\,215\,395\,c[7] - 3\,634\,675\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,291\,c[6] + 3\,214\,755\,c[7] - 3\,631\,507\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,291\,c[6] + \\
& 3\,214\,819\,c[7] - 3\,632\,211\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,291\,c[6] + 3\,214\,883\,c[7] - 3\,632\,787\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,259\,c[6] + \\
& 3\,214\,051\,c[7] - 3\,627\,635\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,259\,c[6] + 3\,214\,115\,c[7] - 3\,628\,339\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,259\,c[6] + \\
& 3\,214\,179\,c[7] - 3\,629\,043\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,259\,c[6] + 3\,214\,179\,c[7] - 3\,628\,915\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,259\,c[6] + \\
& 3\,214\,243\,c[7] - 3\,629\,619\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,259\,c[6] + 3\,214\,307\,c[7] - 3\,630\,195\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,227\,c[6] + \\
& 3\,213\,411\,c[7] - 3\,624\,467\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,227\,c[6] + 3\,213\,475\,c[7] - 3\,625\,171\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,227\,c[6] + \\
& 3\,213\,539\,c[7] - 3\,625\,875\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,227\,c[6] + 3\,213\,539\,c[7] - 3\,625\,747\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,227\,c[6] + \\
& 3\,213\,603\,c[7] - 3\,626\,451\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,195\,c[6] + 3\,212\,835\,c[7] - 3\,622\,003\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,195\,c[6] + \\
& 3\,212\,835\,c[7] - 3\,621\,875\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,195\,c[6] + 3\,212\,899\,c[7] - 3\,622\,707\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,195\,c[6] + \\
& 3\,212\,899\,c[7] - 3\,622\,579\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,163\,c[6] + 3\,212\,195\,c[7] - 3\,618\,835\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,163\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,212\,259\,c[7] - 3\,619\,539\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,755\,c[6] + 3\,219\,155\,c[7] - 3\,645\,059\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,755\,c[6] + \\
& 3\,219\,219\,c[7] - 3\,645\,763\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,723\,c[6] + 3\,218\,515\,c[7] - 3\,641\,891\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,723\,c[6] + \\
& 3\,218\,579\,c[7] - 3\,642\,595\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,723\,c[6] + 3\,218\,643\,c[7] - 3\,643\,299\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,723\,c[6] + \\
& 3\,218\,643\,c[7] - 3\,643\,171\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,217\,811\,c[7] - 3\,638\,019\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] + \\
& 3\,217\,875\,c[7] - 3\,638\,723\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,217\,939\,c[7] - 3\,639\,427\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] + \\
& 3\,217\,939\,c[7] - 3\,639\,299\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,218\,003\,c[7] - 3\,640\,131\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,659\,c[6] + \\
& 3\,217\,235\,c[7] - 3\,635\,555\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,222\,979\,c[7] - 3\,656\,147\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,155\,c[6] + \\
& 3\,222\,275\,c[7] - 3\,652\,275\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,075\,c[5] - 1\,167\,051\,c[6] + 3\,168\,531\,c[7] - 3\,505\,275\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,051\,c[6] + \\
& 3\,168\,595\,c[7] - 3\,505\,851\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,579\,c[6] + 3\,174\,211\,c[7] - 3\,525\,291\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,579\,c[6] + \\
& 3\,174\,275\,c[7] - 3\,525\,867\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,547\,c[6] + 3\,173\,507\,c[7] - 3\,521\,419\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,547\,c[6] + \\
& 3\,173\,571\,c[7] - 3\,522\,123\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,547\,c[6] + 3\,173\,635\,c[7] - 3\,522\,699\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,515\,c[6] + \\
& 3\,172\,931\,c[7] - 3\,518\,955\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,515\,c[6] + 3\,172\,995\,c[7] - 3\,519\,531\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,515\,c[6] + \\
& 3\,173\,059\,c[7] - 3\,520\,107\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,483\,c[6] + 3\,172\,355\,c[7] - 3\,516\,363\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,483\,c[6] + \\
& 3\,172\,419\,c[7] - 3\,516\,939\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,107\,c[6] + 3\,179\,955\,c[7] - 3\,545\,883\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,075\,c[6] + \\
& 3\,179\,315\,c[7] - 3\,542\,715\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,075\,c[6] + 3\,179\,379\,c[7] - 3\,543\,291\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,043\,c[6] + \\
& 3\,178\,611\,c[7] - 3\,538\,843\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,675\,c[7] - 3\,539\,547\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168043 c[6] + \\
& \quad 3178739 c[7] - 3540123 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1168011 c[6] + 3177971 c[7] - 3535675 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168011 c[6] + \\
& \quad 3178035 c[7] - 3536379 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1168011 c[6] + 3178099 c[7] - 3536955 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168011 c[6] + \\
& \quad 3178163 c[7] - 3537531 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1167979 c[6] + 3177331 c[7] - 3532507 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167979 c[6] + \\
& \quad 3177395 c[7] - 3533211 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1167979 c[6] + 3177395 c[7] - 3533083 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167979 c[6] + \\
& \quad 3177459 c[7] - 3533787 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1167947 c[6] + 3176755 c[7] - 3530043 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167947 c[6] + \\
& \quad 3176819 c[7] - 3530619 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168603 c[6] + 3185059 c[7] - 3563307 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168571 c[6] + \\
& \quad 3184419 c[7] - 3560139 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168539 c[6] + 3183715 c[7] - 3556267 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168539 c[6] + \\
& \quad 3183779 c[7] - 3556971 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168539 c[6] + 3183843 c[7] - 3557547 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168507 c[6] + \\
& \quad 3183075 c[7] - 3553099 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168507 c[6] + 3183139 c[7] - 3553803 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168507 c[6] + \\
& \quad 3183203 c[7] - 3554379 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168475 c[6] + 3182371 c[7] - 3549227 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168475 c[6] + \\
& \quad 3182435 c[7] - 3549931 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168475 c[6] + 3182499 c[7] - 3550635 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168475 c[6] + \\
& \quad 3182499 c[7] - 3550507 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168475 c[6] + 3182563 c[7] - 3551211 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168443 c[6] + \\
& \quad 3181795 c[7] - 3546763 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168443 c[6] + 3181859 c[7] - 3547467 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168443 c[6] + \\
& \quad 3181859 c[7] - 3547339 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1169035 c[6] + 3188883 c[7] - 3574395 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1169003 c[6] + \\
& \quad 3188179 c[7] - 3570523 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1169003 c[6] + 3188243 c[7] - 3571227 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1169003 c[6] + \\
& \quad 3188307 c[7] - 3571803 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,539\,c[7] - 3\,567\,355\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& \quad 3\,187\,603\,c[7] - 3\,568\,059\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,186\,835\,c[7] - 3\,563\,483\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,939\,c[6] + \\
& \quad 3\,186\,899\,c[7] - 3\,564\,187\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,186\,963\,c[7] - 3\,564\,891\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,907\,c[6] + \\
& \quad 3\,186\,195\,c[7] - 3\,560\,315\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,467\,c[6] + 3\,192\,643\,c[7] - 3\,584\,779\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,435\,c[6] + \\
& \quad 3\,191\,939\,c[7] - 3\,580\,907\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,192\,003\,c[7] - 3\,581\,611\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,363\,c[6] + \\
& \quad 3\,138\,707\,c[7] - 3\,435\,795\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,755\,c[5] - 1\,162\,331\,c[6] + 3\,138\,067\,c[7] - 3\,432\,627\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,299\,c[6] + \\
& \quad 3\,137\,491\,c[7] - 3\,430\,035\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,859\,c[6] + 3\,143\,811\,c[7] - 3\,453\,219\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,827\,c[6] + \\
& \quad 3\,143\,171\,c[7] - 3\,450\,051\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,795\,c[6] + 3\,142\,531\,c[7] - 3\,446\,883\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,795\,c[6] + \\
& \quad 3\,142\,595\,c[7] - 3\,447\,459\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,763\,c[6] + 3\,141\,891\,c[7] - 3\,443\,715\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,763\,c[6] + \\
& \quad 3\,141\,955\,c[7] - 3\,444\,291\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,731\,c[6] + 3\,141\,379\,c[7] - 3\,441\,699\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,323\,c[6] + \\
& \quad 3\,148\,275\,c[7] - 3\,467\,475\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,291\,c[6] + 3\,147\,635\,c[7] - 3\,464\,307\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,259\,c[6] + \\
& \quad 3\,146\,931\,c[7] - 3\,460\,435\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,259\,c[6] + 3\,146\,995\,c[7] - 3\,461\,139\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,259\,c[6] + \\
& \quad 3\,147\,059\,c[7] - 3\,461\,715\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,227\,c[6] + 3\,146\,355\,c[7] - 3\,457\,971\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,227\,c[6] + \\
& \quad 3\,146\,419\,c[7] - 3\,458\,547\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,195\,c[6] + 3\,145\,715\,c[7] - 3\,454\,803\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,195\,c[6] + \\
& \quad 3\,145\,779\,c[7] - 3\,455\,379\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,819\,c[6] + 3\,153\,379\,c[7] - 3\,484\,899\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,787\,c[6] + \\
& \quad 3\,152\,739\,c[7] - 3\,481\,731\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,035\,c[7] - 3\,477\,859\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,152\,099\,c[7] - 3\,478\,563\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,163\,c[7] - 3\,479\,139\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] + \\
& 3\,151\,395\,c[7] - 3\,474\,691\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,459\,c[7] - 3\,475\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] + \\
& 3\,151\,523\,c[7] - 3\,475\,971\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,755\,c[7] - 3\,471\,523\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& 3\,150\,819\,c[7] - 3\,472\,227\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,283\,c[6] + 3\,157\,843\,c[7] - 3\,499\,155\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& 3\,157\,203\,c[7] - 3\,495\,987\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,499\,c[7] - 3\,492\,115\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& 3\,156\,563\,c[7] - 3\,492\,819\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,187\,c[6] + 3\,155\,859\,c[7] - 3\,488\,947\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,187\,c[6] + \\
& 3\,155\,923\,c[7] - 3\,489\,651\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,779\,c[6] + 3\,162\,947\,c[7] - 3\,516\,579\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,747\,c[6] + \\
& 3\,162\,307\,c[7] - 3\,513\,411\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,715\,c[6] + 3\,161\,603\,c[7] - 3\,509\,539\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,715\,c[6] + \\
& 3\,161\,667\,c[7] - 3\,510\,243\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,683\,c[6] + 3\,160\,963\,c[7] - 3\,506\,371\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,435\,c[5] - 1\,157\,579\,c[6] + \\
& 3\,107\,027\,c[7] - 3\,357\,387\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,451\,c[5] - 1\,158\,043\,c[6] + 3\,111\,491\,c[7] - 3\,371\,643\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,158\,011\,c[6] + \\
& 3\,110\,915\,c[7] - 3\,369\,051\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,539\,c[6] + 3\,116\,595\,c[7] - 3\,389\,067\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,507\,c[6] + \\
& 3\,115\,955\,c[7] - 3\,385\,899\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,315\,c[7] - 3\,382\,731\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,475\,c[6] + \\
& 3\,115\,379\,c[7] - 3\,383\,307\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,159\,003\,c[6] + 3\,121\,059\,c[7] - 3\,403\,323\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,971\,c[6] + \\
& 3\,120\,419\,c[7] - 3\,400\,155\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,971\,c[6] + 3\,120\,483\,c[7] - 3\,400\,731\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,939\,c[6] + \\
& 3\,119\,715\,c[7] - 3\,396\,283\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,939\,c[6] + 3\,119\,779\,c[7] - 3\,396\,987\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,499\,c[6] + \\
& 3\,126\,163\,c[7] - 3\,420\,747\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,499\,c[5] - 1\,159\,467\,c[6] + 3\,125\,523\,c[7] - 3\,417\,579\,c[8] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 435 c[6] +
  3 124 819 c[7] - 3 413 707 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
  229 499 c[5] - 1 159 435 c[6] + 3 124 883 c[7] - 3 414 411 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 963 c[6] +
  3 130 627 c[7] - 3 435 003 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 147 c[5] - 1 153 755 c[6] + 3 084 915 c[7] - 3 310 659 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 723 c[6] +
  3 084 275 c[7] - 3 307 491 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 163 c[5] - 1 154 219 c[6] + 3 089 379 c[7] - 3 324 915 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 187 c[6] +
  3 088 739 c[7] - 3 321 747 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 179 c[5] - 1 154 715 c[6] + 3 094 483 c[7] - 3 342 339 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 843 c[5] - 1 149 435 c[6] +
  3 057 699 c[7] - 3 246 507 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -3 673 067 283, -954 462 930, -155 719 105, -21 817 365, -2 834 629}

GCD[0, 0, 0, -3 673 067 283, -954 462 930, -155 719 105, -21 817 365, -2 834 629]
1

cert.g
-200 571 608

{0, 0, 0, -3 673 067 283, -954 462 930, -155 719 105, -21 817 365, -2 834 629}.
Reverse[gpart[listdim17[[65]]]]
-200 571 608

```

cert.Transpose[A]

```
{1202891672, 1802159128, 4370696, 2274958392, 1439253560, 2038521016,
 1675688504, 1802083640, 1439251128, 2038518584, 1802081208, 603565096,
 1202832552, 840000040, 1802100008, 1439267496, 2038534952, 603562664,
 1202830120, 839997608, 1802097576, 1439265064, 1202827688, 1802095144,
 4311576, 4309144, 603576600, 840011544, 603574168, 1202841624,
 4320648, 2511301480, 2274882904, 1439178072, 2038445528, 2274880472,
 2038443096, 2274878040, 1802026952, 1439194440, 2038461896, 2274896840,
 603489608, 1202757064, 1802024520, 1439192008, 2038459464, 2274894408,
 1202754632, 1802022088, 1439189576, 2038457032, 1675624520, 1802019656,
 2038454600, 1202775864, 1202773432, 1802040888, 2038475832, 603503544,
 1202771000, 1802038456, 1439205944, 2038473400, 2274908344, 603501112,
 1202768568, 1802036024, 1439203512, 2038470968, 1202766136, 839933624,
 1802033592, 1439201080, 1202763704, 1802031160, 603517480, 1202784936,
 603515048, 1202782504, 1802049960, 1439217448, 4245160, 603512616,
 1202780072, 839947560, 1802047528, 603510184, 603526552, 4256664,
 2038370040, 2274804984, 1801951464, 2038386408, 1202681576, 1801949032,
 2038383976, 1801946600, 2038381544, 2274816488, 2038379112, 2274814056,
 1801967832, 1801965400, 2038400344, 1202695512, 1801962968, 2038397912,
 1202693080, 1801960536, 2038395480, 2274830424, 1202690648, 1801958104,
 1439125592, 2038393048, 1801955672, 2038390616, 1801981768, 1801979336,
 1202709448, 1801976904, 2038411848, 1202707016, 1801974472, 2038409416,
 603437128, 1202704584, 1801972040, 1439139528, 2038406984, 1202702152,
 1801969608, 1439137096, 1801990840, 1202720952, 1801988408, 2038423352,
 1202718520, 1801985976, 603448632, 1202716088, 1801983544, 603446200,
 1202732456, 603462568, 1202730024, 1801875976, 1801873544, 2038306056,
 1801889912, 1801887480, 1801885048, 2038319992, 1801882616, 2038317560,
 2274750072, 1801901416, 1801898984, 1202629096, 1801896552, 2038331496,
 1801894120, 2038329064, 1801891688, 2038326632, 1801915352, 1801912920,
 1202643032, 1801910488, 2038345432, 1202640600, 1801908056, 2038343000,
 1202638168, 1801905624, 1801926856, 1801924424, 1202654536, 1801921992,
 1202652104, 1801919560, 1801940792, 1801938360, 1202668472, 1801935928,
 1202666040, 1801809560, 1801821064, 2038253576, 1801835000, 1801832568,
 1801830136, 2038265080, 1801846504, 1801844072, 2038279016, 1202574184,
 1801841640, 1801860440, 1801858008, 1202588120, 1801855576, 1801871944,
 1801768584, 1801766152, 1801780088, 1801777656, 1801794024, 1801713672}
```

chi = listdim17[[66]]

$(-12 + x) (-9 + x)^{12} (5 + x)^{32} (113 - 22x + x^2) (73 - 18x + x^2)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {420 699, -317 624, 96 171, -14 992, 1273, -56, 1},
  {410 819, -314 784, 95 907, -14 984, 1273, -56, 1},
  {413 107, -315 168, 95 923, -14 984, 1273, -56, 1},
  {414 275, -315 456, 95 939, -14 984, 1273, -56, 1},
  {399 003, -311 592, 95 627, -14 976, 1273, -56, 1},
  {401 291, -311 976, 95 643, -14 976, 1273, -56, 1},
  {400 939, -311 944, 95 643, -14 976, 1273, -56, 1},
  {403 227, -312 328, 95 659, -14 976, 1273, -56, 1},
  {402 459, -312 264, 95 659, -14 976, 1273, -56, 1},
  {404 395, -312 616, 95 675, -14 976, 1273, -56, 1},
  {406 683, -313 000, 95 691, -14 976, 1273, -56, 1},
  {407 851, -313 288, 95 707, -14 976, 1273, -56, 1},
  {389 123, -308 752, 95 363, -14 968, 1273, -56, 1},
  {390 643, -309 072, 95 379, -14 968, 1273, -56, 1},
  {392 579, -309 424, 95 395, -14 968, 1273, -56, 1},
  {396 035, -310 096, 95 427, -14 968, 1273, -56, 1},
  {377 307, -305 560, 95 083, -14 960, 1273, -56, 1},
  {380 763, -306 232, 95 115, -14 960, 1273, -56, 1},
  {384 219, -306 904, 95 147, -14 960, 1273, -56, 1},
  {385 387, -307 192, 95 163, -14 960, 1273, -56, 1},
  {370 467, -303 360, 94 851, -14 952, 1273, -56, 1},
  {373 571, -304 000, 94 883, -14 952, 1273, -56, 1},
  {365 211, -301 480, 94 635, -14 944, 1273, -56, 1} }
```

```

A = {{420 699, -317 624, 96 171, -14 992, 1273, -56, 1},
      {410 819, -314 784, 95 907, -14 984, 1273, -56, 1},
      {413 107, -315 168, 95 923, -14 984, 1273, -56, 1},
      {414 275, -315 456, 95 939, -14 984, 1273, -56, 1},
      {399 003, -311 592, 95 627, -14 976, 1273, -56, 1},
      {401 291, -311 976, 95 643, -14 976, 1273, -56, 1},
      {400 939, -311 944, 95 643, -14 976, 1273, -56, 1},
      {403 227, -312 328, 95 659, -14 976, 1273, -56, 1},
      {402 459, -312 264, 95 659, -14 976, 1273, -56, 1},
      {404 395, -312 616, 95 675, -14 976, 1273, -56, 1},
      {406 683, -313 000, 95 691, -14 976, 1273, -56, 1},
      {407 851, -313 288, 95 707, -14 976, 1273, -56, 1},
      {389 123, -308 752, 95 363, -14 968, 1273, -56, 1},
      {390 643, -309 072, 95 379, -14 968, 1273, -56, 1},
      {392 579, -309 424, 95 395, -14 968, 1273, -56, 1},
      {396 035, -310 096, 95 427, -14 968, 1273, -56, 1},
      {377 307, -305 560, 95 083, -14 960, 1273, -56, 1},
      {380 763, -306 232, 95 115, -14 960, 1273, -56, 1},
      {384 219, -306 904, 95 147, -14 960, 1273, -56, 1},
      {385 387, -307 192, 95 163, -14 960, 1273, -56, 1},
      {370 467, -303 360, 94 851, -14 952, 1273, -56, 1},
      {373 571, -304 000, 94 883, -14 952, 1273, -56, 1},
      {365 211, -301 480, 94 635, -14 944, 1273, -56, 1}};

```

```
A // MatrixForm
```

```

( 420 699 -317 624 96 171 -14 992 1273 -56 1 )
( 410 819 -314 784 95 907 -14 984 1273 -56 1 )
( 413 107 -315 168 95 923 -14 984 1273 -56 1 )
( 414 275 -315 456 95 939 -14 984 1273 -56 1 )
( 399 003 -311 592 95 627 -14 976 1273 -56 1 )
( 401 291 -311 976 95 643 -14 976 1273 -56 1 )
( 400 939 -311 944 95 643 -14 976 1273 -56 1 )
( 403 227 -312 328 95 659 -14 976 1273 -56 1 )
( 402 459 -312 264 95 659 -14 976 1273 -56 1 )
( 404 395 -312 616 95 675 -14 976 1273 -56 1 )
( 406 683 -313 000 95 691 -14 976 1273 -56 1 )
( 407 851 -313 288 95 707 -14 976 1273 -56 1 )
( 389 123 -308 752 95 363 -14 968 1273 -56 1 )
( 390 643 -309 072 95 379 -14 968 1273 -56 1 )
( 392 579 -309 424 95 395 -14 968 1273 -56 1 )
( 396 035 -310 096 95 427 -14 968 1273 -56 1 )
( 377 307 -305 560 95 083 -14 960 1273 -56 1 )
( 380 763 -306 232 95 115 -14 960 1273 -56 1 )
( 384 219 -306 904 95 147 -14 960 1273 -56 1 )
( 385 387 -307 192 95 163 -14 960 1273 -56 1 )
( 370 467 -303 360 94 851 -14 952 1273 -56 1 )
( 373 571 -304 000 94 883 -14 952 1273 -56 1 )
( 365 211 -301 480 94 635 -14 944 1273 -56 1 )

```


Dimensions[A]

{23, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{20 232 459, -15 446 840, 4 700 699, -734 224, 62 377, -2744, 49}

Array[c, 7].Transpose[A]

{420 699 c[1] - 317 624 c[2] + 96 171 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 819 c[1] - 314 784 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 107 c[1] - 315 168 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 275 c[1] - 315 456 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 399 003 c[1] - 311 592 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 401 291 c[1] - 311 976 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 400 939 c[1] - 311 944 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 227 c[1] - 312 328 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 402 459 c[1] - 312 264 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 395 c[1] - 312 616 c[2] + 95 675 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 406 683 c[1] - 313 000 c[2] + 95 691 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 407 851 c[1] - 313 288 c[2] + 95 707 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 389 123 c[1] - 308 752 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 390 643 c[1] - 309 072 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 392 579 c[1] - 309 424 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 396 035 c[1] - 310 096 c[2] + 95 427 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 380 763 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 384 219 c[1] - 306 904 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 385 387 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 370 467 c[1] - 303 360 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 373 571 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 365 211 c[1] - 301 480 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7]}

Array[c, 7].g

20 232 459 c[1] - 15 446 840 c[2] + 4 700 699 c[3] -
 734 224 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =
  Flatten[Array[c, 7] /. FindInstance[20 232 459 c[1] - 15 446 840 c[2] + 4 700 699 c[3] -
    734 224 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
    420 699 c[1] - 317 624 c[2] + 96 171 c[3] - 14 992 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
    0 && 410 819 c[1] - 314 784 c[2] + 95 907 c[3] - 14 984 c[4] +
    1273 c[5] - 56 c[6] + c[7] ≥ 0 && 413 107 c[1] - 315 168 c[2] +
    95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
    414 275 c[1] - 315 456 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
    0 && 399 003 c[1] - 311 592 c[2] + 95 627 c[3] - 14 976 c[4] +
    1273 c[5] - 56 c[6] + c[7] ≥ 0 && 401 291 c[1] - 311 976 c[2] +
    95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
    400 939 c[1] - 311 944 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
    0 && 403 227 c[1] - 312 328 c[2] + 95 659 c[3] - 14 976 c[4] +
    1273 c[5] - 56 c[6] + c[7] ≥ 0 && 402 459 c[1] - 312 264 c[2] +
    95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
    404 395 c[1] - 312 616 c[2] + 95 675 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
    0 && 406 683 c[1] - 313 000 c[2] + 95 691 c[3] - 14 976 c[4] +
    1273 c[5] - 56 c[6] + c[7] ≥ 0 && 407 851 c[1] - 313 288 c[2] +
    95 707 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
    389 123 c[1] - 308 752 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
    0 && 390 643 c[1] - 309 072 c[2] + 95 379 c[3] - 14 968 c[4] +
    1273 c[5] - 56 c[6] + c[7] ≥ 0 && 392 579 c[1] - 309 424 c[2] +
    95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
    396 035 c[1] - 310 096 c[2] + 95 427 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
    0 && 377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] +
    1273 c[5] - 56 c[6] + c[7] ≥ 0 && 380 763 c[1] - 306 232 c[2] +
    95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
    384 219 c[1] - 306 904 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
    0 && 385 387 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] +
    1273 c[5] - 56 c[6] + c[7] ≥ 0 && 370 467 c[1] - 303 360 c[2] +
    94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
    373 571 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
    0 && 365 211 c[1] - 301 480 c[2] + 94 635 c[3] - 14 944 c[4] +
    1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{16 317, 128 112, 857 188, 3 242 353, 0, 0, 0}

GCD[16 317, 128 112, 857 188, 3 242 353, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 3 242 353, 857 188, 128 112, 16 317}

cert.g
-23 147 237

{16 317, 128 112, 857 188, 3 242 353, 0, 0, 0}.gpart[listdim17[[66]]]
-23 147 237

```

```
cert.Transpose[A]
```

```
{370667, 2637979, 4491275, 368283, 4695995, 6549291, 4905291, 6758587,
 2426299, 2635595, 4488891, 365899, 6963307, 4484315, 4693611, 2423915,
 9021323, 6751627, 4481931, 358939, 6330651, 2416955, 2205275}
```

```
chi = listdim17[[67]]
```

```
(-11 + x) (-9 + x)11 (5 + x)32 (-80996 + 44123 x - 9402 x2 + 980 x3 - 50 x4 + x5)
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Dimensions[A]

{178, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3185, 87073, -1295617, 11308715, -57753131, 159256771, -182107043}

Array[c, 8].Transpose[A]

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$$\begin{aligned}
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& 230\,443\,c[5] - 1\,173\,195\,c[6] + 3\,212\,899\,c[7] - 3\,622\,707\,c[8], \\
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& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,166\,987\,c[6] + \\
& 3\,167\,315\,c[7] - 3\,499\,515\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,075\,c[5] - 1\,166\,987\,c[6] + 3\,167\,379\,c[7] - 3\,500\,091\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,515\,c[6] +
\end{aligned}$$

$3\,172\,995\,c[7] - 3\,519\,531\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,091\,c[5] - 1\,167\,515\,c[6] + 3\,173\,059\,c[7] - 3\,520\,107\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,483\,c[6] +$
 $3\,172\,291\,c[7] - 3\,515\,787\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,091\,c[5] - 1\,167\,483\,c[6] + 3\,172\,355\,c[7] - 3\,516\,363\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,483\,c[6] +$
 $3\,172\,419\,c[7] - 3\,516\,939\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,091\,c[5] - 1\,167\,483\,c[6] + 3\,172\,483\,c[7] - 3\,517\,515\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,451\,c[6] +$
 $3\,171\,715\,c[7] - 3\,513\,195\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,091\,c[5] - 1\,167\,451\,c[6] + 3\,171\,779\,c[7] - 3\,513\,771\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,451\,c[6] +$
 $3\,171\,843\,c[7] - 3\,514\,347\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,739\,c[7] - 3\,540\,123\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,011\,c[6] +$
 $3\,178\,035\,c[7] - 3\,536\,379\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,107\,c[5] - 1\,168\,011\,c[6] + 3\,178\,099\,c[7] - 3\,536\,955\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,979\,c[6] +$
 $3\,177\,331\,c[7] - 3\,532\,507\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,107\,c[5] - 1\,167\,979\,c[6] + 3\,177\,395\,c[7] - 3\,533\,211\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,979\,c[6] +$
 $3\,177\,459\,c[7] - 3\,533\,787\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,107\,c[5] - 1\,167\,979\,c[6] + 3\,177\,523\,c[7] - 3\,534\,363\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,947\,c[6] +$
 $3\,176\,755\,c[7] - 3\,530\,043\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,107\,c[5] - 1\,167\,947\,c[6] + 3\,176\,819\,c[7] - 3\,530\,619\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,947\,c[6] +$
 $3\,176\,883\,c[7] - 3\,531\,195\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,107\,c[5] - 1\,167\,915\,c[6] + 3\,176\,115\,c[7] - 3\,526\,875\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,915\,c[6] +$
 $3\,176\,179\,c[7] - 3\,527\,451\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,123\,c[5] - 1\,168\,539\,c[6] + 3\,183\,779\,c[7] - 3\,556\,971\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,507\,c[6] +$
 $3\,183\,139\,c[7] - 3\,553\,803\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,123\,c[5] - 1\,168\,507\,c[6] + 3\,183\,203\,c[7] - 3\,554\,379\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,475\,c[6] +$
 $3\,182\,499\,c[7] - 3\,550\,635\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,123\,c[5] - 1\,168\,475\,c[6] + 3\,182\,563\,c[7] - 3\,551\,211\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,475\,c[6] +$
 $3\,182\,627\,c[7] - 3\,551\,787\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,123\,c[5] - 1\,168\,443\,c[6] + 3\,181\,795\,c[7] - 3\,546\,763\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,443\,c[6] +$
 $3\,181\,859\,c[7] - 3\,547\,467\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,123\,c[5] - 1\,168\,443\,c[6] + 3\,181\,923\,c[7] - 3\,548\,043\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,411\,c[6] +$
 $3\,181\,219\,c[7] - 3\,544\,299\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,123\,c[5] - 1\,168\,411\,c[6] + 3\,181\,283\,c[7] - 3\,544\,875\,c[8],$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168379 c[6] + \\
& \quad 3180579 c[7] - 3541131 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1169035 c[6] + 3188883 c[7] - 3574395 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1169003 c[6] + \\
& \quad 3188243 c[7] - 3571227 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168971 c[6] + 3187603 c[7] - 3568059 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168971 c[6] + \\
& \quad 3187667 c[7] - 3568635 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168939 c[6] + 3186963 c[7] - 3564891 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168939 c[6] + \\
& \quad 3187027 c[7] - 3565467 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168907 c[6] + 3186259 c[7] - 3561019 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168907 c[6] + \\
& \quad 3186323 c[7] - 3561723 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168875 c[6] + 3185619 c[7] - 3557851 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169499 c[6] + \\
& \quad 3193347 c[7] - 3588651 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169467 c[6] + 3192707 c[7] - 3585483 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169467 c[6] + \\
& \quad 3192771 c[7] - 3586059 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169435 c[6] + 3192067 c[7] - 3582315 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229755 c[5] - 1162267 c[6] + \\
& \quad 3136851 c[7] - 3426867 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229755 c[5] - 1162235 c[6] + 3136275 c[7] - 3424275 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162795 c[6] + \\
& \quad 3142531 c[7] - 3446883 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162763 c[6] + 3141891 c[7] - 3443715 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162763 c[6] + \\
& \quad 3141955 c[7] - 3444291 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162731 c[6] + 3141251 c[7] - 3440547 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162731 c[6] + \\
& \quad 3141315 c[7] - 3441123 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162731 c[6] + 3141379 c[7] - 3441699 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162699 c[6] + \\
& \quad 3140675 c[7] - 3437955 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162699 c[6] + 3140739 c[7] - 3438531 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163291 c[6] + \\
& \quad 3147635 c[7] - 3464307 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163259 c[6] + 3146995 c[7] - 3461139 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163227 c[6] + \\
& \quad 3146355 c[7] - 3457971 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163227 c[6] + 3146419 c[7] - 3458547 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163195 c[6] + \\
& \quad 3145715 c[7] - 3454803 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163195 c[6] + 3145779 c[7] - 3455379 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163195 c[6] + \\
& \quad 3145843 c[7] - 3455955 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +
\end{aligned}$$

$229\,787\,c[5] - 1\,163\,163\,c[6] + 3\,145\,075\,c[7] - 3\,451\,635\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,163\,c[6] +$
 $3\,145\,139\,c[7] - 3\,452\,211\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,099\,c[7] - 3\,478\,563\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] +$
 $3\,151\,459\,c[7] - 3\,475\,395\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,523\,c[7] - 3\,475\,971\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] +$
 $3\,150\,819\,c[7] - 3\,472\,227\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,883\,c[7] - 3\,472\,803\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,659\,c[6] +$
 $3\,150\,179\,c[7] - 3\,469\,059\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,563\,c[7] - 3\,492\,819\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,187\,c[6] +$
 $3\,155\,923\,c[7] - 3\,489\,651\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,819\,c[5] - 1\,164\,155\,c[6] + 3\,155\,283\,c[7] - 3\,486\,483\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,715\,c[6] +$
 $3\,161\,667\,c[7] - 3\,510\,243\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,835\,c[5] - 1\,164\,683\,c[6] + 3\,161\,027\,c[7] - 3\,507\,075\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,435\,c[5] - 1\,157\,547\,c[6] +$
 $3\,106\,387\,c[7] - 3\,354\,219\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,435\,c[5] - 1\,157\,515\,c[6] + 3\,105\,747\,c[7] - 3\,351\,051\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,435\,c[5] - 1\,157\,515\,c[6] +$
 $3\,105\,811\,c[7] - 3\,351\,627\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,451\,c[5] - 1\,158\,011\,c[6] + 3\,110\,851\,c[7] - 3\,368\,475\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,979\,c[6] +$
 $3\,110\,211\,c[7] - 3\,365\,307\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,451\,c[5] - 1\,157\,979\,c[6] + 3\,110\,275\,c[7] - 3\,365\,883\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,947\,c[6] +$
 $3\,109\,635\,c[7] - 3\,362\,715\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,451\,c[5] - 1\,157\,947\,c[6] + 3\,109\,699\,c[7] - 3\,363\,291\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,507\,c[6] +$
 $3\,115\,955\,c[7] - 3\,385\,899\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,315\,c[7] - 3\,382\,731\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,443\,c[6] +$
 $3\,114\,675\,c[7] - 3\,379\,563\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,467\,c[5] - 1\,158\,443\,c[6] + 3\,114\,739\,c[7] - 3\,380\,139\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,411\,c[6] +$
 $3\,114\,035\,c[7] - 3\,376\,395\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,467\,c[5] - 1\,158\,411\,c[6] + 3\,114\,099\,c[7] - 3\,376\,971\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,971\,c[6] +$
 $3\,120\,419\,c[7] - 3\,400\,155\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,483\,c[5] - 1\,158\,939\,c[6] + 3\,119\,779\,c[7] - 3\,396\,987\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,939\,c[6] +$
 $3\,119\,843\,c[7] - 3\,397\,563\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,483\,c[5] - 1\,158\,907\,c[6] + 3\,119\,139\,c[7] - 3\,393\,819\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,435\,c[6] +$

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3 124 883 c[7] - 3 414 411 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 115 c[5] - 1 152 763 c[6] + 3 074 707 c[7] - 3 275 811 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 227 c[6] +
3 079 171 c[7] - 3 290 067 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 131 c[5] - 1 153 195 c[6] + 3 078 595 c[7] - 3 287 475 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 691 c[6] +
3 083 635 c[7] - 3 304 323 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 659 c[6] + 3 082 995 c[7] - 3 301 155 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 187 c[6] +
3 088 739 c[7] - 3 321 747 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 827 c[5] - 1 148 907 c[6] + 3 051 955 c[7] - 3 225 915 c[8] }

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Array[c, 8].g

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49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 617 c[4] +
11 308 715 c[5] - 57 753 131 c[6] + 159 256 771 c[7] - 182 107 043 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 617 c[4] +
11 308 715 c[5] - 57 753 131 c[6] + 159 256 771 c[7] - 182 107 043 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 083 c[5] - 1 182 635 c[6] +
3 273 763 c[7] - 3 767 427 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
231 099 c[5] - 1 183 131 c[6] + 3 278 739 c[7] - 3 783 571 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 099 c[5] - 1 183 131 c[6] +
3 278 803 c[7] - 3 784 147 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] +
231 099 c[5] - 1 183 099 c[6] + 3 278 163 c[7] - 3 781 107 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 731 c[5] - 1 176 923 c[6] +
3 233 283 c[7] - 3 661 659 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 747 c[5] - 1 177 483 c[6] + 3 239 731 c[7] - 3 685 995 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 451 c[6] +
3 239 027 c[7] - 3 682 251 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 747 c[5] - 1 177 419 c[6] + 3 238 323 c[7] - 3 678 507 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 419 c[6] +
3 238 323 c[7] - 3 678 379 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 763 c[5] - 1 177 979 c[6] + 3 244 707 c[7] - 3 702 267 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 177 979 c[6] +
3 244 771 c[7] - 3 702 843 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 763 c[5] - 1 177 947 c[6] + 3 244 003 c[7] - 3 698 523 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 177 947 c[6] +
3 244 067 c[7] - 3 699 099 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 763 c[5] - 1 177 915 c[6] + 3 243 299 c[7] - 3 694 779 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 177 915 c[6] +
3 243 299 c[7] - 3 694 651 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 763 c[5] - 1 177 915 c[6] + 3 243 363 c[7] - 3 695 355 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 177 915 c[6] +
3 243 363 c[7] - 3 695 227 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 763 c[5] - 1 177 883 c[6] + 3 242 659 c[7] - 3 691 611 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 177 883 c[6] +

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$$\begin{aligned}
& 3\,242\,723\,c[7] - 3\,692\,187\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& 230\,779\,c[5] - 1\,178\,443\,c[6] + 3\,248\,979\,c[7] - 3\,714\,667\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,779\,c[5] - \\
& 1\,178\,443\,c[6] + 3\,249\,043\,c[7] - 3\,715\,371\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,779\,c[5] - 1\,178\,443\,c[6] + \\
& 3\,249\,043\,c[7] - 3\,715\,243\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& 230\,779\,c[5] - 1\,178\,411\,c[6] + 3\,248\,339\,c[7] - 3\,711\,499\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,779\,c[5] - 1\,178\,411\,c[6] + \\
& 3\,248\,403\,c[7] - 3\,712\,203\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& 230\,779\,c[5] - 1\,178\,411\,c[6] + 3\,248\,403\,c[7] - 3\,712\,075\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,779\,c[5] - 1\,178\,411\,c[6] + \\
& 3\,248\,467\,c[7] - 3\,712\,779\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& 230\,779\,c[5] - 1\,178\,379\,c[6] + 3\,247\,699\,c[7] - 3\,708\,331\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,779\,c[5] - 1\,178\,379\,c[6] + \\
& 3\,247\,763\,c[7] - 3\,709\,035\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& 230\,795\,c[5] - 1\,178\,875\,c[6] + 3\,252\,803\,c[7] - 3\,725\,755\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,395\,c[5] - 1\,171\,707\,c[6] + \\
& 3\,197\,843\,c[7] - 3\,572\,739\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,411\,c[5] - 1\,172\,235\,c[6] + 3\,203\,523\,c[7] - 3\,592\,755\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,411\,c[5] - 1\,172\,203\,c[6] + \\
& 3\,202\,819\,c[7] - 3\,589\,011\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,411\,c[5] - 1\,172\,203\,c[6] + 3\,202\,883\,c[7] - 3\,589\,587\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,731\,c[6] + \\
& 3\,208\,499\,c[7] - 3\,609\,027\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,731\,c[6] + 3\,208\,563\,c[7] - 3\,609\,603\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,731\,c[6] + \\
& 3\,208\,627\,c[7] - 3\,610\,179\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,699\,c[6] + 3\,207\,795\,c[7] - 3\,605\,283\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,699\,c[6] + \\
& 3\,207\,859\,c[7] - 3\,605\,859\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,699\,c[6] + 3\,207\,923\,c[7] - 3\,606\,435\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,699\,c[6] + \\
& 3\,207\,987\,c[7] - 3\,607\,011\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,427\,c[5] - 1\,172\,667\,c[6] + 3\,207\,219\,c[7] - 3\,602\,691\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,667\,c[6] + \\
& 3\,207\,283\,c[7] - 3\,603\,267\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,259\,c[6] + 3\,214\,243\,c[7] - 3\,629\,619\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,259\,c[6] + \\
& 3\,214\,307\,c[7] - 3\,630\,195\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,227\,c[6] + 3\,213\,475\,c[7] - 3\,625\,171\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,227\,c[6] + \\
& 3\,213\,539\,c[7] - 3\,625\,875\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,227\,c[6] + 3\,213\,603\,c[7] - 3\,626\,451\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,227\,c[6] + \\
& 3\,213\,667\,c[7] - 3\,627\,027\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,195\,c[6] + 3\,212\,835\,c[7] - 3\,622\,003\,c[8] \geq 0 \&\& \\
c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,195\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,212\,899\,c[7] - 3\,622\,707\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,195\,c[6] + 3\,212\,899\,c[7] - 3\,622\,579\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,195\,c[6] + \\
& 3\,212\,963\,c[7] - 3\,623\,283\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,195\,c[6] + 3\,213\,027\,c[7] - 3\,623\,859\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,163\,c[6] + \\
& 3\,212\,259\,c[7] - 3\,619\,539\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,163\,c[6] + 3\,212\,259\,c[7] - 3\,619\,411\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,163\,c[6] + \\
& 3\,212\,323\,c[7] - 3\,620\,115\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,443\,c[5] - 1\,173\,131\,c[6] + 3\,211\,619\,c[7] - 3\,616\,371\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,755\,c[6] + \\
& 3\,219\,283\,c[7] - 3\,646\,467\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,755\,c[6] + 3\,219\,347\,c[7] - 3\,647\,043\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,723\,c[6] + \\
& 3\,218\,643\,c[7] - 3\,643\,299\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,723\,c[6] + 3\,218\,707\,c[7] - 3\,643\,875\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,723\,c[6] + \\
& 3\,218\,771\,c[7] - 3\,644\,451\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,217\,939\,c[7] - 3\,639\,427\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] + \\
& 3\,218\,003\,c[7] - 3\,640\,131\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,218\,067\,c[7] - 3\,640\,707\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,659\,c[6] + \\
& 3\,217\,299\,c[7] - 3\,636\,259\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,659\,c[6] + 3\,217\,363\,c[7] - 3\,636\,963\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,659\,c[6] + \\
& 3\,217\,363\,c[7] - 3\,636\,835\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,459\,c[5] - 1\,173\,627\,c[6] + 3\,216\,659\,c[7] - 3\,633\,091\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,627\,c[6] + \\
& 3\,216\,723\,c[7] - 3\,633\,795\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,223\,043\,c[7] - 3\,656\,851\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,187\,c[6] + \\
& 3\,223\,107\,c[7] - 3\,657\,555\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,475\,c[5] - 1\,174\,155\,c[6] + 3\,222\,403\,c[7] - 3\,653\,683\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,155\,c[6] + \\
& 3\,222\,467\,c[7] - 3\,654\,387\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,075\,c[5] - 1\,166\,987\,c[6] + 3\,167\,315\,c[7] - 3\,499\,515\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,166\,987\,c[6] + \\
& 3\,167\,379\,c[7] - 3\,500\,091\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,515\,c[6] + 3\,172\,995\,c[7] - 3\,519\,531\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,515\,c[6] + \\
& 3\,173\,059\,c[7] - 3\,520\,107\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,483\,c[6] + 3\,172\,291\,c[7] - 3\,515\,787\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,483\,c[6] + \\
& 3\,172\,355\,c[7] - 3\,516\,363\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,091\,c[5] - 1\,167\,483\,c[6] + 3\,172\,419\,c[7] - 3\,516\,939\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167483 c[6] + \\
& \quad 3172483 c[7] - 3517515 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167451 c[6] + 3171715 c[7] - 3513195 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167451 c[6] + \\
& \quad 3171779 c[7] - 3513771 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167451 c[6] + 3171843 c[7] - 3514347 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168043 c[6] + \\
& \quad 3178739 c[7] - 3540123 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1168011 c[6] + 3178035 c[7] - 3536379 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168011 c[6] + \\
& \quad 3178099 c[7] - 3536955 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1167979 c[6] + 3177331 c[7] - 3532507 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167979 c[6] + \\
& \quad 3177395 c[7] - 3533211 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1167979 c[6] + 3177459 c[7] - 3533787 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167979 c[6] + \\
& \quad 3177523 c[7] - 3534363 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1167947 c[6] + 3176755 c[7] - 3530043 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167947 c[6] + \\
& \quad 3176819 c[7] - 3530619 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1167947 c[6] + 3176883 c[7] - 3531195 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167915 c[6] + \\
& \quad 3176115 c[7] - 3526875 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1167915 c[6] + 3176179 c[7] - 3527451 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168539 c[6] + \\
& \quad 3183779 c[7] - 3556971 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168507 c[6] + 3183139 c[7] - 3553803 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168507 c[6] + \\
& \quad 3183203 c[7] - 3554379 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168475 c[6] + 3182499 c[7] - 3550635 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168475 c[6] + \\
& \quad 3182563 c[7] - 3551211 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168475 c[6] + 3182627 c[7] - 3551787 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168443 c[6] + \\
& \quad 3181795 c[7] - 3546763 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168443 c[6] + 3181859 c[7] - 3547467 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168443 c[6] + \\
& \quad 3181923 c[7] - 3548043 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168411 c[6] + 3181219 c[7] - 3544299 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168411 c[6] + \\
& \quad 3181283 c[7] - 3544875 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168379 c[6] + 3180579 c[7] - 3541131 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1169035 c[6] + \\
& \quad 3188883 c[7] - 3574395 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1169003 c[6] + 3188243 c[7] - 3571227 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168971 c[6] + \\
& \quad 3187603 c[7] - 3568059 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,667\,c[7] - 3\,568\,635\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,939\,c[6] + \\
& \quad 3\,186\,963\,c[7] - 3\,564\,891\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,187\,027\,c[7] - 3\,565\,467\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,907\,c[6] + \\
& \quad 3\,186\,259\,c[7] - 3\,561\,019\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,907\,c[6] + 3\,186\,323\,c[7] - 3\,561\,723\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,875\,c[6] + \\
& \quad 3\,185\,619\,c[7] - 3\,557\,851\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,499\,c[6] + 3\,193\,347\,c[7] - 3\,588\,651\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,467\,c[6] + \\
& \quad 3\,192\,707\,c[7] - 3\,585\,483\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,467\,c[6] + 3\,192\,771\,c[7] - 3\,586\,059\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,435\,c[6] + \\
& \quad 3\,192\,067\,c[7] - 3\,582\,315\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,755\,c[5] - 1\,162\,267\,c[6] + 3\,136\,851\,c[7] - 3\,426\,867\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,235\,c[6] + \\
& \quad 3\,136\,275\,c[7] - 3\,424\,275\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,795\,c[6] + 3\,142\,531\,c[7] - 3\,446\,883\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,763\,c[6] + \\
& \quad 3\,141\,891\,c[7] - 3\,443\,715\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,763\,c[6] + 3\,141\,955\,c[7] - 3\,444\,291\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,731\,c[6] + \\
& \quad 3\,141\,251\,c[7] - 3\,440\,547\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,731\,c[6] + 3\,141\,315\,c[7] - 3\,441\,123\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,731\,c[6] + \\
& \quad 3\,141\,379\,c[7] - 3\,441\,699\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,699\,c[6] + 3\,140\,675\,c[7] - 3\,437\,955\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,699\,c[6] + \\
& \quad 3\,140\,739\,c[7] - 3\,438\,531\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,291\,c[6] + 3\,147\,635\,c[7] - 3\,464\,307\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,259\,c[6] + \\
& \quad 3\,146\,995\,c[7] - 3\,461\,139\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,227\,c[6] + 3\,146\,355\,c[7] - 3\,457\,971\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,227\,c[6] + \\
& \quad 3\,146\,419\,c[7] - 3\,458\,547\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,195\,c[6] + 3\,145\,715\,c[7] - 3\,454\,803\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,195\,c[6] + \\
& \quad 3\,145\,779\,c[7] - 3\,455\,379\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,195\,c[6] + 3\,145\,843\,c[7] - 3\,455\,955\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,163\,c[6] + \\
& \quad 3\,145\,075\,c[7] - 3\,451\,635\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,163\,c[6] + 3\,145\,139\,c[7] - 3\,452\,211\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& \quad 3\,152\,099\,c[7] - 3\,478\,563\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,459\,c[7] - 3\,475\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,151\,523\,c[7] - 3\,475\,971\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,819\,c[7] - 3\,472\,227\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& 3\,150\,883\,c[7] - 3\,472\,803\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,659\,c[6] + 3\,150\,179\,c[7] - 3\,469\,059\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& 3\,156\,563\,c[7] - 3\,492\,819\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,187\,c[6] + 3\,155\,923\,c[7] - 3\,489\,651\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,155\,c[6] + \\
& 3\,155\,283\,c[7] - 3\,486\,483\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,715\,c[6] + 3\,161\,667\,c[7] - 3\,510\,243\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,683\,c[6] + \\
& 3\,161\,027\,c[7] - 3\,507\,075\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,435\,c[5] - 1\,157\,547\,c[6] + 3\,106\,387\,c[7] - 3\,354\,219\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,435\,c[5] - 1\,157\,515\,c[6] + \\
& 3\,105\,747\,c[7] - 3\,351\,051\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,435\,c[5] - 1\,157\,515\,c[6] + 3\,105\,811\,c[7] - 3\,351\,627\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,158\,011\,c[6] + \\
& 3\,110\,851\,c[7] - 3\,368\,475\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,451\,c[5] - 1\,157\,979\,c[6] + 3\,110\,211\,c[7] - 3\,365\,307\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,979\,c[6] + \\
& 3\,110\,275\,c[7] - 3\,365\,883\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,451\,c[5] - 1\,157\,947\,c[6] + 3\,109\,635\,c[7] - 3\,362\,715\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,947\,c[6] + \\
& 3\,109\,699\,c[7] - 3\,363\,291\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,507\,c[6] + 3\,115\,955\,c[7] - 3\,385\,899\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,475\,c[6] + \\
& 3\,115\,315\,c[7] - 3\,382\,731\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,443\,c[6] + 3\,114\,675\,c[7] - 3\,379\,563\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,443\,c[6] + \\
& 3\,114\,739\,c[7] - 3\,380\,139\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,411\,c[6] + 3\,114\,035\,c[7] - 3\,376\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,411\,c[6] + \\
& 3\,114\,099\,c[7] - 3\,376\,971\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,971\,c[6] + 3\,120\,419\,c[7] - 3\,400\,155\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,939\,c[6] + \\
& 3\,119\,779\,c[7] - 3\,396\,987\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,939\,c[6] + 3\,119\,843\,c[7] - 3\,397\,563\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,907\,c[6] + \\
& 3\,119\,139\,c[7] - 3\,393\,819\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,499\,c[5] - 1\,159\,435\,c[6] + 3\,124\,883\,c[7] - 3\,414\,411\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,115\,c[5] - 1\,152\,763\,c[6] + \\
& 3\,074\,707\,c[7] - 3\,275\,811\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& 229\,131\,c[5] - 1\,153\,227\,c[6] + 3\,079\,171\,c[7] - 3\,290\,067\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,131\,c[5] - 1\,153\,195\,c[6] + \\
& 3\,078\,595\,c[7] - 3\,287\,475\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& 229\,147\,c[5] - 1\,153\,691\,c[6] + 3\,083\,635\,c[7] - 3\,304\,323\,c[8] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 659 c[6] +
  3 082 995 c[7] - 3 301 155 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 163 c[5] - 1 154 187 c[6] + 3 088 739 c[7] - 3 321 747 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 827 c[5] - 1 148 907 c[6] +
  3 051 955 c[7] - 3 225 915 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -136 206 225, -35 394 372, -5 774 558, -809 058, -105 118}

GCD[0, 0, 0, -136 206 225, -35 394 372, -5 774 558, -809 058, -105 118]
1

cert.g
-196 780 701

{0, 0, 0, -136 206 225, -35 394 372, -5 774 558, -809 058, -105 118}.
Reverse[gpart[listdim17[[67]]]]
-196 780 701

```

```
cert.Transpose[A]
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```

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 52 885 051, 44 114 235, 30 659 131, 44 134 171, 52 902 427, 35 363 355,
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 35 358 235, 4 386 555, 26 609 915, 13 154 811, 4 383 995, 26 607 355, 13 152 251,
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 52 801 859, 35 282 723, 44 050 979, 52 819 235, 26 511 907, 35 280 163,
 44 048 419, 52 816 675, 35 277 603, 44 045 859, 35 300 099, 44 068 355, 4 305 923,
 26 529 283, 35 297 539, 44 065 795, 4 303 363, 26 526 723, 13 071 619, 35 294 979,
 44 063 235, 26 524 163, 13 069 059, 35 292 419, 26 521 603, 26 546 659, 35 314 915,
 26 544 099, 35 312 355, 44 080 611, 4 318 179, 26 541 539, 35 309 795, 4 315 619,
 26 538 979, 13 083 875, 4 313 059, 26 536 419, 4 332 995, 26 556 355, 4 330 435,
 26 553 795, 43 952 971, 52 721 227, 35 202 091, 43 970 347, 26 431 275, 35 199 531,
 43 967 787, 52 736 043, 35 196 971, 43 965 227, 52 733 483, 35 219 467, 26 448 651,
 35 216 907, 4 222 731, 26 446 091, 35 214 347, 43 982 603, 26 443 531, 35 211 787,
 43 980 043, 26 440 971, 35 209 227, 26 466 027, 26 463 467, 35 231 723, 26 460 907,
 35 229 163, 43 997 419, 4 234 987, 26 458 347, 35 226 603, 26 455 787, 35 224 043,
 26 453 227, 26 480 843, 26 478 283, 26 475 723, 35 243 979, 26 473 163, 35 241 419,
 4 247 243, 26 470 603, 4 244 683, 26 493 099, 26 490 539, 35 258 795, 26 487 979,
 35 118 899, 43 884 595, 26 368 019, 26 365 459, 35 133 715, 26 362 899, 35 131 155,
 43 899 411, 35 128 595, 43 896 851, 26 382 835, 26 380 275, 26 377 715, 35 145 971,
 26 375 155, 35 143 411, 43 911 667, 26 372 595, 35 140 851, 26 395 091, 26 392 531,
 35 160 787, 26 389 971, 35 158 227, 26 387 411, 26 407 347, 26 404 787, 26 402 227,
 26 422 163, 26 419 603, 26 284 827, 26 282 267, 35 050 523, 26 297 083, 26 294 523,
 35 062 779, 35 060 219, 43 828 475, 26 311 899, 26 309 339, 26 306 779, 35 075 035,
 26 304 219, 35 072 475, 26 324 155, 26 321 595, 35 089 851, 26 319 035, 26 336 411,
 26 213 891, 26 226 147, 34 991 843, 26 238 403, 26 235 843, 26 253 219, 26 167 467}

```

```
chi = listdim17[[68]]
```

$$(-13 + x) (-11 + x) (-9 + x)^{12} (5 + x)^{32} (-692 + 247 x - 28 x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

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  {413699, -315392, 95939, -14984, 1273, -56, 1},
  {396747, -311176, 95611, -14976, 1273, -56, 1},
  {398555, -311528, 95627, -14976, 1273, -56, 1},
  {398619, -311528, 95627, -14976, 1273, -56, 1},
  {400427, -311880, 95643, -14976, 1273, -56, 1},
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  {400075, -311848, 95643, -14976, 1273, -56, 1},
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  {401947, -312200, 95659, -14976, 1273, -56, 1},
  {404523, -312616, 95675, -14976, 1273, -56, 1},
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  {403819, -312552, 95675, -14976, 1273, -56, 1},
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  {406043, -312936, 95691, -14976, 1273, -56, 1},
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  {390483, -309040, 95379, -14968, 1273, -56, 1},
  {390131, -309008, 95379, -14968, 1273, -56, 1},
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  {392355, -309392, 95395, -14968, 1273, -56, 1},
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{395 395, -310 032, 95 427, -14 968, 1273, -56, 1},
{397 683, -310 416, 95 443, -14 968, 1273, -56, 1},
{378 315, -305 816, 95 099, -14 960, 1273, -56, 1},
{380 187, -306 168, 95 115, -14 960, 1273, -56, 1},
{379 899, -306 136, 95 115, -14 960, 1273, -56, 1},
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{364 923, -301 448, 94 635, -14 944, 1273, -56, 1},
{366 795, -301 800, 94 651, -14 944, 1273, -56, 1},

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{356 499, -298 928, 94 387, -14 936, 1273, -56, 1}}
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      {412 243, -315 072, 95 923, -14 984, 1273, -56, 1},
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      {413 699, -315 392, 95 939, -14 984, 1273, -56, 1},
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      {402 363, -312 232, 95 659, -14 976, 1273, -56, 1},
      {401 947, -312 200, 95 659, -14 976, 1273, -56, 1},
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      {403 819, -312 552, 95 675, -14 976, 1273, -56, 1},
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{373 347, -303 968, 94 883, -14 952, 1273, -56, 1},
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{354 915, -298 608, 94 371, -14 936, 1273, -56, 1},
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```
A // MatrixForm
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```

( 408 915 -314 400 95 891 -14 984 1273 -56 1 )
( 408 499 -314 368 95 891 -14 984 1273 -56 1 )
( 410 787 -314 752 95 907 -14 984 1273 -56 1 )
( 410 371 -314 720 95 907 -14 984 1273 -56 1 )
( 412 505 -315 104 95 907 -14 984 1273 -56 1 )

```

412 595	-315 104	95 923	-14 984	1273	-56	1
412 659	-315 104	95 923	-14 984	1273	-56	1
412 179	-315 072	95 923	-14 984	1273	-56	1
412 243	-315 072	95 923	-14 984	1273	-56	1
414 051	-315 424	95 939	-14 984	1273	-56	1
414 115	-315 424	95 939	-14 984	1273	-56	1
413 699	-315 392	95 939	-14 984	1273	-56	1
396 747	-311 176	95 611	-14 976	1273	-56	1
398 555	-311 528	95 627	-14 976	1273	-56	1
398 619	-311 528	95 627	-14 976	1273	-56	1
400 427	-311 880	95 643	-14 976	1273	-56	1
400 491	-311 880	95 643	-14 976	1273	-56	1
400 075	-311 848	95 643	-14 976	1273	-56	1
402 235	-312 232	95 659	-14 976	1273	-56	1
402 299	-312 232	95 659	-14 976	1273	-56	1
402 363	-312 232	95 659	-14 976	1273	-56	1
401 947	-312 200	95 659	-14 976	1273	-56	1
404 523	-312 616	95 675	-14 976	1273	-56	1
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404 235	-312 584	95 675	-14 976	1273	-56	1
403 755	-312 552	95 675	-14 976	1273	-56	1
403 819	-312 552	95 675	-14 976	1273	-56	1
406 395	-312 968	95 691	-14 976	1273	-56	1
406 043	-312 936	95 691	-14 976	1273	-56	1
406 107	-312 936	95 691	-14 976	1273	-56	1
405 691	-312 904	95 691	-14 976	1273	-56	1
386 451	-308 304	95 347	-14 968	1273	-56	1
388 323	-308 656	95 363	-14 968	1273	-56	1
390 483	-309 040	95 379	-14 968	1273	-56	1
390 131	-309 008	95 379	-14 968	1273	-56	1
390 195	-309 008	95 379	-14 968	1273	-56	1
392 355	-309 392	95 395	-14 968	1273	-56	1
391 939	-309 360	95 395	-14 968	1273	-56	1
392 003	-309 360	95 395	-14 968	1273	-56	1
392 067	-309 360	95 395	-14 968	1273	-56	1
394 163	-309 744	95 411	-14 968	1273	-56	1
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395 811	-310 064	95 427	-14 968	1273	-56	1
395 395	-310 032	95 427	-14 968	1273	-56	1
397 683	-310 416	95 443	-14 968	1273	-56	1
378 315	-305 816	95 099	-14 960	1273	-56	1
380 187	-306 168	95 115	-14 960	1273	-56	1
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382 059	-306 520	95 131	-14 960	1273	-56	1
381 707	-306 488	95 131	-14 960	1273	-56	1
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383 931 -306 872 95 147 -14 960 1273 -56 1
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385 451 -307 192 95 163 -14 960 1273 -56 1
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387 387 -307 544 95 179 -14 960 1273 -56 1
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371 475 -303 616 94 867 -14 952 1273 -56 1
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375 155 -304 320 94 899 -14 952 1273 -56 1
375 219 -304 320 94 899 -14 952 1273 -56 1
377 091 -304 672 94 915 -14 952 1273 -56 1
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363 339 -301 128 94 619 -14 944 1273 -56 1
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365 211 -301 480 94 635 -14 944 1273 -56 1
364 923 -301 448 94 635 -14 944 1273 -56 1
366 795 -301 800 94 651 -14 944 1273 -56 1
354 915 -298 608 94 371 -14 936 1273 -56 1
356 499 -298 928 94 387 -14 936 1273 -56 1

```

Dimensions[A]

{86, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{20 225 163, -15 445 432, 4 700 699, -734 224, 62 377, -2744, 49}

Array[c, 7].Transpose[A]

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 408 499 c[1] - 314 368 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 787 c[1] - 314 752 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 410 371 c[1] - 314 720 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 595 c[1] - 315 104 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 659 c[1] - 315 104 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 179 c[1] - 315 072 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 412 243 c[1] - 315 072 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 051 c[1] - 315 424 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 414 115 c[1] - 315 424 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 699 c[1] - 315 392 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 396 747 c[1] - 311 176 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 398 555 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 398 619 c[1] - 311 528 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 400 427 c[1] - 311 880 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
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```

[illegible]

```

385 451 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
385 515 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
385 099 c[1] - 307 160 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
387 387 c[1] - 307 544 c[2] + 95 179 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
371 763 c[1] - 303 648 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
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373 923 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
373 571 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
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365 211 c[1] - 301 480 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
364 923 c[1] - 301 448 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
366 795 c[1] - 301 800 c[2] + 94 651 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
354 915 c[1] - 298 608 c[2] + 94 371 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7],
356 499 c[1] - 298 928 c[2] + 94 387 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 225 163 c[1] - 15 445 432 c[2] + 4 700 699 c[3] -
734 224 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 225 163 c[1] - 15 445 432 c[2] + 4 700 699 c[3] -
734 224 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
408 915 c[1] - 314 400 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 408 499 c[1] - 314 368 c[2] + 95 891 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 410 787 c[1] - 314 752 c[2] +
95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
410 371 c[1] - 314 720 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 412 595 c[1] - 315 104 c[2] + 95 923 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 412 659 c[1] - 315 104 c[2] +
95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
412 179 c[1] - 315 072 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 412 243 c[1] - 315 072 c[2] + 95 923 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 414 051 c[1] - 315 424 c[2] +
95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
414 115 c[1] - 315 424 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 413 699 c[1] - 315 392 c[2] + 95 939 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 396 747 c[1] - 311 176 c[2] +
95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&

```

$$\begin{aligned}
& 398\,555\,c[1] - 311\,528\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 398\,619\,c[1] - 311\,528\,c[2] + 95\,627\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 400\,427\,c[1] - 311\,880\,c[2] + \\
& 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 400\,491\,c[1] - 311\,880\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 400\,075\,c[1] - 311\,848\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 402\,235\,c[1] - 312\,232\,c[2] + \\
& 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 402\,299\,c[1] - 312\,232\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,363\,c[1] - 312\,232\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 401\,947\,c[1] - 312\,200\,c[2] + \\
& 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 404\,523\,c[1] - 312\,616\,c[2] + 95\,675\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 404\,107\,c[1] - 312\,584\,c[2] + 95\,675\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 404\,171\,c[1] - 312\,584\,c[2] + \\
& 95\,675\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 404\,235\,c[1] - 312\,584\,c[2] + 95\,675\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 403\,755\,c[1] - 312\,552\,c[2] + 95\,675\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 403\,819\,c[1] - 312\,552\,c[2] + \\
& 95\,675\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 406\,395\,c[1] - 312\,968\,c[2] + 95\,691\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 406\,043\,c[1] - 312\,936\,c[2] + 95\,691\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 406\,107\,c[1] - 312\,936\,c[2] + \\
& 95\,691\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 405\,691\,c[1] - 312\,904\,c[2] + 95\,691\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 386\,451\,c[1] - 308\,304\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 388\,323\,c[1] - 308\,656\,c[2] + \\
& 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 390\,483\,c[1] - 309\,040\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 390\,131\,c[1] - 309\,008\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,195\,c[1] - 309\,008\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 392\,355\,c[1] - 309\,392\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 391\,939\,c[1] - 309\,360\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 392\,003\,c[1] - 309\,360\,c[2] + \\
& 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 392\,067\,c[1] - 309\,360\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 394\,163\,c[1] - 309\,744\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 394\,227\,c[1] - 309\,744\,c[2] + \\
& 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 393\,811\,c[1] - 309\,712\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 393\,875\,c[1] - 309\,712\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 393\,939\,c[1] - 309\,712\,c[2] + \\
& 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 393\,523\,c[1] - 309\,680\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 396\,099\,c[1] - 310\,096\,c[2] + 95\,427\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 395\,747\,c[1] - 310\,064\,c[2] +
\end{aligned}$$

$$\begin{aligned}
& 95\,427\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 395\,811\,c[1] - 310\,064\,c[2] + 95\,427\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 395\,395\,c[1] - 310\,032\,c[2] + 95\,427\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 397\,683\,c[1] - 310\,416\,c[2] + \\
& 95\,443\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 378\,315\,c[1] - 305\,816\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 380\,187\,c[1] - 306\,168\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 379\,899\,c[1] - 306\,136\,c[2] + \\
& 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 381\,995\,c[1] - 306\,520\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 382\,059\,c[1] - 306\,520\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 381\,707\,c[1] - 306\,488\,c[2] + \\
& 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 381\,771\,c[1] - 306\,488\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 383\,867\,c[1] - 306\,872\,c[2] + 95\,147\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 383\,931\,c[1] - 306\,872\,c[2] + \\
& 95\,147\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 383\,579\,c[1] - 306\,840\,c[2] + 95\,147\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 383\,643\,c[1] - 306\,840\,c[2] + 95\,147\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 385\,803\,c[1] - 307\,224\,c[2] + \\
& 95\,163\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 385\,451\,c[1] - 307\,192\,c[2] + 95\,163\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 385\,515\,c[1] - 307\,192\,c[2] + 95\,163\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 385\,099\,c[1] - 307\,160\,c[2] + \\
& 95\,163\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 387\,387\,c[1] - 307\,544\,c[2] + 95\,179\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 371\,763\,c[1] - 303\,648\,c[2] + 94\,867\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 371\,475\,c[1] - 303\,616\,c[2] + \\
& 94\,867\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 373\,923\,c[1] - 304\,032\,c[2] + 94\,883\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 373\,571\,c[1] - 304\,000\,c[2] + 94\,883\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 373\,635\,c[1] - 304\,000\,c[2] + \\
& 94\,883\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 373\,283\,c[1] - 303\,968\,c[2] + 94\,883\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 373\,347\,c[1] - 303\,968\,c[2] + 94\,883\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 375\,507\,c[1] - 304\,352\,c[2] + \\
& 94\,899\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 375\,155\,c[1] - 304\,320\,c[2] + 94\,899\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 375\,219\,c[1] - 304\,320\,c[2] + 94\,899\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 377\,091\,c[1] - 304\,672\,c[2] + \\
& 94\,915\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 363\,627\,c[1] - 301\,160\,c[2] + 94\,619\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 363\,339\,c[1] - 301\,128\,c[2] + 94\,619\,c[3] - 14\,944\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 363\,051\,c[1] - 301\,096\,c[2] + \\
& 94\,619\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 365\,211\,c[1] - 301\,480\,c[2] + 94\,635\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 364\,923\,c[1] - 301\,448\,c[2] + 94\,635\,c[3] - 14\,944\,c[4] +
\end{aligned}$$


```

1273 c[5] - 56 c[6] + c[7] ≥ 0 && 366 795 c[1] - 301 800 c[2] +
94 651 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
354 915 c[1] - 298 608 c[2] + 94 371 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 356 499 c[1] - 298 928 c[2] + 94 387 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{607 418, 3 501 307, 8 891 029, 0, 0, 0, 0}

GCD[607 418, 3 501 307, 8 891 029, 0, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 0, 8 891 029, 3 501 307, 607 418}

cert.g
-19 991 219

{607 418, 3 501 307, 8 891 029, 0, 0, 0, 0}.gpart[listdim17[[68]]]
-19 991 219

cert.Transpose[A]
{141 072 509, 428 445, 187 955 405, 47 311 341, 195 963 549, 234 838 301, 55 319 485,
94 194 237, 102 202 381, 141 077 133, 433 069, 1 548 735 933, 1 556 744 077, 1 595 618 829,
1 603 626 973, 1 642 501 725, 1 501 857 661, 1 611 635 117, 1 650 509 869, 1 689 384 621,
1 548 740 557, 1 799 162 077, 1 658 518 013, 1 697 392 765, 1 736 267 517, 1 556 748 701,
1 595 623 453, 1 846 044 973, 1 744 275 661, 1 783 150 413, 1 642 506 349, 3 003 282 253,
3 050 165 149, 3 159 942 605, 3 058 173 293, 3 097 048 045, 3 206 825 501, 3 066 181 437,
3 105 056 189, 3 143 930 941, 3 214 833 645, 3 253 708 397, 3 113 064 333, 3 151 939 085,
3 190 813 837, 3 050 169 773, 3 300 591 293, 3 198 821 981, 3 237 696 733, 3 097 052 669,
3 284 579 629, 4 567 606 029, 4 614 488 925, 4 551 594 365, 4 622 497 069, 4 661 371 821,
4 559 602 509, 4 598 477 261, 4 669 379 965, 4 708 254 717, 4 606 485 405, 4 645 360 157,
4 755 137 613, 4 653 368 301, 4 692 243 053, 4 551 598 989, 4 739 125 949, 6 115 918 141,
6 053 023 581, 6 225 695 597, 6 123 926 285, 6 162 801 037, 6 061 031 725, 6 099 906 477,
6 209 683 933, 6 107 914 621, 6 146 789 373, 6 193 672 269, 7 680 241 917, 7 617 347 357,
7 554 452 797, 7 664 230 253, 7 601 335 693, 7 648 218 589, 9 118 776 573, 9 102 764 909}

chi = listdim17[[69]]
(-9 + x)10 (5 + x)32 (-811 + 271 x - 29 x2 + x3) (9908 - 4079 x + 619 x2 - 41 x3 + x4)

CoefficientList[feasibleinterlacingpolylist[chi], x]
A = {{1, -74, 2362, -42 442, 469 140, -3 262 958, 13 925 062, -33 274 494, 33 996 267},
{1, -74, 2362, -42 434, 468 748, -3 255 422, 13 854 102, -32 947 574, 33 407 523},
{1, -74, 2362, -42 434, 468 748, -3 255 390, 13 853 110, -32 937 750, 33 376 131},

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{1, -74, 2362, -42 434, 468 748, -3 255 390, 13 853 110, -32 937 622, 33 374 979},
 {1, -74, 2362, -42 434, 468 748, -3 255 390, 13 853 110, -32 937 494, 33 373 827},
 {1, -74, 2362, -42 434, 468 748, -3 255 390, 13 853 174, -32 938 902, 33 381 315},
 {1, -74, 2362, -42 434, 468 748, -3 255 358, 13 852 182, -32 928 822, 33 347 619},
 {1, -74, 2362, -42 434, 468 748, -3 255 326, 13 851 254, -32 920 022, 33 320 259},
 {1, -74, 2362, -42 434, 468 764, -3 256 030, 13 862 550, -32 998 550, 33 520 275},
 {1, -74, 2362, -42 434, 468 764, -3 256 030, 13 862 550, -32 998 422, 33 519 123},
 {1, -74, 2362, -42 434, 468 764, -3 256 030, 13 862 614, -32 999 574, 33 524 307},
 {1, -74, 2362, -42 434, 468 764, -3 255 998, 13 861 686, -32 990 902, 33 498 099},
 {1, -74, 2362, -42 426, 468 324, -3 246 510, 13 761 222, -32 467 662, 32 424 219},
 {1, -74, 2362, -42 426, 468 324, -3 246 510, 13 761 286, -32 468 814, 32 429 403},
 {1, -74, 2362, -42 426, 468 340, -3 247 182, 13 771 718, -32 539 822, 32 608 395},
 {1, -74, 2362, -42 426, 468 340, -3 247 150, 13 770 662, -32 528 590, 32 569 515},
 {1, -74, 2362, -42 426, 468 340, -3 247 150, 13 770 726, -32 529 870, 32 575 851},
 {1, -74, 2362, -42 426, 468 340, -3 247 150, 13 770 726, -32 529 742, 32 574 699},
 {1, -74, 2362, -42 426, 468 340, -3 247 118, 13 769 734, -32 519 790, 32 542 155},
 {1, -74, 2362, -42 426, 468 340, -3 247 118, 13 769 798, -32 520 942, 32 547 339},
 {1, -74, 2362, -42 426, 468 356, -3 247 822, 13 781 158, -32 600 878, 32 754 843},
 {1, -74, 2362, -42 426, 468 356, -3 247 822, 13 781 222, -32 602 030, 32 760 027},
 {1, -74, 2362, -42 426, 468 356, -3 247 822, 13 781 286, -32 603 182, 32 765 211},
 {1, -74, 2362, -42 426, 468 356, -3 247 790, 13 780 166, -32 590 798, 32 721 147},
 {1, -74, 2362, -42 426, 468 356, -3 247 790, 13 780 166, -32 590 670, 32 719 995},
 {1, -74, 2362, -42 426, 468 356, -3 247 790, 13 780 230, -32 591 950, 32 726 331},
 {1, -74, 2362, -42 426, 468 356, -3 247 790, 13 780 230, -32 591 822, 32 725 179},
 {1, -74, 2362, -42 426, 468 356, -3 247 790, 13 780 294, -32 593 102, 32 731 515},
 {1, -74, 2362, -42 426, 468 356, -3 247 758, 13 779 238, -32 581 870, 32 692 635},
 {1, -74, 2362, -42 426, 468 356, -3 247 758, 13 779 302, -32 583 150, 32 698 971},
 {1, -74, 2362, -42 426, 468 356, -3 247 758, 13 779 302, -32 583 022, 32 697 819},
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 {1, -74, 2362, -42 426, 468 372, -3 248 430, 13 789 798, -32 655 182, 32 881 995},
 {1, -74, 2362, -42 426, 468 372, -3 248 398, 13 788 742, -32 643 950, 32 843 115},
 {1, -74, 2362, -42 426, 468 372, -3 248 398, 13 788 806, -32 645 230, 32 849 451},
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 {1, -74, 2362, -42 418, 467 932, -3 238 878, 13 687 414, -32 113 062, 31 747 059},
 {1, -74, 2362, -42 418, 467 948, -3 239 582, 13 698 710, -32 191 846, 31 949 379},
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 {1, -74, 2362, -42 418, 467 948, -3 239 550, 13 697 846, -32 184 070, 31 926 051},
 {1, -74, 2362, -42 418, 467 948, -3 239 518, 13 696 854, -32 174 118, 31 893 507},
 {1, -74, 2362, -42 418, 467 948, -3 239 518, 13 696 918, -32 175 142, 31 897 539},
 {1, -74, 2362, -42 418, 467 948, -3 239 486, 13 695 990, -32 166 342, 31 870 179},
 {1, -74, 2362, -42 418, 467 964, -3 240 222, 13 708 278, -32 255 206, 32 106 195},

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{1, -74, 2362, -42 418, 467 964, -3 240 190, 13 707 350, -32 246 278, 32 077 683},
{1, -74, 2362, -42 418, 467 964, -3 240 190, 13 707 414, -32 247 430, 32 082 867},
{1, -74, 2362, -42 418, 467 964, -3 240 158, 13 706 358, -32 236 070, 32 042 835},
{1, -74, 2362, -42 418, 467 964, -3 240 158, 13 706 422, -32 237 350, 32 049 171},
{1, -74, 2362, -42 418, 467 964, -3 240 126, 13 705 430, -32 227 270, 32 015 475},
{1, -74, 2362, -42 418, 467 964, -3 240 126, 13 705 494, -32 228 550, 32 021 811},
{1, -74, 2362, -42 418, 467 964, -3 240 126, 13 705 494, -32 228 422, 32 020 659},
{1, -74, 2362, -42 418, 467 980, -3 240 830, 13 716 918, -32 309 638, 32 234 499},
{1, -74, 2362, -42 418, 467 980, -3 240 798, 13 715 926, -32 299 430, 32 199 651},
{1, -74, 2362, -42 418, 467 980, -3 240 798, 13 715 990, -32 300 710, 32 205 987},
{1, -74, 2362, -42 418, 467 980, -3 240 766, 13 714 998, -32 290 630, 32 172 291},
{1, -74, 2362, -42 418, 467 996, -3 241 438, 13 725 494, -32 362 790, 32 356 467},
{1, -74, 2362, -42 410, 467 540, -3 231 310, 13 615 334, -31 773 886, 31 115 403},
{1, -74, 2362, -42 410, 467 556, -3 231 950, 13 624 902, -31 837 246, 31 272 219},
{1, -74, 2362, -42 410, 467 556, -3 231 918, 13 623 974, -31 828 318, 31 243 707},
{1, -74, 2362, -42 410, 467 556, -3 231 886, 13 623 110, -31 820 542, 31 220 379},
{1, -74, 2362, -42 410, 467 572, -3 232 558, 13 633 542, -31 891 678, 31 400 523},
{1, -74, 2362, -42 410, 467 572, -3 232 526, 13 632 614, -31 882 750, 31 372 011},
{1, -74, 2362, -42 402, 467 164, -3 224 286, 13 550 166, -31 473 718, 30 566 547},
{1, -74, 2362, -42 402, 467 180, -3 224 894, 13 558 806, -31 528 150, 30 694 851}};
```

A // MatrixForm

```
( 1 -74 2362 -42 442 469 140 -3 262 958 13 925 062 -33 274 494 33 996 267
1 -74 2362 -42 434 468 748 -3 255 422 13 854 102 -32 947 574 33 407 523
1 -74 2362 -42 434 468 748 -3 255 390 13 853 110 -32 937 750 33 376 131
1 -74 2362 -42 434 468 748 -3 255 390 13 853 110 -32 937 622 33 374 979
1 -74 2362 -42 434 468 748 -3 255 390 13 853 110 -32 937 494 33 373 827
1 -74 2362 -42 434 468 748 -3 255 390 13 853 174 -32 938 902 33 381 315
1 -74 2362 -42 434 468 748 -3 255 358 13 852 182 -32 928 822 33 347 619
1 -74 2362 -42 434 468 748 -3 255 326 13 851 254 -32 920 022 33 320 259
1 -74 2362 -42 434 468 764 -3 256 030 13 862 550 -32 998 550 33 520 275
1 -74 2362 -42 434 468 764 -3 256 030 13 862 550 -32 998 422 33 519 123
1 -74 2362 -42 434 468 764 -3 256 030 13 862 614 -32 999 574 33 524 307
1 -74 2362 -42 434 468 764 -3 255 998 13 861 686 -32 990 902 33 498 099
1 -74 2362 -42 426 468 324 -3 246 510 13 761 222 -32 467 662 32 424 219
1 -74 2362 -42 426 468 324 -3 246 510 13 761 286 -32 468 814 32 429 403
1 -74 2362 -42 426 468 340 -3 247 182 13 771 718 -32 539 822 32 608 395
1 -74 2362 -42 426 468 340 -3 247 150 13 770 662 -32 528 590 32 569 515
1 -74 2362 -42 426 468 340 -3 247 150 13 770 726 -32 529 870 32 575 851
1 -74 2362 -42 426 468 340 -3 247 150 13 770 726 -32 529 742 32 574 699
1 -74 2362 -42 426 468 340 -3 247 118 13 769 734 -32 519 790 32 542 155
1 -74 2362 -42 426 468 340 -3 247 118 13 769 798 -32 520 942 32 547 339
1 -74 2362 -42 426 468 356 -3 247 822 13 781 158 -32 600 878 32 754 843
1 -74 2362 -42 426 468 356 -3 247 822 13 781 222 -32 602 030 32 760 027
1 -74 2362 -42 426 468 356 -3 247 822 13 781 286 -32 603 182 32 765 211
1 -74 2362 -42 426 468 356 -3 247 790 13 780 166 -32 590 798 32 721 147
1 -74 2362 -42 426 468 356 -3 247 790 13 780 166 -32 590 670 32 719 995
1 -74 2362 -42 426 468 356 -3 247 790 13 780 230 -32 591 950 32 726 331
1 -74 2362 -42 426 468 356 -3 247 790 13 780 230 -32 591 822 32 725 179
1 -74 2362 -42 426 468 356 -3 247 790 13 780 294 -32 593 102 32 731 515
1 -74 2362 -42 426 468 356 -3 247 758 13 779 238 -32 581 870 32 692 635
```

```

1 -74 2362 -42 426 468 356 -3 247 758 13 779 302 -32 583 150 32 698 971
1 -74 2362 -42 426 468 356 -3 247 758 13 779 302 -32 583 022 32 697 819
1 -74 2362 -42 426 468 356 -3 247 726 13 778 374 -32 574 222 32 670 459
1 -74 2362 -42 426 468 372 -3 248 430 13 789 734 -32 654 158 32 877 963
1 -74 2362 -42 426 468 372 -3 248 430 13 789 734 -32 654 030 32 876 811
1 -74 2362 -42 426 468 372 -3 248 430 13 789 798 -32 655 182 32 881 995
1 -74 2362 -42 426 468 372 -3 248 398 13 788 742 -32 643 950 32 843 115
1 -74 2362 -42 426 468 372 -3 248 398 13 788 806 -32 645 230 32 849 451
1 -74 2362 -42 426 468 372 -3 248 398 13 788 806 -32 645 102 32 848 299
1 -74 2362 -42 426 468 388 -3 249 038 13 798 310 -32 707 182 32 998 779
1 -74 2362 -42 426 468 388 -3 249 006 13 797 318 -32 697 102 32 965 083
1 -74 2362 -42 426 468 404 -3 249 646 13 806 822 -32 759 182 33 115 563
1 -74 2362 -42 418 467 932 -3 238 878 13 687 414 -32 113 062 31 747 059
1 -74 2362 -42 418 467 948 -3 239 582 13 698 710 -32 191 846 31 949 379
1 -74 2362 -42 418 467 948 -3 239 582 13 698 774 -32 192 998 31 954 563
1 -74 2362 -42 418 467 948 -3 239 550 13 697 782 -32 182 918 31 920 867
1 -74 2362 -42 418 467 948 -3 239 550 13 697 846 -32 184 070 31 926 051
1 -74 2362 -42 418 467 948 -3 239 518 13 696 854 -32 174 118 31 893 507
1 -74 2362 -42 418 467 948 -3 239 518 13 696 918 -32 175 142 31 897 539
1 -74 2362 -42 418 467 948 -3 239 486 13 695 990 -32 166 342 31 870 179
1 -74 2362 -42 418 467 964 -3 240 222 13 708 278 -32 255 206 32 106 195
1 -74 2362 -42 418 467 964 -3 240 190 13 707 286 -32 244 998 32 071 347
1 -74 2362 -42 418 467 964 -3 240 190 13 707 350 -32 246 278 32 077 683
1 -74 2362 -42 418 467 964 -3 240 190 13 707 414 -32 247 430 32 082 867
1 -74 2362 -42 418 467 964 -3 240 158 13 706 358 -32 236 070 32 042 835
1 -74 2362 -42 418 467 964 -3 240 158 13 706 422 -32 237 350 32 049 171
1 -74 2362 -42 418 467 964 -3 240 126 13 705 430 -32 227 270 32 015 475
1 -74 2362 -42 418 467 964 -3 240 126 13 705 494 -32 228 550 32 021 811
1 -74 2362 -42 418 467 964 -3 240 126 13 705 494 -32 228 422 32 020 659
1 -74 2362 -42 418 467 980 -3 240 830 13 716 918 -32 309 638 32 234 499
1 -74 2362 -42 418 467 980 -3 240 798 13 715 926 -32 299 430 32 199 651
1 -74 2362 -42 418 467 980 -3 240 798 13 715 990 -32 300 710 32 205 987
1 -74 2362 -42 418 467 980 -3 240 766 13 714 998 -32 290 630 32 172 291
1 -74 2362 -42 418 467 996 -3 241 438 13 725 494 -32 362 790 32 356 467
1 -74 2362 -42 410 467 540 -3 231 310 13 615 334 -31 773 886 31 115 403
1 -74 2362 -42 410 467 556 -3 231 950 13 624 902 -31 837 246 31 272 219
1 -74 2362 -42 410 467 556 -3 231 918 13 623 974 -31 828 318 31 243 707
1 -74 2362 -42 410 467 556 -3 231 886 13 623 110 -31 820 542 31 220 379
1 -74 2362 -42 410 467 572 -3 232 558 13 633 542 -31 891 678 31 400 523
1 -74 2362 -42 410 467 572 -3 232 526 13 632 614 -31 882 750 31 372 011
1 -74 2362 -42 402 467 164 -3 224 286 13 550 166 -31 473 718 30 566 547
1 -74 2362 -42 402 467 180 -3 224 894 13 558 806 -31 528 150 30 694 851

```

Dimensions[A]

{71, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```

{49, -3626, 115 738, -2 079 274, 22 969 988,
 -159 557 390, 679 371 526, -1 617 297 950, 1 642 731 179}

```

Array[c, 9].Transpose[A]

```

{c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 140 c[5] -
 3 262 958 c[6] + 13 925 062 c[7] - 33 274 494 c[8] + 33 996 267 c[9],

```

$c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,748 c[5] - 3\,255\,422 c[6] +$
 $13\,854\,102 c[7] - 32\,947\,574 c[8] + 33\,407\,523 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,748 c[5] - 3\,255\,390 c[6] +$
 $13\,853\,110 c[7] - 32\,937\,750 c[8] + 33\,376\,131 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,748 c[5] - 3\,255\,390 c[6] +$
 $13\,853\,110 c[7] - 32\,937\,622 c[8] + 33\,374\,979 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,748 c[5] - 3\,255\,390 c[6] +$
 $13\,853\,110 c[7] - 32\,937\,494 c[8] + 33\,373\,827 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,748 c[5] - 3\,255\,390 c[6] +$
 $13\,853\,174 c[7] - 32\,938\,902 c[8] + 33\,381\,315 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,748 c[5] - 3\,255\,358 c[6] + 13\,852\,182 c[7] -$
 $32\,928\,822 c[8] + 33\,347\,619 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,748 c[5] - 3\,255\,326 c[6] + 13\,851\,254 c[7] - 32\,920\,022 c[8] + 33\,320\,259 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,764 c[5] - 3\,256\,030 c[6] + 13\,862\,550 c[7] -$
 $32\,998\,550 c[8] + 33\,520\,275 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,764 c[5] - 3\,256\,030 c[6] + 13\,862\,550 c[7] - 32\,998\,422 c[8] + 33\,519\,123 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,764 c[5] - 3\,256\,030 c[6] + 13\,862\,614 c[7] -$
 $32\,999\,574 c[8] + 33\,524\,307 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] +$
 $468\,764 c[5] - 3\,255\,998 c[6] + 13\,861\,686 c[7] - 32\,990\,902 c[8] + 33\,498\,099 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,510 c[6] + 13\,761\,222 c[7] -$
 $32\,467\,662 c[8] + 32\,424\,219 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,324 c[5] - 3\,246\,510 c[6] + 13\,761\,286 c[7] - 32\,468\,814 c[8] + 32\,429\,403 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,182 c[6] + 13\,771\,718 c[7] -$
 $32\,539\,822 c[8] + 32\,608\,395 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,340 c[5] - 3\,247\,150 c[6] + 13\,770\,662 c[7] - 32\,528\,590 c[8] + 32\,569\,515 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,150 c[6] + 13\,770\,726 c[7] -$
 $32\,529\,870 c[8] + 32\,575\,851 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,340 c[5] - 3\,247\,150 c[6] + 13\,770\,726 c[7] - 32\,529\,742 c[8] + 32\,574\,699 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,118 c[6] + 13\,769\,734 c[7] -$
 $32\,519\,790 c[8] + 32\,542\,155 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,340 c[5] - 3\,247\,118 c[6] + 13\,769\,798 c[7] - 32\,520\,942 c[8] + 32\,547\,339 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,822 c[6] + 13\,781\,158 c[7] -$
 $32\,600\,878 c[8] + 32\,754\,843 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,356 c[5] - 3\,247\,822 c[6] + 13\,781\,222 c[7] - 32\,602\,030 c[8] + 32\,760\,027 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,822 c[6] + 13\,781\,286 c[7] -$
 $32\,603\,182 c[8] + 32\,765\,211 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,356 c[5] - 3\,247\,790 c[6] + 13\,780\,166 c[7] - 32\,590\,798 c[8] + 32\,721\,147 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,790 c[6] + 13\,780\,166 c[7] -$
 $32\,590\,670 c[8] + 32\,719\,995 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,356 c[5] - 3\,247\,790 c[6] + 13\,780\,230 c[7] - 32\,591\,950 c[8] + 32\,726\,331 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,790 c[6] + 13\,780\,230 c[7] -$
 $32\,591\,822 c[8] + 32\,725\,179 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,356 c[5] - 3\,247\,790 c[6] + 13\,780\,294 c[7] - 32\,593\,102 c[8] + 32\,731\,515 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,758 c[6] + 13\,779\,238 c[7] -$
 $32\,581\,870 c[8] + 32\,692\,635 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] +$
 $468\,356 c[5] - 3\,247\,758 c[6] + 13\,779\,302 c[7] - 32\,583\,150 c[8] + 32\,698\,971 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,758 c[6] + 13\,779\,302 c[7] -$

$$\begin{aligned}
& 32\,583\,022\,c[8] + 32\,697\,819\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,356\,c[5] - 3\,247\,726\,c[6] + 13\,778\,374\,c[7] - 32\,574\,222\,c[8] + 32\,670\,459\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,430\,c[6] + 13\,789\,734\,c[7] - \\
& 32\,654\,158\,c[8] + 32\,877\,963\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,372\,c[5] - 3\,248\,430\,c[6] + 13\,789\,734\,c[7] - 32\,654\,030\,c[8] + 32\,876\,811\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,430\,c[6] + 13\,789\,798\,c[7] - \\
& 32\,655\,182\,c[8] + 32\,881\,995\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,372\,c[5] - 3\,248\,398\,c[6] + 13\,788\,742\,c[7] - 32\,643\,950\,c[8] + 32\,843\,115\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,398\,c[6] + 13\,788\,806\,c[7] - \\
& 32\,645\,230\,c[8] + 32\,849\,451\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,372\,c[5] - 3\,248\,398\,c[6] + 13\,788\,806\,c[7] - 32\,645\,102\,c[8] + 32\,848\,299\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,388\,c[5] - 3\,249\,038\,c[6] + 13\,798\,310\,c[7] - \\
& 32\,707\,182\,c[8] + 32\,998\,779\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,388\,c[5] - 3\,249\,006\,c[6] + 13\,797\,318\,c[7] - 32\,697\,102\,c[8] + 32\,965\,083\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,404\,c[5] - 3\,249\,646\,c[6] + 13\,806\,822\,c[7] - \\
& 32\,759\,182\,c[8] + 33\,115\,563\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,932\,c[5] - 3\,238\,878\,c[6] + 13\,687\,414\,c[7] - 32\,113\,062\,c[8] + 31\,747\,059\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,582\,c[6] + 13\,698\,710\,c[7] - \\
& 32\,191\,846\,c[8] + 31\,949\,379\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,948\,c[5] - 3\,239\,582\,c[6] + 13\,698\,774\,c[7] - 32\,192\,998\,c[8] + 31\,954\,563\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,550\,c[6] + 13\,697\,782\,c[7] - \\
& 32\,182\,918\,c[8] + 31\,920\,867\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,948\,c[5] - 3\,239\,550\,c[6] + 13\,697\,846\,c[7] - 32\,184\,070\,c[8] + 31\,926\,051\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,518\,c[6] + 13\,696\,854\,c[7] - \\
& 32\,174\,118\,c[8] + 31\,893\,507\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,948\,c[5] - 3\,239\,518\,c[6] + 13\,696\,918\,c[7] - 32\,175\,142\,c[8] + 31\,897\,539\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,486\,c[6] + 13\,695\,990\,c[7] - \\
& 32\,166\,342\,c[8] + 31\,870\,179\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,964\,c[5] - 3\,240\,222\,c[6] + 13\,708\,278\,c[7] - 32\,255\,206\,c[8] + 32\,106\,195\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,190\,c[6] + 13\,707\,286\,c[7] - \\
& 32\,244\,998\,c[8] + 32\,071\,347\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,964\,c[5] - 3\,240\,190\,c[6] + 13\,707\,350\,c[7] - 32\,246\,278\,c[8] + 32\,077\,683\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,190\,c[6] + 13\,707\,414\,c[7] - \\
& 32\,247\,430\,c[8] + 32\,082\,867\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,964\,c[5] - 3\,240\,158\,c[6] + 13\,706\,358\,c[7] - 32\,236\,070\,c[8] + 32\,042\,835\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,158\,c[6] + 13\,706\,422\,c[7] - \\
& 32\,237\,350\,c[8] + 32\,049\,171\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,964\,c[5] - 3\,240\,126\,c[6] + 13\,705\,430\,c[7] - 32\,227\,270\,c[8] + 32\,015\,475\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,126\,c[6] + 13\,705\,494\,c[7] - \\
& 32\,228\,550\,c[8] + 32\,021\,811\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,964\,c[5] - 3\,240\,126\,c[6] + 13\,705\,494\,c[7] - 32\,228\,422\,c[8] + 32\,020\,659\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,830\,c[6] + 13\,716\,918\,c[7] - \\
& 32\,309\,638\,c[8] + 32\,234\,499\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,980\,c[5] - 3\,240\,798\,c[6] + 13\,715\,926\,c[7] - 32\,299\,430\,c[8] + 32\,199\,651\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,798\,c[6] + 13\,715\,990\,c[7] - \\
& 32\,300\,710\,c[8] + 32\,205\,987\,c[9], \, c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,980\,c[5] - 3\,240\,766\,c[6] + 13\,714\,998\,c[7] - 32\,290\,630\,c[8] + 32\,172\,291\,c[9],
\end{aligned}$$

```

c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 996 c[5] - 3 241 438 c[6] + 13 725 494 c[7] -
32 362 790 c[8] + 32 356 467 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 540 c[5] - 3 231 310 c[6] + 13 615 334 c[7] - 31 773 886 c[8] + 31 115 403 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 950 c[6] + 13 624 902 c[7] -
31 837 246 c[8] + 31 272 219 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 556 c[5] - 3 231 918 c[6] + 13 623 974 c[7] - 31 828 318 c[8] + 31 243 707 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 886 c[6] + 13 623 110 c[7] -
31 820 542 c[8] + 31 220 379 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 572 c[5] - 3 232 558 c[6] + 13 633 542 c[7] - 31 891 678 c[8] + 31 400 523 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 572 c[5] - 3 232 526 c[6] + 13 632 614 c[7] -
31 882 750 c[8] + 31 372 011 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] +
467 164 c[5] - 3 224 286 c[6] + 13 550 166 c[7] - 31 473 718 c[8] + 30 566 547 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 180 c[5] - 3 224 894 c[6] +
13 558 806 c[7] - 31 528 150 c[8] + 30 694 851 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 274 c[4] + 22 969 988 c[5] -
159 557 390 c[6] + 679 371 526 c[7] - 1 617 297 950 c[8] + 1 642 731 179 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3626 c[2] + 115 738 c[3] - 2 079 274 c[4] + 22 969 988 c[5] -
159 557 390 c[6] + 679 371 526 c[7] - 1 617 297 950 c[8] + 1 642 731 179 c[9] < 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 442 c[4] + 469 140 c[5] - 3 262 958 c[6] +
13 925 062 c[7] - 33 274 494 c[8] + 33 996 267 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 748 c[5] - 3 255 422 c[6] +
13 854 102 c[7] - 32 947 574 c[8] + 33 407 523 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 748 c[5] - 3 255 390 c[6] +
13 853 110 c[7] - 32 937 750 c[8] + 33 376 131 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 748 c[5] - 3 255 390 c[6] +
13 853 110 c[7] - 32 937 622 c[8] + 33 374 979 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 748 c[5] - 3 255 390 c[6] +
13 853 110 c[7] - 32 937 494 c[8] + 33 373 827 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 748 c[5] - 3 255 390 c[6] +
13 853 174 c[7] - 32 938 902 c[8] + 33 381 315 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 748 c[5] - 3 255 358 c[6] +
13 852 182 c[7] - 32 928 822 c[8] + 33 347 619 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 748 c[5] - 3 255 326 c[6] +
13 851 254 c[7] - 32 920 022 c[8] + 33 320 259 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 764 c[5] - 3 256 030 c[6] +
13 862 550 c[7] - 32 998 550 c[8] + 33 520 275 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 764 c[5] - 3 256 030 c[6] +
13 862 550 c[7] - 32 998 422 c[8] + 33 519 123 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 764 c[5] - 3 256 030 c[6] +
13 862 614 c[7] - 32 999 574 c[8] + 33 524 307 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 434 c[4] + 468 764 c[5] - 3 255 998 c[6] +
13 861 686 c[7] - 32 990 902 c[8] + 33 498 099 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 324 c[5] - 3 246 510 c[6] +

```

$$\begin{aligned}
& 13\,761\,222\,c[7] - 32\,467\,662\,c[8] + 32\,424\,219\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,324\,c[5] - 3\,246\,510\,c[6] + \\
& 13\,761\,286\,c[7] - 32\,468\,814\,c[8] + 32\,429\,403\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,182\,c[6] + \\
& 13\,771\,718\,c[7] - 32\,539\,822\,c[8] + 32\,608\,395\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,150\,c[6] + \\
& 13\,770\,662\,c[7] - 32\,528\,590\,c[8] + 32\,569\,515\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,150\,c[6] + \\
& 13\,770\,726\,c[7] - 32\,529\,870\,c[8] + 32\,575\,851\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,150\,c[6] + \\
& 13\,770\,726\,c[7] - 32\,529\,742\,c[8] + 32\,574\,699\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,118\,c[6] + \\
& 13\,769\,734\,c[7] - 32\,519\,790\,c[8] + 32\,542\,155\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,340\,c[5] - 3\,247\,118\,c[6] + \\
& 13\,769\,798\,c[7] - 32\,520\,942\,c[8] + 32\,547\,339\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,822\,c[6] + \\
& 13\,781\,158\,c[7] - 32\,600\,878\,c[8] + 32\,754\,843\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,822\,c[6] + \\
& 13\,781\,222\,c[7] - 32\,602\,030\,c[8] + 32\,760\,027\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,822\,c[6] + \\
& 13\,781\,286\,c[7] - 32\,603\,182\,c[8] + 32\,765\,211\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,790\,c[6] + \\
& 13\,780\,166\,c[7] - 32\,590\,798\,c[8] + 32\,721\,147\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,790\,c[6] + \\
& 13\,780\,166\,c[7] - 32\,590\,670\,c[8] + 32\,719\,995\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,790\,c[6] + \\
& 13\,780\,230\,c[7] - 32\,591\,950\,c[8] + 32\,726\,331\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,790\,c[6] + \\
& 13\,780\,230\,c[7] - 32\,591\,822\,c[8] + 32\,725\,179\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,790\,c[6] + \\
& 13\,780\,294\,c[7] - 32\,593\,102\,c[8] + 32\,731\,515\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,758\,c[6] + \\
& 13\,779\,238\,c[7] - 32\,581\,870\,c[8] + 32\,692\,635\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,758\,c[6] + \\
& 13\,779\,302\,c[7] - 32\,583\,150\,c[8] + 32\,698\,971\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,758\,c[6] + \\
& 13\,779\,302\,c[7] - 32\,583\,022\,c[8] + 32\,697\,819\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,356\,c[5] - 3\,247\,726\,c[6] + \\
& 13\,778\,374\,c[7] - 32\,574\,222\,c[8] + 32\,670\,459\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,430\,c[6] + \\
& 13\,789\,734\,c[7] - 32\,654\,158\,c[8] + 32\,877\,963\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,430\,c[6] + \\
& 13\,789\,734\,c[7] - 32\,654\,030\,c[8] + 32\,876\,811\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,430\,c[6] + \\
& 13\,789\,798\,c[7] - 32\,655\,182\,c[8] + 32\,881\,995\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,398\,c[6] + \\
& 13\,788\,742\,c[7] - 32\,643\,950\,c[8] + 32\,843\,115\,c[9] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,398 c[6] + \\
& \quad 13\,788\,806 c[7] - 32\,645\,230 c[8] + 32\,849\,451 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,398 c[6] + \\
& \quad 13\,788\,806 c[7] - 32\,645\,102 c[8] + 32\,848\,299 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,388 c[5] - 3\,249\,038 c[6] + \\
& \quad 13\,798\,310 c[7] - 32\,707\,182 c[8] + 32\,998\,779 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,388 c[5] - 3\,249\,006 c[6] + \\
& \quad 13\,797\,318 c[7] - 32\,697\,102 c[8] + 32\,965\,083 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,404 c[5] - 3\,249\,646 c[6] + \\
& \quad 13\,806\,822 c[7] - 32\,759\,182 c[8] + 33\,115\,563 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,932 c[5] - 3\,238\,878 c[6] + \\
& \quad 13\,687\,414 c[7] - 32\,113\,062 c[8] + 31\,747\,059 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,582 c[6] + \\
& \quad 13\,698\,710 c[7] - 32\,191\,846 c[8] + 31\,949\,379 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,582 c[6] + \\
& \quad 13\,698\,774 c[7] - 32\,192\,998 c[8] + 31\,954\,563 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,550 c[6] + \\
& \quad 13\,697\,782 c[7] - 32\,182\,918 c[8] + 31\,920\,867 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,550 c[6] + \\
& \quad 13\,697\,846 c[7] - 32\,184\,070 c[8] + 31\,926\,051 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,518 c[6] + \\
& \quad 13\,696\,854 c[7] - 32\,174\,118 c[8] + 31\,893\,507 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,518 c[6] + \\
& \quad 13\,696\,918 c[7] - 32\,175\,142 c[8] + 31\,897\,539 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,948 c[5] - 3\,239\,486 c[6] + \\
& \quad 13\,695\,990 c[7] - 32\,166\,342 c[8] + 31\,870\,179 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,222 c[6] + \\
& \quad 13\,708\,278 c[7] - 32\,255\,206 c[8] + 32\,106\,195 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,190 c[6] + \\
& \quad 13\,707\,286 c[7] - 32\,244\,998 c[8] + 32\,071\,347 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,190 c[6] + \\
& \quad 13\,707\,350 c[7] - 32\,246\,278 c[8] + 32\,077\,683 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,190 c[6] + \\
& \quad 13\,707\,414 c[7] - 32\,247\,430 c[8] + 32\,082\,867 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,158 c[6] + \\
& \quad 13\,706\,358 c[7] - 32\,236\,070 c[8] + 32\,042\,835 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,158 c[6] + \\
& \quad 13\,706\,422 c[7] - 32\,237\,350 c[8] + 32\,049\,171 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,126 c[6] + \\
& \quad 13\,705\,430 c[7] - 32\,227\,270 c[8] + 32\,015\,475 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,126 c[6] + \\
& \quad 13\,705\,494 c[7] - 32\,228\,550 c[8] + 32\,021\,811 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,126 c[6] + \\
& \quad 13\,705\,494 c[7] - 32\,228\,422 c[8] + 32\,020\,659 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,830 c[6] + \\
& \quad 13\,716\,918 c[7] - 32\,309\,638 c[8] + 32\,234\,499 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,798 c[6] +
\end{aligned}$$

```

13 715 926 c[7] - 32 299 430 c[8] + 32 199 651 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 798 c[6] +
13 715 990 c[7] - 32 300 710 c[8] + 32 205 987 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 766 c[6] +
13 714 998 c[7] - 32 290 630 c[8] + 32 172 291 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 996 c[5] - 3 241 438 c[6] +
13 725 494 c[7] - 32 362 790 c[8] + 32 356 467 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 540 c[5] - 3 231 310 c[6] +
13 615 334 c[7] - 31 773 886 c[8] + 31 115 403 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 950 c[6] +
13 624 902 c[7] - 31 837 246 c[8] + 31 272 219 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 918 c[6] +
13 623 974 c[7] - 31 828 318 c[8] + 31 243 707 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 886 c[6] +
13 623 110 c[7] - 31 820 542 c[8] + 31 220 379 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 572 c[5] - 3 232 558 c[6] +
13 633 542 c[7] - 31 891 678 c[8] + 31 400 523 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 572 c[5] - 3 232 526 c[6] +
13 632 614 c[7] - 31 882 750 c[8] + 31 372 011 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 164 c[5] - 3 224 286 c[6] +
13 550 166 c[7] - 31 473 718 c[8] + 30 566 547 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 180 c[5] - 3 224 894 c[6] +
13 558 806 c[7] - 31 528 150 c[8] + 30 694 851 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 5 173 067, 2 563 924, 730 730, 161 530}

```

```
GCD[0, 0, 0, 0, 0, 5 173 067, 2 563 924, 730 730, 161 530]
```

```
1
```

```
cert.g
```

```
-1 872 046 736
```

```
{0, 0, 0, 0, 0, 5 173 067, 2 563 924, 730 730, 161 530}.Reverse[gpart[listdim17[[69]]]
```

```
-1 872 046 736
```

```
cert.Transpose[A]
```

```

{46 318 992, 884 938 144, 615 005 440, 522 456 320, 429 907 200, 774 667 136,
319 636 192, 116 816 064, 362 881 440, 270 332 320, 429 994 016, 319 723 008,
703 050 768, 862 712 464, 1 158 168 528, 543 475 888, 795 686 704, 703 137 584,
340 655 760, 500 317 456, 1 091 142 768, 1 250 804 464, 1 410 466 160,
636 111 824, 543 562 704, 795 773 520, 703 224 400, 955 435 216, 340 742 576,
592 953 392, 500 404 272, 297 584 144, 888 409 456, 795 860 336, 955 522 032,
340 829 392, 593 040 208, 500 491 088, 500 577 904, 45 546 960, 45 633 776,
680 998 720, 1 112 162 336, 1 271 824 032, 816 793 088, 976 454 784, 613 972 960,
681 085 536, 478 265 408, 1 364 459 968, 816 879 904, 1 069 090 720, 1 228 752 416,
521 510 656, 773 721 472, 318 690 528, 570 901 344, 478 352 224, 1 321 388 352,
773 808 288, 1 026 019 104, 570 988 160, 1 026 105 920, 837 812 656, 1 090 110 288,
794 741 040, 659 033 488, 1 047 038 672, 751 669 424, 772 688 992, 729 617 376}

```

```
chi = listdim17[[70]]
```

$$(-13 + x)^2 (-12 + x) (-9 + x)^{12} (-7 + x)^2 (5 + x)^{32}$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{ {4641, -2476, 462, -36, 1}, {4537, -2468, 462, -36, 1}, {4553, -2468, 462, -36, 1},  
  {4433, -2460, 462, -36, 1}, {4449, -2460, 462, -36, 1}, {4329, -2452, 462, -36, 1},  
  {4345, -2452, 462, -36, 1}, {4361, -2452, 462, -36, 1}, {4257, -2444, 462, -36, 1} }
```

```
A = { {4641, -2476, 462, -36, 1}, {4537, -2468, 462, -36, 1},  
      {4553, -2468, 462, -36, 1}, {4433, -2460, 462, -36, 1},  
      {4449, -2460, 462, -36, 1}, {4329, -2452, 462, -36, 1}, {4345, -2452,  
      462, -36, 1}, {4361, -2452, 462, -36, 1}, {4257, -2444, 462, -36, 1} };
```

```
A // MatrixForm
```

$$\begin{pmatrix} 4641 & -2476 & 462 & -36 & 1 \\ 4537 & -2468 & 462 & -36 & 1 \\ 4553 & -2468 & 462 & -36 & 1 \\ 4433 & -2460 & 462 & -36 & 1 \\ 4449 & -2460 & 462 & -36 & 1 \\ 4329 & -2452 & 462 & -36 & 1 \\ 4345 & -2452 & 462 & -36 & 1 \\ 4361 & -2452 & 462 & -36 & 1 \\ 4257 & -2444 & 462 & -36 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{223 281, -120 940, 22 638, -1764, 49}
```

```
Array[c, 5].Transpose[A]
```

```
{4641 c[1] - 2476 c[2] + 462 c[3] - 36 c[4] + c[5],  
 4537 c[1] - 2468 c[2] + 462 c[3] - 36 c[4] + c[5],  
 4553 c[1] - 2468 c[2] + 462 c[3] - 36 c[4] + c[5],  
 4433 c[1] - 2460 c[2] + 462 c[3] - 36 c[4] + c[5],  
 4449 c[1] - 2460 c[2] + 462 c[3] - 36 c[4] + c[5],  
 4329 c[1] - 2452 c[2] + 462 c[3] - 36 c[4] + c[5],  
 4345 c[1] - 2452 c[2] + 462 c[3] - 36 c[4] + c[5],  
 4361 c[1] - 2452 c[2] + 462 c[3] - 36 c[4] + c[5],  
 4257 c[1] - 2444 c[2] + 462 c[3] - 36 c[4] + c[5]}
```

```
Array[c, 5].g
```

```
223 281 c[1] - 120 940 c[2] + 22 638 c[3] - 1764 c[4] + 49 c[5]
```

```

cert = Flatten[Array[c, 5] /.
  FindInstance[223 281 c[1] - 120 940 c[2] + 22 638 c[3] - 1764 c[4] + 49 c[5] < 0 &&
    4641 c[1] - 2476 c[2] + 462 c[3] - 36 c[4] + c[5] ≥ 0 &&
    4537 c[1] - 2468 c[2] + 462 c[3] - 36 c[4] + c[5] ≥ 0 &&
    4553 c[1] - 2468 c[2] + 462 c[3] - 36 c[4] + c[5] ≥ 0 &&
    4433 c[1] - 2460 c[2] + 462 c[3] - 36 c[4] + c[5] ≥ 0 &&
    4449 c[1] - 2460 c[2] + 462 c[3] - 36 c[4] + c[5] ≥ 0 &&
    4329 c[1] - 2452 c[2] + 462 c[3] - 36 c[4] + c[5] ≥ 0 &&
    4345 c[1] - 2452 c[2] + 462 c[3] - 36 c[4] + c[5] ≥ 0 &&
    4361 c[1] - 2452 c[2] + 462 c[3] - 36 c[4] + c[5] ≥ 0 &&
    4257 c[1] - 2444 c[2] + 462 c[3] - 36 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{-3840, -42 244, 0, 0, -86 772 378}

GCD[-3840, -42 244, 0, 0, -86 772 378]
2

cert = cert / 2
{-1920, -21 122, 0, 0, -43 386 189}

Reverse[cert]
{-43 386 189, 0, 0, -21 122, -1920}

cert.g
-128 101

{-1920, -21 122, 0, 0, -43 386 189}.gpart[listdim17[[70]]]
-128 101

cert.Transpose[A]
{1163, 31 867, 1147, 62 571, 31 851, 93 275, 62 555, 31 835, 62 539}

```

```

chi = listdim17[[71]]

$$(-11 + x)^2 (-9 + x)^{12} (5 + x)^{32} (-808 + 281 x - 30 x^2 + x^3)$$


```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-38049, 25349, -6434, 778, -45, 1}, {-36729, 25141, -6426, 778, -45, 1},
  {-36969, 25157, -6426, 778, -45, 1}, {-36937, 25157, -6426, 778, -45, 1},
  {-36905, 25157, -6426, 778, -45, 1}, {-37113, 25173, -6426, 778, -45, 1},
  {-37081, 25173, -6426, 778, -45, 1}, {-37289, 25189, -6426, 778, -45, 1},
  {-37257, 25189, -6426, 778, -45, 1}, {-37433, 25205, -6426, 778, -45, 1},
  {-35825, 24965, -6418, 778, -45, 1}, {-35793, 24965, -6418, 778, -45, 1},
  {-36001, 24981, -6418, 778, -45, 1}, {-35969, 24981, -6418, 778, -45, 1},
  {-35937, 24981, -6418, 778, -45, 1}, {-36145, 24997, -6418, 778, -45, 1},
  {-36113, 24997, -6418, 778, -45, 1}, {-36321, 25013, -6418, 778, -45, 1},
  {-36289, 25013, -6418, 778, -45, 1}, {-36465, 25029, -6418, 778, -45, 1},
  {-36641, 25045, -6418, 778, -45, 1}, {-36817, 25061, -6418, 778, -45, 1},
  {-34713, 24773, -6410, 778, -45, 1}, {-34857, 24789, -6410, 778, -45, 1},
  {-35033, 24805, -6410, 778, -45, 1}, {-35001, 24805, -6410, 778, -45, 1},
  {-35209, 24821, -6410, 778, -45, 1}, {-35177, 24821, -6410, 778, -45, 1},
  {-35145, 24821, -6410, 778, -45, 1}, {-35353, 24837, -6410, 778, -45, 1},
  {-35321, 24837, -6410, 778, -45, 1}, {-35529, 24853, -6410, 778, -45, 1},
  {-35497, 24853, -6410, 778, -45, 1}, {-35673, 24869, -6410, 778, -45, 1},
  {-35849, 24885, -6410, 778, -45, 1}, {-33921, 24613, -6402, 778, -45, 1},
  {-34065, 24629, -6402, 778, -45, 1}, {-34241, 24645, -6402, 778, -45, 1},
  {-34209, 24645, -6402, 778, -45, 1}, {-34385, 24661, -6402, 778, -45, 1},
  {-34353, 24661, -6402, 778, -45, 1}, {-34561, 24677, -6402, 778, -45, 1},
  {-34529, 24677, -6402, 778, -45, 1}, {-34705, 24693, -6402, 778, -45, 1},
  {-34881, 24709, -6402, 778, -45, 1}, {-35057, 24725, -6402, 778, -45, 1},
  {-33273, 24469, -6394, 778, -45, 1}, {-33449, 24485, -6394, 778, -45, 1},
  {-33417, 24485, -6394, 778, -45, 1}, {-33593, 24501, -6394, 778, -45, 1},
  {-33561, 24501, -6394, 778, -45, 1}, {-33769, 24517, -6394, 778, -45, 1},
  {-33737, 24517, -6394, 778, -45, 1}, {-33913, 24533, -6394, 778, -45, 1},
  {-34089, 24549, -6394, 778, -45, 1}, {-32481, 24309, -6386, 778, -45, 1},
  {-32625, 24325, -6386, 778, -45, 1}, {-32801, 24341, -6386, 778, -45, 1},
  {-32769, 24341, -6386, 778, -45, 1}, {-32945, 24357, -6386, 778, -45, 1},
  {-33121, 24373, -6386, 778, -45, 1}, {-31833, 24165, -6378, 778, -45, 1},
  {-32009, 24181, -6378, 778, -45, 1}, {-31977, 24181, -6378, 778, -45, 1},
  {-32153, 24197, -6378, 778, -45, 1}, {-32329, 24213, -6378, 778, -45, 1},
  {-31041, 24005, -6370, 778, -45, 1}, {-31185, 24021, -6370, 778, -45, 1},
  {-31361, 24037, -6370, 778, -45, 1}, {-30249, 23845, -6362, 778, -45, 1},
  {-30393, 23861, -6362, 778, -45, 1}, {-30569, 23877, -6362, 778, -45, 1},
  {-29601, 23701, -6354, 778, -45, 1}, {-28809, 23541, -6346, 778, -45, 1}}
```

```

A = {{-38 049, 25 349, -6434, 778, -45, 1}, {-36 729, 25 141, -6426, 778, -45, 1},
      {-36 969, 25 157, -6426, 778, -45, 1}, {-36 937, 25 157, -6426, 778, -45, 1},
      {-36 905, 25 157, -6426, 778, -45, 1}, {-37 113, 25 173, -6426, 778, -45, 1},
      {-37 081, 25 173, -6426, 778, -45, 1}, {-37 289, 25 189, -6426, 778, -45, 1},
      {-37 257, 25 189, -6426, 778, -45, 1}, {-37 433, 25 205, -6426, 778, -45, 1},
      {-35 825, 24 965, -6418, 778, -45, 1}, {-35 793, 24 965, -6418, 778, -45, 1},
      {-36 001, 24 981, -6418, 778, -45, 1}, {-35 969, 24 981, -6418, 778, -45, 1},
      {-35 937, 24 981, -6418, 778, -45, 1}, {-36 145, 24 997, -6418, 778, -45, 1},
      {-36 113, 24 997, -6418, 778, -45, 1}, {-36 321, 25 013, -6418, 778, -45, 1},
      {-36 289, 25 013, -6418, 778, -45, 1}, {-36 465, 25 029, -6418, 778, -45, 1},
      {-36 641, 25 045, -6418, 778, -45, 1}, {-36 817, 25 061, -6418, 778, -45, 1},
      {-34 713, 24 773, -6410, 778, -45, 1}, {-34 857, 24 789, -6410, 778, -45, 1},
      {-35 033, 24 805, -6410, 778, -45, 1}, {-35 001, 24 805, -6410, 778, -45, 1},
      {-35 209, 24 821, -6410, 778, -45, 1}, {-35 177, 24 821, -6410, 778, -45, 1},
      {-35 145, 24 821, -6410, 778, -45, 1}, {-35 353, 24 837, -6410, 778, -45, 1},
      {-35 321, 24 837, -6410, 778, -45, 1}, {-35 529, 24 853, -6410, 778, -45, 1},
      {-35 497, 24 853, -6410, 778, -45, 1}, {-35 673, 24 869, -6410, 778, -45, 1},
      {-35 849, 24 885, -6410, 778, -45, 1}, {-33 921, 24 613, -6402, 778, -45, 1},
      {-34 065, 24 629, -6402, 778, -45, 1}, {-34 241, 24 645, -6402, 778, -45, 1},
      {-34 209, 24 645, -6402, 778, -45, 1}, {-34 385, 24 661, -6402, 778, -45, 1},
      {-34 353, 24 661, -6402, 778, -45, 1}, {-34 561, 24 677, -6402, 778, -45, 1},
      {-34 529, 24 677, -6402, 778, -45, 1}, {-34 705, 24 693, -6402, 778, -45, 1},
      {-34 881, 24 709, -6402, 778, -45, 1}, {-35 057, 24 725, -6402, 778, -45, 1},
      {-33 273, 24 469, -6394, 778, -45, 1}, {-33 449, 24 485, -6394, 778, -45, 1},
      {-33 417, 24 485, -6394, 778, -45, 1}, {-33 593, 24 501, -6394, 778, -45, 1},
      {-33 561, 24 501, -6394, 778, -45, 1}, {-33 769, 24 517, -6394, 778, -45, 1},
      {-33 737, 24 517, -6394, 778, -45, 1}, {-33 913, 24 533, -6394, 778, -45, 1},
      {-34 089, 24 549, -6394, 778, -45, 1}, {-32 481, 24 309, -6386, 778, -45, 1},
      {-32 625, 24 325, -6386, 778, -45, 1}, {-32 801, 24 341, -6386, 778, -45, 1},
      {-32 769, 24 341, -6386, 778, -45, 1}, {-32 945, 24 357, -6386, 778, -45, 1},
      {-33 121, 24 373, -6386, 778, -45, 1}, {-31 833, 24 165, -6378, 778, -45, 1},
      {-32 009, 24 181, -6378, 778, -45, 1}, {-31 977, 24 181, -6378, 778, -45, 1},
      {-32 153, 24 197, -6378, 778, -45, 1}, {-32 329, 24 213, -6378, 778, -45, 1},
      {-31 041, 24 005, -6370, 778, -45, 1}, {-31 185, 24 021, -6370, 778, -45, 1},
      {-31 361, 24 037, -6370, 778, -45, 1}, {-30 249, 23 845, -6362, 778, -45, 1},
      {-30 393, 23 861, -6362, 778, -45, 1}, {-30 569, 23 877, -6362, 778, -45, 1},
      {-29 601, 23 701, -6354, 778, -45, 1}, {-28 809, 23 541, -6346, 778, -45, 1}};

```

```
A // MatrixForm
```

```

( -38 049 25 349 -6434 778 -45 1 )
( -36 729 25 141 -6426 778 -45 1 )
( -36 969 25 157 -6426 778 -45 1 )
( -36 937 25 157 -6426 778 -45 1 )
( -36 905 25 157 -6426 778 -45 1 )
( -37 113 25 173 -6426 778 -45 1 )
( -37 081 25 173 -6426 778 -45 1 )
( -37 289 25 189 -6426 778 -45 1 )
( -37 257 25 189 -6426 778 -45 1 )
( -37 433 25 205 -6426 778 -45 1 )

```

-35 825	24 965	-6418	778	-45	1
-35 793	24 965	-6418	778	-45	1
-36 001	24 981	-6418	778	-45	1
-35 969	24 981	-6418	778	-45	1
-35 937	24 981	-6418	778	-45	1
-36 145	24 997	-6418	778	-45	1
-36 113	24 997	-6418	778	-45	1
-36 321	25 013	-6418	778	-45	1
-36 289	25 013	-6418	778	-45	1
-36 465	25 029	-6418	778	-45	1
-36 641	25 045	-6418	778	-45	1
-36 817	25 061	-6418	778	-45	1
-34 713	24 773	-6410	778	-45	1
-34 857	24 789	-6410	778	-45	1
-35 033	24 805	-6410	778	-45	1
-35 001	24 805	-6410	778	-45	1
-35 209	24 821	-6410	778	-45	1
-35 177	24 821	-6410	778	-45	1
-35 145	24 821	-6410	778	-45	1
-35 353	24 837	-6410	778	-45	1
-35 321	24 837	-6410	778	-45	1
-35 529	24 853	-6410	778	-45	1
-35 497	24 853	-6410	778	-45	1
-35 673	24 869	-6410	778	-45	1
-35 849	24 885	-6410	778	-45	1
-33 921	24 613	-6402	778	-45	1
-34 065	24 629	-6402	778	-45	1
-34 241	24 645	-6402	778	-45	1
-34 209	24 645	-6402	778	-45	1
-34 385	24 661	-6402	778	-45	1
-34 353	24 661	-6402	778	-45	1
-34 561	24 677	-6402	778	-45	1
-34 529	24 677	-6402	778	-45	1
-34 705	24 693	-6402	778	-45	1
-34 881	24 709	-6402	778	-45	1
-35 057	24 725	-6402	778	-45	1
-33 273	24 469	-6394	778	-45	1
-33 449	24 485	-6394	778	-45	1
-33 417	24 485	-6394	778	-45	1
-33 593	24 501	-6394	778	-45	1
-33 561	24 501	-6394	778	-45	1
-33 769	24 517	-6394	778	-45	1
-33 737	24 517	-6394	778	-45	1
-33 913	24 533	-6394	778	-45	1
-34 089	24 549	-6394	778	-45	1
-32 481	24 309	-6386	778	-45	1
-32 625	24 325	-6386	778	-45	1
-32 801	24 341	-6386	778	-45	1
-32 769	24 341	-6386	778	-45	1
-32 945	24 357	-6386	778	-45	1
-33 121	24 373	-6386	778	-45	1
-31 833	24 165	-6378	778	-45	1
-32 009	24 181	-6378	778	-45	1
-31 977	24 181	-6378	778	-45	1
-32 153	24 197	-6378	778	-45	1

$$\begin{pmatrix} -32329 & 24213 & -6378 & 778 & -45 & 1 \\ -31041 & 24005 & -6370 & 778 & -45 & 1 \\ -31185 & 24021 & -6370 & 778 & -45 & 1 \\ -31361 & 24037 & -6370 & 778 & -45 & 1 \\ -30249 & 23845 & -6362 & 778 & -45 & 1 \\ -30393 & 23861 & -6362 & 778 & -45 & 1 \\ -30569 & 23877 & -6362 & 778 & -45 & 1 \\ -29601 & 23701 & -6354 & 778 & -45 & 1 \\ -28809 & 23541 & -6346 & 778 & -45 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1814649, 1231237, -314698, 38122, -2205, 49}

Array[c, 6].Transpose[A]

{-38049 c[1] + 25349 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6],
-36729 c[1] + 25141 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
-36969 c[1] + 25157 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
-36937 c[1] + 25157 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
-36905 c[1] + 25157 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
-37113 c[1] + 25173 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
-37081 c[1] + 25173 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
-37289 c[1] + 25189 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
-37257 c[1] + 25189 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
-37433 c[1] + 25205 c[2] - 6426 c[3] + 778 c[4] - 45 c[5] + c[6],
-35825 c[1] + 24965 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-35793 c[1] + 24965 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-36001 c[1] + 24981 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-35969 c[1] + 24981 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-35937 c[1] + 24981 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-36145 c[1] + 24997 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-36113 c[1] + 24997 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-36321 c[1] + 25013 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-36289 c[1] + 25013 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-36465 c[1] + 25029 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-36641 c[1] + 25045 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-36817 c[1] + 25061 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
-34713 c[1] + 24773 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-34857 c[1] + 24789 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35033 c[1] + 24805 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35001 c[1] + 24805 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35209 c[1] + 24821 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35177 c[1] + 24821 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35145 c[1] + 24821 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35353 c[1] + 24837 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35321 c[1] + 24837 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35529 c[1] + 24853 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35497 c[1] + 24853 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
-35673 c[1] + 24869 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],


```

-35 849 c[1] + 24 885 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 921 c[1] + 24 613 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 065 c[1] + 24 629 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 241 c[1] + 24 645 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 209 c[1] + 24 645 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 385 c[1] + 24 661 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 353 c[1] + 24 661 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 561 c[1] + 24 677 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 529 c[1] + 24 677 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 705 c[1] + 24 693 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 881 c[1] + 24 709 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-35 057 c[1] + 24 725 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 273 c[1] + 24 469 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 449 c[1] + 24 485 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 417 c[1] + 24 485 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 593 c[1] + 24 501 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 561 c[1] + 24 501 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 769 c[1] + 24 517 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 737 c[1] + 24 517 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 913 c[1] + 24 533 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-34 089 c[1] + 24 549 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 481 c[1] + 24 309 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 625 c[1] + 24 325 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 801 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 769 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 945 c[1] + 24 357 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-33 121 c[1] + 24 373 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 833 c[1] + 24 165 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 009 c[1] + 24 181 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 977 c[1] + 24 181 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 153 c[1] + 24 197 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-32 329 c[1] + 24 213 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 041 c[1] + 24 005 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 185 c[1] + 24 021 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-31 361 c[1] + 24 037 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-30 249 c[1] + 23 845 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-30 393 c[1] + 23 861 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-30 569 c[1] + 23 877 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-29 601 c[1] + 23 701 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ,
-28 809 c[1] + 23 541 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] }

```

Array[c, 6].g

```
-1 814 649 c[1] + 1 231 237 c[2] - 314 698 c[3] + 38 122 c[4] - 2205 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```

-1 814 649 c[1] + 1 231 237 c[2] - 314 698 c[3] + 38 122 c[4] - 2205 c[5] + 49 c[6] < 0 &&
-38 049 c[1] + 25 349 c[2] - 6434 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&

```

[illegible]

```

-33 417 c[1] + 24 485 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-33 593 c[1] + 24 501 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-33 561 c[1] + 24 501 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-33 769 c[1] + 24 517 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-33 737 c[1] + 24 517 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-33 913 c[1] + 24 533 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-34 089 c[1] + 24 549 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 481 c[1] + 24 309 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 625 c[1] + 24 325 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 801 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 769 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 945 c[1] + 24 357 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-33 121 c[1] + 24 373 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 833 c[1] + 24 165 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 009 c[1] + 24 181 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 977 c[1] + 24 181 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 153 c[1] + 24 197 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-32 329 c[1] + 24 213 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 041 c[1] + 24 005 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 185 c[1] + 24 021 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-31 361 c[1] + 24 037 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-30 249 c[1] + 23 845 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-30 393 c[1] + 23 861 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-30 569 c[1] + 23 877 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-29 601 c[1] + 23 701 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-28 809 c[1] + 23 541 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```

chi = listdim17[[72]]
(-11 + x)2 (-9 + x)10 (5 + x)32 (-65 768 + 37 337 x - 8296 x2 + 902 x3 - 48 x4 + x5)

CoefficientList[feasibleinterlacingpolylist[chi], x]

A = {{1, -63, 1669, -24 083, 204 211, -1 016 285, 2 744 455, -3 097 105},
      {1, -63, 1669, -24 075, 203 875, -1 011 133, 2 710 295, -3 014 649},
      {1, -63, 1669, -24 075, 203 875, -1 011 101, 2 709 655, -3 011 481},

```

```

{1, -63, 1669, -24 075, 203 875, -1 011 069, 2 709 015, -3 008 313},
{1, -63, 1669, -24 075, 203 891, -1 011 597, 2 714 759, -3 028 905},
{1, -63, 1669, -24 075, 203 891, -1 011 565, 2 714 119, -3 025 737},
{1, -63, 1669, -24 075, 203 891, -1 011 533, 2 713 479, -3 022 569},
{1, -63, 1669, -24 075, 203 907, -1 012 029, 2 718 519, -3 039 289},
{1, -63, 1669, -24 075, 203 907, -1 011 997, 2 717 879, -3 036 121},
{1, -63, 1669, -24 067, 203 539, -1 005 917, 2 674 727, -2 924 577},
{1, -63, 1669, -24 067, 203 555, -1 006 381, 2 679 191, -2 938 833},
{1, -63, 1669, -24 067, 203 555, -1 006 349, 2 678 615, -2 936 241},
{1, -63, 1669, -24 067, 203 571, -1 006 877, 2 684 295, -2 956 257},
{1, -63, 1669, -24 067, 203 571, -1 006 813, 2 683 079, -2 950 497},
{1, -63, 1669, -24 067, 203 571, -1 006 781, 2 682 439, -2 947 329},
{1, -63, 1669, -24 067, 203 587, -1 007 309, 2 688 183, -2 967 921},
{1, -63, 1669, -24 067, 203 587, -1 007 277, 2 687 543, -2 964 753},
{1, -63, 1669, -24 067, 203 587, -1 007 245, 2 686 903, -2 961 585},
{1, -63, 1669, -24 067, 203 603, -1 007 773, 2 692 647, -2 982 177},
{1, -63, 1669, -24 067, 203 603, -1 007 741, 2 692 007, -2 979 009},
{1, -63, 1669, -24 067, 203 603, -1 007 709, 2 691 303, -2 975 137},
{1, -63, 1669, -24 067, 203 619, -1 008 173, 2 695 767, -2 989 393},
{1, -63, 1669, -24 059, 203 251, -1 002 093, 2 652 615, -2 877 849},
{1, -63, 1669, -24 059, 203 251, -1 002 029, 2 651 399, -2 872 089},
{1, -63, 1669, -24 059, 203 267, -1 002 493, 2 655 863, -2 886 345},
{1, -63, 1669, -24 059, 203 283, -1 003 053, 2 662 183, -2 909 529},
{1, -63, 1669, -24 059, 203 283, -1 002 989, 2 660 967, -2 903 769},
{1, -63, 1669, -24 059, 203 283, -1 002 957, 2 660 327, -2 900 601},
{1, -63, 1669, -24 059, 203 283, -1 002 925, 2 659 687, -2 897 433},
{1, -63, 1669, -24 059, 203 299, -1 003 453, 2 665 431, -2 918 025},
{1, -63, 1669, -24 059, 203 299, -1 003 421, 2 664 791, -2 914 857},
{1, -63, 1669, -24 059, 203 299, -1 003 389, 2 664 087, -2 910 985},
{1, -63, 1669, -24 059, 203 315, -1 003 917, 2 669 895, -2 932 281},
{1, -63, 1669, -24 059, 203 331, -1 004 349, 2 673 655, -2 942 665},
{1, -63, 1669, -24 051, 202 947, -997 773, 2 625 399, -2 813 697},
{1, -63, 1669, -24 051, 202 963, -998 173, 2 628 647, -2 822 193},
{1, -63, 1669, -24 051, 202 979, -998 669, 2 633 751, -2 839 617},
{1, -63, 1669, -24 051, 202 979, -998 637, 2 633 111, -2 836 449},
{1, -63, 1669, -24 051, 202 995, -999 133, 2 638 215, -2 853 873},
{1, -63, 1669, -24 051, 203 011, -999 629, 2 643 319, -2 871 297},
{1, -63, 1669, -24 051, 203 011, -999 597, 2 642 679, -2 868 129},
{1, -63, 1669, -24 051, 203 011, -999 565, 2 641 975, -2 864 257},
{1, -63, 1669, -24 051, 203 027, -1 000 093, 2 647 783, -2 885 553},
{1, -63, 1669, -24 043, 202 659, -993 885, 2 602 071, -2 761 209},
{1, -63, 1669, -24 043, 202 675, -994 349, 2 606 535, -2 775 465},
{1, -63, 1669, -24 043, 202 691, -994 845, 2 611 639, -2 792 889},
{1, -63, 1669, -24 043, 202 691, -994 813, 2 610 999, -2 789 721},
{1, -63, 1669, -24 043, 202 707, -995 309, 2 616 103, -2 807 145},
{1, -63, 1669, -24 043, 202 739, -996 269, 2 625 671, -2 838 825},
{1, -63, 1669, -24 035, 202 355, -989 565, 2 574 855, -2 697 057},

```

```
{1, -63, 1669, -24 035, 202 371, -990 029, 2 579 319, -2 711 313},
{1, -63, 1669, -24 035, 202 387, -990 525, 2 584 423, -2 728 737},
{1, -63, 1669, -24 035, 202 419, -991 485, 2 593 991, -2 760 417},
{1, -63, 1669, -24 027, 202 067, -985 741, 2 552 743, -2 650 329},
{1, -63, 1669, -24 027, 202 083, -986 205, 2 557 207, -2 664 585},
{1, -63, 1669, -24 019, 201 763, -981 421, 2 525 527, -2 586 177}};
```

```
A // MatrixForm
```

```
( 1 -63 1669 -24 083 204 211 -1 016 285 2 744 455 -3 097 105 )
1 -63 1669 -24 075 203 875 -1 011 133 2 710 295 -3 014 649
1 -63 1669 -24 075 203 875 -1 011 101 2 709 655 -3 011 481
1 -63 1669 -24 075 203 875 -1 011 069 2 709 015 -3 008 313
1 -63 1669 -24 075 203 891 -1 011 597 2 714 759 -3 028 905
1 -63 1669 -24 075 203 891 -1 011 565 2 714 119 -3 025 737
1 -63 1669 -24 075 203 891 -1 011 533 2 713 479 -3 022 569
1 -63 1669 -24 075 203 907 -1 012 029 2 718 519 -3 039 289
1 -63 1669 -24 075 203 907 -1 011 997 2 717 879 -3 036 121
1 -63 1669 -24 067 203 539 -1 005 917 2 674 727 -2 924 577
1 -63 1669 -24 067 203 555 -1 006 381 2 679 191 -2 938 833
1 -63 1669 -24 067 203 555 -1 006 349 2 678 615 -2 936 241
1 -63 1669 -24 067 203 571 -1 006 877 2 684 295 -2 956 257
1 -63 1669 -24 067 203 571 -1 006 813 2 683 079 -2 950 497
1 -63 1669 -24 067 203 571 -1 006 781 2 682 439 -2 947 329
1 -63 1669 -24 067 203 587 -1 007 309 2 688 183 -2 967 921
1 -63 1669 -24 067 203 587 -1 007 277 2 687 543 -2 964 753
1 -63 1669 -24 067 203 587 -1 007 245 2 686 903 -2 961 585
1 -63 1669 -24 067 203 603 -1 007 773 2 692 647 -2 982 177
1 -63 1669 -24 067 203 603 -1 007 741 2 692 007 -2 979 009
1 -63 1669 -24 067 203 603 -1 007 709 2 691 303 -2 975 137
1 -63 1669 -24 067 203 619 -1 008 173 2 695 767 -2 989 393
1 -63 1669 -24 059 203 251 -1 002 093 2 652 615 -2 877 849
1 -63 1669 -24 059 203 251 -1 002 029 2 651 399 -2 872 089
1 -63 1669 -24 059 203 267 -1 002 493 2 655 863 -2 886 345
1 -63 1669 -24 059 203 283 -1 003 053 2 662 183 -2 909 529
1 -63 1669 -24 059 203 283 -1 002 989 2 660 967 -2 903 769
1 -63 1669 -24 059 203 283 -1 002 957 2 660 327 -2 900 601
1 -63 1669 -24 059 203 283 -1 002 925 2 659 687 -2 897 433
1 -63 1669 -24 059 203 299 -1 003 453 2 665 431 -2 918 025
1 -63 1669 -24 059 203 299 -1 003 421 2 664 791 -2 914 857
1 -63 1669 -24 059 203 299 -1 003 389 2 664 087 -2 910 985
1 -63 1669 -24 059 203 315 -1 003 917 2 669 895 -2 932 281
1 -63 1669 -24 059 203 331 -1 004 349 2 673 655 -2 942 665
1 -63 1669 -24 051 202 947 -997 773 2 625 399 -2 813 697
1 -63 1669 -24 051 202 963 -998 173 2 628 647 -2 822 193
1 -63 1669 -24 051 202 979 -998 669 2 633 751 -2 839 617
1 -63 1669 -24 051 202 979 -998 637 2 633 111 -2 836 449
1 -63 1669 -24 051 202 995 -999 133 2 638 215 -2 853 873
1 -63 1669 -24 051 203 011 -999 629 2 643 319 -2 871 297
1 -63 1669 -24 051 203 011 -999 597 2 642 679 -2 868 129
1 -63 1669 -24 051 203 011 -999 565 2 641 975 -2 864 257
1 -63 1669 -24 051 203 027 -1 000 093 2 647 783 -2 885 553
1 -63 1669 -24 043 202 659 -993 885 2 602 071 -2 761 209
1 -63 1669 -24 043 202 675 -994 349 2 606 535 -2 775 465
1 -63 1669 -24 043 202 691 -994 845 2 611 639 -2 792 889
```

1	-63	1669	-24 043	202 691	-994 813	2 610 999	-2 789 721
1	-63	1669	-24 043	202 707	-995 309	2 616 103	-2 807 145
1	-63	1669	-24 043	202 739	-996 269	2 625 671	-2 838 825
1	-63	1669	-24 035	202 355	-989 565	2 574 855	-2 697 057
1	-63	1669	-24 035	202 371	-990 029	2 579 319	-2 711 313
1	-63	1669	-24 035	202 387	-990 525	2 584 423	-2 728 737
1	-63	1669	-24 035	202 419	-991 485	2 593 991	-2 760 417
1	-63	1669	-24 027	202 067	-985 741	2 552 743	-2 650 329
1	-63	1669	-24 027	202 083	-986 205	2 557 207	-2 664 585
1	-63	1669	-24 019	201 763	-981 421	2 525 527	-2 586 177

Dimensions[A]

{56, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81 781, -1 179 499, 9 985 123, -49 504 669, 132 701 303, -147 779 689}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24 083 c[4] + 204 211 c[5] -
 1 016 285 c[6] + 2 744 455 c[7] - 3 097 105 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24 075 c[4] + 203 875 c[5] - 1 011 133 c[6] + 2 710 295 c[7] - 3 014 649 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 875 c[5] - 1 011 101 c[6] +
 2 709 655 c[7] - 3 011 481 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
 203 875 c[5] - 1 011 069 c[6] + 2 709 015 c[7] - 3 008 313 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 891 c[5] - 1 011 597 c[6] +
 2 714 759 c[7] - 3 028 905 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
 203 891 c[5] - 1 011 565 c[6] + 2 714 119 c[7] - 3 025 737 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 891 c[5] - 1 011 533 c[6] +
 2 713 479 c[7] - 3 022 569 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
 203 907 c[5] - 1 012 029 c[6] + 2 718 519 c[7] - 3 039 289 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 907 c[5] - 1 011 997 c[6] +
 2 717 879 c[7] - 3 036 121 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
 203 539 c[5] - 1 005 917 c[6] + 2 674 727 c[7] - 2 924 577 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 555 c[5] - 1 006 381 c[6] +
 2 679 191 c[7] - 2 938 833 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
 203 555 c[5] - 1 006 349 c[6] + 2 678 615 c[7] - 2 936 241 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 571 c[5] - 1 006 877 c[6] +
 2 684 295 c[7] - 2 956 257 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
 203 571 c[5] - 1 006 813 c[6] + 2 683 079 c[7] - 2 950 497 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 571 c[5] - 1 006 781 c[6] +
 2 682 439 c[7] - 2 947 329 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
 203 587 c[5] - 1 007 309 c[6] + 2 688 183 c[7] - 2 967 921 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 587 c[5] - 1 007 277 c[6] +
 2 687 543 c[7] - 2 964 753 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
 203 587 c[5] - 1 007 245 c[6] + 2 686 903 c[7] - 2 961 585 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 603 c[5] - 1 007 773 c[6] +
 2 692 647 c[7] - 2 982 177 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
 203 603 c[5] - 1 007 741 c[6] + 2 692 007 c[7] - 2 979 009 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 603 c[5] - 1 007 709 c[6] +

$2\,691\,303\,c[7] - 2\,975\,137\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] +$
 $203\,619\,c[5] - 1\,008\,173\,c[6] + 2\,695\,767\,c[7] - 2\,989\,393\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,251\,c[5] - 1\,002\,093\,c[6] +$
 $2\,652\,615\,c[7] - 2\,877\,849\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,251\,c[5] - 1\,002\,029\,c[6] + 2\,651\,399\,c[7] - 2\,872\,089\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,267\,c[5] - 1\,002\,493\,c[6] +$
 $2\,655\,863\,c[7] - 2\,886\,345\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,283\,c[5] - 1\,003\,053\,c[6] + 2\,662\,183\,c[7] - 2\,909\,529\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,989\,c[6] +$
 $2\,660\,967\,c[7] - 2\,903\,769\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,283\,c[5] - 1\,002\,957\,c[6] + 2\,660\,327\,c[7] - 2\,900\,601\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,925\,c[6] +$
 $2\,659\,687\,c[7] - 2\,897\,433\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,299\,c[5] - 1\,003\,453\,c[6] + 2\,665\,431\,c[7] - 2\,918\,025\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,421\,c[6] +$
 $2\,664\,791\,c[7] - 2\,914\,857\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,299\,c[5] - 1\,003\,389\,c[6] + 2\,664\,087\,c[7] - 2\,910\,985\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,917\,c[6] +$
 $2\,669\,895\,c[7] - 2\,932\,281\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,331\,c[5] - 1\,004\,349\,c[6] + 2\,673\,655\,c[7] - 2\,942\,665\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,947\,c[5] - 997\,773\,c[6] +$
 $2\,625\,399\,c[7] - 2\,813\,697\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] +$
 $202\,963\,c[5] - 998\,173\,c[6] + 2\,628\,647\,c[7] - 2\,822\,193\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,669\,c[6] +$
 $2\,633\,751\,c[7] - 2\,839\,617\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] +$
 $202\,979\,c[5] - 998\,637\,c[6] + 2\,633\,111\,c[7] - 2\,836\,449\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,133\,c[6] +$
 $2\,638\,215\,c[7] - 2\,853\,873\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] +$
 $203\,011\,c[5] - 999\,629\,c[6] + 2\,643\,319\,c[7] - 2\,871\,297\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,597\,c[6] +$
 $2\,642\,679\,c[7] - 2\,868\,129\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] +$
 $203\,011\,c[5] - 999\,565\,c[6] + 2\,641\,975\,c[7] - 2\,864\,257\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 1\,000\,093\,c[6] +$
 $2\,647\,783\,c[7] - 2\,885\,553\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,659\,c[5] - 993\,885\,c[6] + 2\,602\,071\,c[7] - 2\,761\,209\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,675\,c[5] - 994\,349\,c[6] +$
 $2\,606\,535\,c[7] - 2\,775\,465\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,691\,c[5] - 994\,845\,c[6] + 2\,611\,639\,c[7] - 2\,792\,889\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,813\,c[6] +$
 $2\,610\,999\,c[7] - 2\,789\,721\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,707\,c[5] - 995\,309\,c[6] + 2\,616\,103\,c[7] - 2\,807\,145\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,269\,c[6] +$
 $2\,625\,671\,c[7] - 2\,838\,825\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,355\,c[5] - 989\,565\,c[6] + 2\,574\,855\,c[7] - 2\,697\,057\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 990\,029\,c[6] +$
 $2\,579\,319\,c[7] - 2\,711\,313\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,387\,c[5] - 990\,525\,c[6] + 2\,584\,423\,c[7] - 2\,728\,737\,c[8],$

```

c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 419 c[5] - 991 485 c[6] +
  2 593 991 c[7] - 2 760 417 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 067 c[5] - 985 741 c[6] + 2 552 743 c[7] - 2 650 329 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 205 c[6] +
  2 557 207 c[7] - 2 664 585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 763 c[5] - 981 421 c[6] + 2 525 527 c[7] - 2 586 177 c[8] }

```

```
Array[c, 8].g
```

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 499 c[4] +
  9 985 123 c[5] - 49 504 669 c[6] + 132 701 303 c[7] - 147 779 689 c[8]

```

```
cert =
```

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 499 c[4] +
  9 985 123 c[5] - 49 504 669 c[6] + 132 701 303 c[7] - 147 779 689 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 083 c[4] + 204 211 c[5] - 1 016 285 c[6] +
  2 744 455 c[7] - 3 097 105 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 875 c[5] - 1 011 133 c[6] + 2 710 295 c[7] - 3 014 649 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 875 c[5] - 1 011 101 c[6] +
  2 709 655 c[7] - 3 011 481 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 875 c[5] - 1 011 069 c[6] + 2 709 015 c[7] - 3 008 313 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 891 c[5] - 1 011 597 c[6] +
  2 714 759 c[7] - 3 028 905 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 891 c[5] - 1 011 565 c[6] + 2 714 119 c[7] - 3 025 737 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 891 c[5] - 1 011 533 c[6] +
  2 713 479 c[7] - 3 022 569 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
  203 907 c[5] - 1 012 029 c[6] + 2 718 519 c[7] - 3 039 289 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 907 c[5] - 1 011 997 c[6] +
  2 717 879 c[7] - 3 036 121 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 539 c[5] - 1 005 917 c[6] + 2 674 727 c[7] - 2 924 577 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 555 c[5] - 1 006 381 c[6] +
  2 679 191 c[7] - 2 938 833 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 555 c[5] - 1 006 349 c[6] + 2 678 615 c[7] - 2 936 241 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 571 c[5] - 1 006 877 c[6] +
  2 684 295 c[7] - 2 956 257 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 571 c[5] - 1 006 813 c[6] + 2 683 079 c[7] - 2 950 497 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 571 c[5] - 1 006 781 c[6] +
  2 682 439 c[7] - 2 947 329 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 587 c[5] - 1 007 309 c[6] + 2 688 183 c[7] - 2 967 921 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 587 c[5] - 1 007 277 c[6] +
  2 687 543 c[7] - 2 964 753 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 587 c[5] - 1 007 245 c[6] + 2 686 903 c[7] - 2 961 585 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 603 c[5] - 1 007 773 c[6] +
  2 692 647 c[7] - 2 982 177 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 603 c[5] - 1 007 741 c[6] + 2 692 007 c[7] - 2 979 009 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 603 c[5] -
  1 007 709 c[6] + 2 691 303 c[7] - 2 975 137 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 619 c[5] - 1 008 173 c[6] +

```


$$\begin{aligned}
& 2\,695\,767\,c[7] - 2\,989\,393\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,251\,c[5] - 1\,002\,093\,c[6] + 2\,652\,615\,c[7] - 2\,877\,849\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,251\,c[5] - 1\,002\,029\,c[6] + \\
& 2\,651\,399\,c[7] - 2\,872\,089\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,267\,c[5] - 1\,002\,493\,c[6] + 2\,655\,863\,c[7] - 2\,886\,345\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,003\,053\,c[6] + \\
& 2\,662\,183\,c[7] - 2\,909\,529\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,989\,c[6] + 2\,660\,967\,c[7] - 2\,903\,769\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,957\,c[6] + \\
& 2\,660\,327\,c[7] - 2\,900\,601\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,925\,c[6] + 2\,659\,687\,c[7] - 2\,897\,433\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,453\,c[6] + \\
& 2\,665\,431\,c[7] - 2\,918\,025\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,421\,c[6] + 2\,664\,791\,c[7] - 2\,914\,857\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,389\,c[6] + \\
& 2\,664\,087\,c[7] - 2\,910\,985\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,917\,c[6] + 2\,669\,895\,c[7] - 2\,932\,281\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,349\,c[6] + \\
& 2\,673\,655\,c[7] - 2\,942\,665\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,947\,c[5] - 997\,773\,c[6] + 2\,625\,399\,c[7] - 2\,813\,697\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,963\,c[5] - 998\,173\,c[6] + \\
& 2\,628\,647\,c[7] - 2\,822\,193\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,669\,c[6] + 2\,633\,751\,c[7] - 2\,839\,617\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,637\,c[6] + \\
& 2\,633\,111\,c[7] - 2\,836\,449\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,133\,c[6] + 2\,638\,215\,c[7] - 2\,853\,873\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,629\,c[6] + \\
& 2\,643\,319\,c[7] - 2\,871\,297\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,597\,c[6] + 2\,642\,679\,c[7] - 2\,868\,129\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,565\,c[6] + \\
& 2\,641\,975\,c[7] - 2\,864\,257\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 1\,000\,093\,c[6] + 2\,647\,783\,c[7] - 2\,885\,553\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,659\,c[5] - 993\,885\,c[6] + \\
& 2\,602\,071\,c[7] - 2\,761\,209\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,675\,c[5] - 994\,349\,c[6] + 2\,606\,535\,c[7] - 2\,775\,465\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,845\,c[6] + \\
& 2\,611\,639\,c[7] - 2\,792\,889\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,813\,c[6] + 2\,610\,999\,c[7] - 2\,789\,721\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,309\,c[6] + \\
& 2\,616\,103\,c[7] - 2\,807\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,269\,c[6] + 2\,625\,671\,c[7] - 2\,838\,825\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,355\,c[5] - 989\,565\,c[6] + \\
& 2\,574\,855\,c[7] - 2\,697\,057\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 990\,029\,c[6] + 2\,579\,319\,c[7] - 2\,711\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,525\,c[6] + \\
& 2\,584\,423\,c[7] - 2\,728\,737\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,485\,c[6] + 2\,593\,991\,c[7] - 2\,760\,417\,c[8] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 067 c[5] - 985 741 c[6] +
  2 552 743 c[7] - 2 650 329 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 083 c[5] - 986 205 c[6] + 2 557 207 c[7] - 2 664 585 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 763 c[5] - 981 421 c[6] +
  2 525 527 c[7] - 2 586 177 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -103 422 864, -26 769 889, -4 290 940, -589 184, -74 958}

```

```
GCD[0, 0, 0, -103 422 864, -26 769 889, -4 290 940, -589 184, -74 958]
```

```
1
```

```
cert.g
```

```
-119 876 041
```

```
{0, 0, 0, -103 422 864, -26 769 889, -4 290 940, -589 184, -74 958}.
```

```
Reverse[gpart[listdim17[[72]]]]
```

```
-119 876 041
```

```
cert.Transpose[A]
```

```

{8 810 903, 14 976 407, 17 277 143, 19 577 879, 16 138 215, 18 438 951, 20 739 687,
 4 538 103, 6 838 839, 5 212 695, 6 374 503, 14 143 271, 5 235 575, 15 305 079,
 17 605 815, 14 166 151, 16 466 887, 18 767 623, 15 327 959, 17 628 695, 4 866 775,
 6 028 583, 4 402 439, 14 471 943, 15 633 751, 4 425 319, 14 494 823, 16 795 559,
 19 096 295, 15 656 631, 17 957 367, 5 195 447, 16 818 439, 5 218 327, 4 731 111,
 15 962 423, 14 823 495, 17 124 231, 15 985 303, 14 846 375, 17 147 111, 4 385 191,
 16 008 183, 13 990 359, 15 152 167, 14 013 239, 16 313 975, 15 175 047, 15 197 927,
 14 319 031, 15 480 839, 14 341 911, 14 364 791, 13 508 775, 14 670 583, 13 837 447}

```

```
chi = listdim17[[73]]
```

```
(-11 + x)3 (-9 + x)11 (-8 + x) (5 + x)32 (83 - 20 x + x2)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

{{-30 627, 21 241, -5618, 710, -43, 1}, {-30 595, 21 241, -5618, 710, -43, 1},
 {-30 563, 21 241, -5618, 710, -43, 1}, {-30 707, 21 257, -5618, 710, -43, 1},
 {-30 675, 21 257, -5618, 710, -43, 1}, {-29 691, 21 065, -5610, 710, -43, 1},
 {-29 659, 21 065, -5610, 710, -43, 1}, {-29 835, 21 081, -5610, 710, -43, 1},
 {-29 803, 21 081, -5610, 710, -43, 1}, {-29 771, 21 081, -5610, 710, -43, 1},
 {-29 979, 21 097, -5610, 710, -43, 1}, {-29 947, 21 097, -5610, 710, -43, 1},
 {-29 915, 21 097, -5610, 710, -43, 1}, {-30 123, 21 113, -5610, 710, -43, 1},
 {-30 091, 21 113, -5610, 710, -43, 1}, {-30 059, 21 113, -5610, 710, -43, 1},
 {-30 027, 21 113, -5610, 710, -43, 1}, {-30 235, 21 129, -5610, 710, -43, 1},
 {-30 203, 21 129, -5610, 710, -43, 1}, {-30 171, 21 129, -5610, 710, -43, 1},
 {-30 315, 21 145, -5610, 710, -43, 1}, {-30 283, 21 145, -5610, 710, -43, 1},

```

```
{-28755, 20889, -5602, 710, -43, 1}, {-28899, 20905, -5602, 710, -43, 1},
{-29043, 20921, -5602, 710, -43, 1}, {-29011, 20921, -5602, 710, -43, 1},
{-29187, 20937, -5602, 710, -43, 1}, {-29155, 20937, -5602, 710, -43, 1},
{-29331, 20953, -5602, 710, -43, 1}, {-29299, 20953, -5602, 710, -43, 1},
{-29267, 20953, -5602, 710, -43, 1}, {-29475, 20969, -5602, 710, -43, 1},
{-29443, 20969, -5602, 710, -43, 1}, {-29411, 20969, -5602, 710, -43, 1},
{-29619, 20985, -5602, 710, -43, 1}, {-29587, 20985, -5602, 710, -43, 1},
{-29555, 20985, -5602, 710, -43, 1}, {-29523, 20985, -5602, 710, -43, 1},
{-29763, 21001, -5602, 710, -43, 1}, {-29731, 21001, -5602, 710, -43, 1},
{-29699, 21001, -5602, 710, -43, 1}, {-29667, 21001, -5602, 710, -43, 1},
{-29843, 21017, -5602, 710, -43, 1}, {-28107, 20745, -5594, 710, -43, 1},
{-28251, 20761, -5594, 710, -43, 1}, {-28395, 20777, -5594, 710, -43, 1},
{-28363, 20777, -5594, 710, -43, 1}, {-28539, 20793, -5594, 710, -43, 1},
{-28507, 20793, -5594, 710, -43, 1}, {-28683, 20809, -5594, 710, -43, 1},
{-28651, 20809, -5594, 710, -43, 1}, {-28619, 20809, -5594, 710, -43, 1},
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{-28763, 20825, -5594, 710, -43, 1}, {-28971, 20841, -5594, 710, -43, 1},
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{-29083, 20857, -5594, 710, -43, 1}, {-29051, 20857, -5594, 710, -43, 1},
{-29259, 20873, -5594, 710, -43, 1}, {-29227, 20873, -5594, 710, -43, 1},
{-27603, 20617, -5586, 710, -43, 1}, {-27747, 20633, -5586, 710, -43, 1},
{-27891, 20649, -5586, 710, -43, 1}, {-27859, 20649, -5586, 710, -43, 1},
{-28035, 20665, -5586, 710, -43, 1}, {-28003, 20665, -5586, 710, -43, 1},
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{-28115, 20681, -5586, 710, -43, 1}, {-28323, 20697, -5586, 710, -43, 1},
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{-28467, 20713, -5586, 710, -43, 1}, {-28435, 20713, -5586, 710, -43, 1},
{-28611, 20729, -5586, 710, -43, 1}, {-26955, 20473, -5578, 710, -43, 1},
{-27099, 20489, -5578, 710, -43, 1}, {-27243, 20505, -5578, 710, -43, 1},
{-27211, 20505, -5578, 710, -43, 1}, {-27387, 20521, -5578, 710, -43, 1},
{-27355, 20521, -5578, 710, -43, 1}, {-27531, 20537, -5578, 710, -43, 1},
{-27499, 20537, -5578, 710, -43, 1}, {-27467, 20537, -5578, 710, -43, 1},
{-27675, 20553, -5578, 710, -43, 1}, {-27643, 20553, -5578, 710, -43, 1},
{-27819, 20569, -5578, 710, -43, 1}, {-26451, 20345, -5570, 710, -43, 1},
{-26595, 20361, -5570, 710, -43, 1}, {-26739, 20377, -5570, 710, -43, 1},
{-26707, 20377, -5570, 710, -43, 1}, {-26883, 20393, -5570, 710, -43, 1},
{-26851, 20393, -5570, 710, -43, 1}, {-27027, 20409, -5570, 710, -43, 1},
{-25803, 20201, -5562, 710, -43, 1}, {-25947, 20217, -5562, 710, -43, 1},
{-26091, 20233, -5562, 710, -43, 1}, {-26059, 20233, -5562, 710, -43, 1},
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{-25443, 20089, -5554, 710, -43, 1}, {-24651, 19929, -5546, 710, -43, 1}}
```

```
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      {-30563, 21241, -5618, 710, -43, 1}, {-30707, 21257, -5618, 710, -43, 1},
      {-30675, 21257, -5618, 710, -43, 1}, {-29691, 21065, -5610, 710, -43, 1},
      {-29659, 21065, -5610, 710, -43, 1}, {-29835, 21081, -5610, 710, -43, 1},
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{-28755, 20889, -5602, 710, -43, 1}, {-28899, 20905, -5602, 710, -43, 1},
{-29043, 20921, -5602, 710, -43, 1}, {-29011, 20921, -5602, 710, -43, 1},
{-29187, 20937, -5602, 710, -43, 1}, {-29155, 20937, -5602, 710, -43, 1},
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{-29619, 20985, -5602, 710, -43, 1}, {-29587, 20985, -5602, 710, -43, 1},
{-29555, 20985, -5602, 710, -43, 1}, {-29523, 20985, -5602, 710, -43, 1},
{-29763, 21001, -5602, 710, -43, 1}, {-29731, 21001, -5602, 710, -43, 1},
{-29699, 21001, -5602, 710, -43, 1}, {-29667, 21001, -5602, 710, -43, 1},
{-29843, 21017, -5602, 710, -43, 1}, {-28107, 20745, -5594, 710, -43, 1},
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{-29083, 20857, -5594, 710, -43, 1}, {-29051, 20857, -5594, 710, -43, 1},
{-29259, 20873, -5594, 710, -43, 1}, {-29227, 20873, -5594, 710, -43, 1},
{-27603, 20617, -5586, 710, -43, 1}, {-27747, 20633, -5586, 710, -43, 1},
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{-28035, 20665, -5586, 710, -43, 1}, {-28003, 20665, -5586, 710, -43, 1},
{-28179, 20681, -5586, 710, -43, 1}, {-28147, 20681, -5586, 710, -43, 1},
{-28115, 20681, -5586, 710, -43, 1}, {-28323, 20697, -5586, 710, -43, 1},
{-28291, 20697, -5586, 710, -43, 1}, {-28259, 20697, -5586, 710, -43, 1},
{-28467, 20713, -5586, 710, -43, 1}, {-28435, 20713, -5586, 710, -43, 1},
{-28611, 20729, -5586, 710, -43, 1}, {-26955, 20473, -5578, 710, -43, 1},
{-27099, 20489, -5578, 710, -43, 1}, {-27243, 20505, -5578, 710, -43, 1},
{-27211, 20505, -5578, 710, -43, 1}, {-27387, 20521, -5578, 710, -43, 1},
{-27355, 20521, -5578, 710, -43, 1}, {-27531, 20537, -5578, 710, -43, 1},
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{-27819, 20569, -5578, 710, -43, 1}, {-26451, 20345, -5570, 710, -43, 1},
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{-26851, 20393, -5570, 710, -43, 1}, {-27027, 20409, -5570, 710, -43, 1},
{-25803, 20201, -5562, 710, -43, 1}, {-25947, 20217, -5562, 710, -43, 1},
{-26091, 20233, -5562, 710, -43, 1}, {-26059, 20233, -5562, 710, -43, 1},

```

```
{-26235, 20249, -5562, 710, -43, 1}, {-25299, 20073, -5554, 710, -43, 1},
{-25443, 20089, -5554, 710, -43, 1}, {-24651, 19929, -5546, 710, -43, 1}};
```

```
A // MatrixForm
```

```
(-30627 21241 -5618 710 -43 1)
(-30595 21241 -5618 710 -43 1)
(-30563 21241 -5618 710 -43 1)
(-30707 21257 -5618 710 -43 1)
(-30675 21257 -5618 710 -43 1)
(-29691 21065 -5610 710 -43 1)
(-29659 21065 -5610 710 -43 1)
(-29835 21081 -5610 710 -43 1)
(-29803 21081 -5610 710 -43 1)
(-29771 21081 -5610 710 -43 1)
(-29979 21097 -5610 710 -43 1)
(-29947 21097 -5610 710 -43 1)
(-29915 21097 -5610 710 -43 1)
(-30123 21113 -5610 710 -43 1)
(-30091 21113 -5610 710 -43 1)
(-30059 21113 -5610 710 -43 1)
(-30027 21113 -5610 710 -43 1)
(-30235 21129 -5610 710 -43 1)
(-30203 21129 -5610 710 -43 1)
(-30171 21129 -5610 710 -43 1)
(-30315 21145 -5610 710 -43 1)
(-30283 21145 -5610 710 -43 1)
(-28755 20889 -5602 710 -43 1)
(-28899 20905 -5602 710 -43 1)
(-29043 20921 -5602 710 -43 1)
(-29011 20921 -5602 710 -43 1)
(-29187 20937 -5602 710 -43 1)
(-29155 20937 -5602 710 -43 1)
(-29331 20953 -5602 710 -43 1)
(-29299 20953 -5602 710 -43 1)
(-29267 20953 -5602 710 -43 1)
(-29475 20969 -5602 710 -43 1)
(-29443 20969 -5602 710 -43 1)
(-29411 20969 -5602 710 -43 1)
(-29619 20985 -5602 710 -43 1)
(-29587 20985 -5602 710 -43 1)
(-29555 20985 -5602 710 -43 1)
(-29523 20985 -5602 710 -43 1)
(-29763 21001 -5602 710 -43 1)
(-29731 21001 -5602 710 -43 1)
(-29699 21001 -5602 710 -43 1)
(-29667 21001 -5602 710 -43 1)
(-29843 21017 -5602 710 -43 1)
(-28107 20745 -5594 710 -43 1)
(-28251 20761 -5594 710 -43 1)
(-28395 20777 -5594 710 -43 1)
(-28363 20777 -5594 710 -43 1)
(-28539 20793 -5594 710 -43 1)
(-28507 20793 -5594 710 -43 1)
(-28683 20809 -5594 710 -43 1)
(-28651 20809 -5594 710 -43 1)
```

-28619	20809	-5594	710	-43	1
-28827	20825	-5594	710	-43	1
-28795	20825	-5594	710	-43	1
-28763	20825	-5594	710	-43	1
-28971	20841	-5594	710	-43	1
-28939	20841	-5594	710	-43	1
-28907	20841	-5594	710	-43	1
-28875	20841	-5594	710	-43	1
-29115	20857	-5594	710	-43	1
-29083	20857	-5594	710	-43	1
-29051	20857	-5594	710	-43	1
-29259	20873	-5594	710	-43	1
-29227	20873	-5594	710	-43	1
-27603	20617	-5586	710	-43	1
-27747	20633	-5586	710	-43	1
-27891	20649	-5586	710	-43	1
-27859	20649	-5586	710	-43	1
-28035	20665	-5586	710	-43	1
-28003	20665	-5586	710	-43	1
-28179	20681	-5586	710	-43	1
-28147	20681	-5586	710	-43	1
-28115	20681	-5586	710	-43	1
-28323	20697	-5586	710	-43	1
-28291	20697	-5586	710	-43	1
-28259	20697	-5586	710	-43	1
-28467	20713	-5586	710	-43	1
-28435	20713	-5586	710	-43	1
-28611	20729	-5586	710	-43	1
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-27099	20489	-5578	710	-43	1
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-27531	20537	-5578	710	-43	1
-27499	20537	-5578	710	-43	1
-27467	20537	-5578	710	-43	1
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-27819	20569	-5578	710	-43	1
-26451	20345	-5570	710	-43	1
-26595	20361	-5570	710	-43	1
-26739	20377	-5570	710	-43	1
-26707	20377	-5570	710	-43	1
-26883	20393	-5570	710	-43	1
-26851	20393	-5570	710	-43	1
-27027	20409	-5570	710	-43	1
-25803	20201	-5562	710	-43	1
-25947	20217	-5562	710	-43	1
-26091	20233	-5562	710	-43	1
-26059	20233	-5562	710	-43	1
-26235	20249	-5562	710	-43	1
-25299	20073	-5554	710	-43	1
-25443	20089	-5554	710	-43	1

```
( -24651 19929 -5546 /10 -43 1 )
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1491907, 1038793, -275106, 34790, -2107, 49}
```

```
Array[c, 6].Transpose[A]
```

```
{-30627 c[1] + 21241 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30595 c[1] + 21241 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30563 c[1] + 21241 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30707 c[1] + 21257 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30675 c[1] + 21257 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29691 c[1] + 21065 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29659 c[1] + 21065 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29835 c[1] + 21081 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29803 c[1] + 21081 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29771 c[1] + 21081 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29979 c[1] + 21097 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29947 c[1] + 21097 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29915 c[1] + 21097 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30123 c[1] + 21113 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30091 c[1] + 21113 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30059 c[1] + 21113 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30027 c[1] + 21113 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
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 -30203 c[1] + 21129 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30171 c[1] + 21129 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30315 c[1] + 21145 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -30283 c[1] + 21145 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6],
 -28755 c[1] + 20889 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -28899 c[1] + 20905 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29043 c[1] + 20921 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
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 -29155 c[1] + 20937 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
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 -29299 c[1] + 20953 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
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 -29475 c[1] + 20969 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29443 c[1] + 20969 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29411 c[1] + 20969 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29619 c[1] + 20985 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29587 c[1] + 20985 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29555 c[1] + 20985 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29523 c[1] + 20985 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29763 c[1] + 21001 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29731 c[1] + 21001 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29699 c[1] + 21001 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29667 c[1] + 21001 c[2] - 5602 c[3] + 710 c[4] - 43 c[5] + c[6],
```

[illegible]


```

-27 643 c[1] + 20 553 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-27 819 c[1] + 20 569 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-26 451 c[1] + 20 345 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-26 595 c[1] + 20 361 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-26 739 c[1] + 20 377 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-26 707 c[1] + 20 377 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-26 883 c[1] + 20 393 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-26 851 c[1] + 20 393 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-27 027 c[1] + 20 409 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-25 803 c[1] + 20 201 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-25 947 c[1] + 20 217 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-26 091 c[1] + 20 233 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-26 059 c[1] + 20 233 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-26 235 c[1] + 20 249 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-25 299 c[1] + 20 073 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-25 443 c[1] + 20 089 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-24 651 c[1] + 19 929 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] }

```

Array[c, 6].g

```
-1 491 907 c[1] + 1 038 793 c[2] - 275 106 c[3] + 34 790 c[4] - 2107 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```

-1 491 907 c[1] + 1 038 793 c[2] - 275 106 c[3] + 34 790 c[4] - 2107 c[5] + 49 c[6] < 0 &&
-30 627 c[1] + 21 241 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-30 595 c[1] + 21 241 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-30 563 c[1] + 21 241 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-30 707 c[1] + 21 257 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-30 675 c[1] + 21 257 c[2] - 5618 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 691 c[1] + 21 065 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 659 c[1] + 21 065 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 835 c[1] + 21 081 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 803 c[1] + 21 081 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 771 c[1] + 21 081 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 979 c[1] + 21 097 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 947 c[1] + 21 097 c[2] - 5610 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
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[illegible]

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-25 299 c[1] + 20 073 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 443 c[1] + 20 089 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-24 651 c[1] + 19 929 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0,
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GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

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CoefficientList[feasibleinterlacingpolylist[chi], x]
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Dimensions[A]

{157, 8}

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Array[c, 8].Transpose[A]

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& \quad 230459 c[5] - 1173819 c[6] + 3220499 c[7] - 3652099 c[8], \\
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& \quad 3220563 c[7] - 3652803 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230459 c[5] - 1173787 c[6] + 3219859 c[7] - 3648931 c[8], \\
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& \quad 230475 c[5] - 1174283 c[6] + 3224963 c[7] - 3666355 c[8], \\
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& \quad 230043 c[5] - 1166123 c[6] + 3159603 c[7] - 3476763 c[8], \\
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& \quad 230059 c[5] - 1166619 c[6] + 3164643 c[7] - 3493611 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230059 c[5] - 1166619 c[6] + \\
& \quad 3164707 c[7] - 3494187 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230059 c[5] - 1166587 c[6] + 3164003 c[7] - 3490443 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230059 c[5] - 1166587 c[6] + \\
& \quad 3164067 c[7] - 3491019 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230075 c[5] - 1167179 c[6] + 3171027 c[7] - 3517371 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230075 c[5] - 1167147 c[6] + \\
& \quad 3170387 c[7] - 3514203 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230075 c[5] - 1167115 c[6] + 3169747 c[7] - 3511035 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230075 c[5] - 1167115 c[6] + \\
& \quad 3169811 c[7] - 3511611 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230075 c[5] - 1167083 c[6] + 3169107 c[7] - 3507867 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230075 c[5] - 1167083 c[6] + \\
& \quad 3169171 c[7] - 3508443 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230075 c[5] - 1167051 c[6] + 3168467 c[7] - 3504699 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167643 c[6] + \\
& \quad 3175491 c[7] - 3531627 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167611 c[6] + 3174851 c[7] - 3528459 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167579 c[6] + \\
& \quad 3174147 c[7] - 3524587 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167579 c[6] + 3174211 c[7] - 3525291 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167547 c[6] + \\
& \quad 3173571 c[7] - 3522123 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167515 c[6] + 3172931 c[7] - 3518955 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168139 c[6] + \\
& \quad 3180595 c[7] - 3549051 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1168107 c[6] + 3179955 c[7] - 3545883 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168075 c[6] + \\
& \quad 3179251 c[7] - 3542011 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1168075 c[6] + 3179315 c[7] - 3542715 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168043 c[6] + \\
& \quad 3178611 c[7] - 3538843 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,675\,c[7] - 3\,539\,547\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,603\,c[6] + \\
& \quad 3\,185\,059\,c[7] - 3\,563\,307\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,571\,c[6] + 3\,184\,419\,c[7] - 3\,560\,139\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,539\,c[6] + \\
& \quad 3\,183\,715\,c[7] - 3\,556\,267\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,539\,c[6] + 3\,183\,779\,c[7] - 3\,556\,971\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,507\,c[6] + \\
& \quad 3\,183\,075\,c[7] - 3\,553\,099\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,169\,099\,c[6] + 3\,190\,163\,c[7] - 3\,580\,731\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,067\,c[6] + \\
& \quad 3\,189\,523\,c[7] - 3\,577\,563\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,169\,035\,c[6] + 3\,188\,819\,c[7] - 3\,573\,691\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,035\,c[6] + \\
& \quad 3\,188\,883\,c[7] - 3\,574\,395\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,563\,c[6] + 3\,194\,627\,c[7] - 3\,594\,987\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,170\,059\,c[6] + \\
& \quad 3\,199\,731\,c[7] - 3\,612\,411\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,707\,c[5] - 1\,160\,907\,c[6] + 3\,124\,035\,c[7] - 3\,386\,691\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,707\,c[5] - 1\,160\,875\,c[6] + \\
& \quad 3\,123\,459\,c[7] - 3\,384\,099\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,723\,c[5] - 1\,161\,403\,c[6] + 3\,129\,139\,c[7] - 3\,404\,115\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,723\,c[5] - 1\,161\,371\,c[6] + \\
& \quad 3\,128\,499\,c[7] - 3\,400\,947\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,723\,c[5] - 1\,161\,339\,c[6] + 3\,127\,923\,c[7] - 3\,398\,355\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,899\,c[6] + \\
& \quad 3\,134\,243\,c[7] - 3\,421\,539\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,739\,c[5] - 1\,161\,867\,c[6] + 3\,133\,603\,c[7] - 3\,418\,371\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,835\,c[6] + \\
& \quad 3\,132\,963\,c[7] - 3\,415\,203\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,739\,c[5] - 1\,161\,835\,c[6] + 3\,133\,027\,c[7] - 3\,415\,779\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,803\,c[6] + \\
& \quad 3\,132\,323\,c[7] - 3\,412\,035\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,739\,c[5] - 1\,161\,803\,c[6] + 3\,132\,387\,c[7] - 3\,412\,611\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,363\,c[6] + \\
& \quad 3\,138\,707\,c[7] - 3\,435\,795\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,755\,c[5] - 1\,162\,331\,c[6] + 3\,138\,067\,c[7] - 3\,432\,627\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,299\,c[6] + \\
& \quad 3\,137\,427\,c[7] - 3\,429\,459\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,755\,c[5] - 1\,162\,267\,c[6] + 3\,136\,787\,c[7] - 3\,426\,291\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,859\,c[6] + \\
& \quad 3\,143\,811\,c[7] - 3\,453\,219\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,827\,c[6] + 3\,143\,171\,c[7] - 3\,450\,051\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,795\,c[6] + \\
& \quad 3\,142\,531\,c[7] - 3\,446\,883\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,763\,c[6] + 3\,141\,891\,c[7] - 3\,443\,715\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,323\,c[6] +
\end{aligned}$$

$3\,148\,275\,c[7] - 3\,467\,475\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,787\,c[5] - 1\,163\,291\,c[6] + 3\,147\,635\,c[7] - 3\,464\,307\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,259\,c[6] +$
 $3\,146\,931\,c[7] - 3\,460\,435\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,787\,c[5] - 1\,163\,259\,c[6] + 3\,146\,995\,c[7] - 3\,461\,139\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,819\,c[6] +$
 $3\,153\,379\,c[7] - 3\,484\,899\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,803\,c[5] - 1\,163\,787\,c[6] + 3\,152\,739\,c[7] - 3\,481\,731\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] +$
 $3\,152\,035\,c[7] - 3\,477\,859\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,099\,c[7] - 3\,478\,563\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,283\,c[6] +$
 $3\,157\,843\,c[7] - 3\,499\,155\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,835\,c[5] - 1\,164\,779\,c[6] + 3\,162\,947\,c[7] - 3\,516\,579\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,387\,c[5] - 1\,156\,155\,c[6] +$
 $3\,092\,995\,c[7] - 3\,311\,451\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,403\,c[5] - 1\,156\,619\,c[6] + 3\,097\,459\,c[7] - 3\,325\,707\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,403\,c[5] - 1\,156\,587\,c[6] +$
 $3\,096\,819\,c[7] - 3\,322\,539\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,419\,c[5] - 1\,157\,115\,c[6] + 3\,102\,563\,c[7] - 3\,343\,131\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,419\,c[5] - 1\,157\,083\,c[6] +$
 $3\,101\,923\,c[7] - 3\,339\,963\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,419\,c[5] - 1\,157\,051\,c[6] + 3\,101\,283\,c[7] - 3\,336\,795\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,435\,c[5] - 1\,157\,579\,c[6] +$
 $3\,107\,027\,c[7] - 3\,357\,387\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,435\,c[5] - 1\,157\,547\,c[6] + 3\,106\,387\,c[7] - 3\,354\,219\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,435\,c[5] - 1\,157\,515\,c[6] +$
 $3\,105\,747\,c[7] - 3\,351\,051\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,451\,c[5] - 1\,158\,075\,c[6] + 3\,112\,131\,c[7] - 3\,374\,811\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,158\,043\,c[6] +$
 $3\,111\,491\,c[7] - 3\,371\,643\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,451\,c[5] - 1\,158\,011\,c[6] + 3\,110\,851\,c[7] - 3\,368\,475\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,979\,c[6] +$
 $3\,110\,211\,c[7] - 3\,365\,307\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,467\,c[5] - 1\,158\,539\,c[6] + 3\,116\,595\,c[7] - 3\,389\,067\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,507\,c[6] +$
 $3\,115\,955\,c[7] - 3\,385\,899\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,483\,c[5] - 1\,159\,035\,c[6] + 3\,121\,699\,c[7] - 3\,406\,491\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,159\,003\,c[6] +$
 $3\,121\,059\,c[7] - 3\,403\,323\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,483\,c[5] - 1\,158\,971\,c[6] + 3\,120\,355\,c[7] - 3\,399\,451\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,499\,c[6] +$
 $3\,126\,163\,c[7] - 3\,420\,747\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] +$
 $229\,083\,c[5] - 1\,151\,835\,c[6] + 3\,065\,779\,c[7] - 3\,247\,299\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,099\,c[5] - 1\,152\,299\,c[6] +$
 $3\,070\,243\,c[7] - 3\,261\,555\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] +$
 $229\,099\,c[5] - 1\,152\,267\,c[6] + 3\,069\,603\,c[7] - 3\,258\,387\,c[8],$

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c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 115 c[5] - 1 152 795 c[6] +
  3 075 347 c[7] - 3 278 979 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 115 c[5] - 1 152 763 c[6] + 3 074 707 c[7] - 3 275 811 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 115 c[5] - 1 152 731 c[6] +
  3 074 067 c[7] - 3 272 643 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 131 c[5] - 1 153 259 c[6] + 3 079 811 c[7] - 3 293 235 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 227 c[6] +
  3 079 171 c[7] - 3 290 067 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 147 c[5] - 1 153 755 c[6] + 3 084 915 c[7] - 3 310 659 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 723 c[6] +
  3 084 275 c[7] - 3 307 491 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
  228 763 c[5] - 1 147 051 c[6] + 3 034 099 c[7] - 3 168 891 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 779 c[5] - 1 147 515 c[6] +
  3 038 563 c[7] - 3 183 147 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
  228 795 c[5] - 1 148 011 c[6] + 3 043 667 c[7] - 3 200 571 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 795 c[5] - 1 147 979 c[6] +
  3 043 027 c[7] - 3 197 403 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
  228 795 c[5] - 1 147 947 c[6] + 3 042 387 c[7] - 3 194 235 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 811 c[5] - 1 148 475 c[6] +
  3 048 131 c[7] - 3 214 827 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
  228 811 c[5] - 1 148 443 c[6] + 3 047 491 c[7] - 3 211 659 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 827 c[5] - 1 148 971 c[6] +
  3 053 235 c[7] - 3 232 251 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
  228 459 c[5] - 1 142 731 c[6] + 3 006 883 c[7] - 3 104 739 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 475 c[5] - 1 143 195 c[6] +
  3 011 347 c[7] - 3 118 995 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
  228 491 c[5] - 1 143 691 c[6] + 3 016 451 c[7] - 3 136 419 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] + 228 155 c[5] - 1 138 411 c[6] +
  2 979 667 c[7] - 3 040 587 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] +
  228 171 c[5] - 1 138 907 c[6] + 2 984 771 c[7] - 3 058 011 c[8] }

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Array[c, 8].g

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49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 433 c[4] +
  11 300 715 c[5] - 57 631 771 c[6] + 158 493 187 c[7] - 180 440 171 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 433 c[4] +
  11 300 715 c[5] - 57 631 771 c[6] + 158 493 187 c[7] - 180 440 171 c[8] < 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 731 c[5] - 1 177 083 c[6] +
  3 236 291 c[7] - 3 675 771 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 731 c[5] - 1 177 051 c[6] + 3 235 651 c[7] - 3 672 603 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 643 c[6] +
  3 242 739 c[7] - 3 700 107 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 747 c[5] - 1 177 611 c[6] + 3 241 971 c[7] - 3 695 659 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 747 c[5] - 1 177 611 c[6] +
  3 242 035 c[7] - 3 696 363 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 747 c[5] - 1 177 579 c[6] + 3 241 331 c[7] - 3 692 491 c[8] ≥ 0 &&

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$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230747 c[5] - 1177579 c[6] + \\
& \quad 3241395 c[7] - 3693195 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230747 c[5] - 1177547 c[6] + 3240755 c[7] - 3690027 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230763 c[5] - 1178139 c[6] + \\
& \quad 3247715 c[7] - 3716251 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230763 c[5] - 1178107 c[6] + 3247075 c[7] - 3713083 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230763 c[5] - 1178107 c[6] + \\
& \quad 3247139 c[7] - 3713787 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230763 c[5] - 1178075 c[6] + 3246435 c[7] - 3709915 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230763 c[5] - 1178075 c[6] + \\
& \quad 3246499 c[7] - 3710619 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + \\
& \quad 230763 c[5] - 1178043 c[6] + 3245795 c[7] - 3706747 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230779 c[5] - 1178571 c[6] + \\
& \quad 3251539 c[7] - 3727339 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230379 c[5] - 1171339 c[6] + 3195107 c[7] - 3566259 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230395 c[5] - 1171899 c[6] + \\
& \quad 3201491 c[7] - 3590019 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230395 c[5] - 1171867 c[6] + 3200787 c[7] - 3586275 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230395 c[5] - 1171867 c[6] + \\
& \quad 3200851 c[7] - 3586851 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230395 c[5] - 1171835 c[6] + 3200147 c[7] - 3583107 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230395 c[5] - 1171803 c[6] + \\
& \quad 3199507 c[7] - 3579939 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230411 c[5] - 1172427 c[6] + 3207171 c[7] - 3610035 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172395 c[6] + \\
& \quad 3206531 c[7] - 3606867 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230411 c[5] - 1172363 c[6] + 3205827 c[7] - 3602995 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172363 c[6] + \\
& \quad 3205891 c[7] - 3603699 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230411 c[5] - 1172363 c[6] + 3205955 c[7] - 3604275 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230411 c[5] - 1172331 c[6] + \\
& \quad 3205251 c[7] - 3600531 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230411 c[5] - 1172299 c[6] + 3204611 c[7] - 3597363 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172923 c[6] + \\
& \quad 3212275 c[7] - 3627459 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230427 c[5] - 1172891 c[6] + 3211635 c[7] - 3624291 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172859 c[6] + \\
& \quad 3210931 c[7] - 3620419 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230427 c[5] - 1172859 c[6] + 3210995 c[7] - 3621123 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172827 c[6] + \\
& \quad 3210291 c[7] - 3617251 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230427 c[5] - 1172827 c[6] + 3210355 c[7] - 3617955 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230427 c[5] - 1172795 c[6] + \\
& \quad 3209651 c[7] - 3614083 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230427 c[5] - 1172795 c[6] + 3209715 c[7] - 3614787 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230443 c[5] - 1173387 c[6] + \\
& \quad 3216739 c[7] - 3641715 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,443\,c[5] - 1\,173\,355\,c[6] + 3\,216\,099\,c[7] - 3\,638\,547\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,323\,c[6] + \\
& \quad 3\,215\,395\,c[7] - 3\,634\,675\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,323\,c[6] + 3\,215\,459\,c[7] - 3\,635\,379\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,291\,c[6] + \\
& \quad 3\,214\,755\,c[7] - 3\,631\,507\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,291\,c[6] + 3\,214\,819\,c[7] - 3\,632\,211\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,883\,c[6] + \\
& \quad 3\,221\,843\,c[7] - 3\,659\,139\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,851\,c[6] + 3\,221\,203\,c[7] - 3\,655\,971\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,819\,c[6] + \\
& \quad 3\,220\,499\,c[7] - 3\,652\,099\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,819\,c[6] + 3\,220\,563\,c[7] - 3\,652\,803\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,787\,c[6] + \\
& \quad 3\,219\,859\,c[7] - 3\,648\,931\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,315\,c[6] + 3\,225\,603\,c[7] - 3\,669\,523\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,283\,c[6] + \\
& \quad 3\,224\,963\,c[7] - 3\,666\,355\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,043\,c[5] - 1\,166\,123\,c[6] + 3\,159\,539\,c[7] - 3\,476\,187\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,043\,c[5] - 1\,166\,123\,c[6] + \\
& \quad 3\,159\,603\,c[7] - 3\,476\,763\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,059\,c[5] - 1\,166\,651\,c[6] + 3\,165\,283\,c[7] - 3\,496\,779\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,619\,c[6] + \\
& \quad 3\,164\,643\,c[7] - 3\,493\,611\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,059\,c[5] - 1\,166\,619\,c[6] + 3\,164\,707\,c[7] - 3\,494\,187\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,059\,c[5] - 1\,166\,587\,c[6] + \\
& \quad 3\,164\,003\,c[7] - 3\,490\,443\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,059\,c[5] - 1\,166\,587\,c[6] + 3\,164\,067\,c[7] - 3\,491\,019\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,179\,c[6] + \\
& \quad 3\,171\,027\,c[7] - 3\,517\,371\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,075\,c[5] - 1\,167\,147\,c[6] + 3\,170\,387\,c[7] - 3\,514\,203\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,115\,c[6] + \\
& \quad 3\,169\,747\,c[7] - 3\,511\,035\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,075\,c[5] - 1\,167\,115\,c[6] + 3\,169\,811\,c[7] - 3\,511\,611\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,083\,c[6] + \\
& \quad 3\,169\,107\,c[7] - 3\,507\,867\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,075\,c[5] - 1\,167\,083\,c[6] + 3\,169\,171\,c[7] - 3\,508\,443\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,075\,c[5] - 1\,167\,051\,c[6] + \\
& \quad 3\,168\,467\,c[7] - 3\,504\,699\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,091\,c[5] - 1\,167\,643\,c[6] + 3\,175\,491\,c[7] - 3\,531\,627\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,611\,c[6] + \\
& \quad 3\,174\,851\,c[7] - 3\,528\,459\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,091\,c[5] - 1\,167\,579\,c[6] + 3\,174\,147\,c[7] - 3\,524\,587\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,579\,c[6] + \\
& \quad 3\,174\,211\,c[7] - 3\,525\,291\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,091\,c[5] - 1\,167\,547\,c[6] + 3\,173\,571\,c[7] - 3\,522\,123\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,515\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,172\,931\,c[7] - 3\,518\,955\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,139\,c[6] + 3\,180\,595\,c[7] - 3\,549\,051\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,107\,c[6] + \\
& 3\,179\,955\,c[7] - 3\,545\,883\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,075\,c[6] + 3\,179\,251\,c[7] - 3\,542\,011\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,075\,c[6] + \\
& 3\,179\,315\,c[7] - 3\,542\,715\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,611\,c[7] - 3\,538\,843\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,043\,c[6] + \\
& 3\,178\,675\,c[7] - 3\,539\,547\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,603\,c[6] + 3\,185\,059\,c[7] - 3\,563\,307\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,571\,c[6] + \\
& 3\,184\,419\,c[7] - 3\,560\,139\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,539\,c[6] + 3\,183\,715\,c[7] - 3\,556\,267\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,539\,c[6] + \\
& 3\,183\,779\,c[7] - 3\,556\,971\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,507\,c[6] + 3\,183\,075\,c[7] - 3\,553\,099\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,099\,c[6] + \\
& 3\,190\,163\,c[7] - 3\,580\,731\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,067\,c[6] + 3\,189\,523\,c[7] - 3\,577\,563\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,035\,c[6] + \\
& 3\,188\,819\,c[7] - 3\,573\,691\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,035\,c[6] + 3\,188\,883\,c[7] - 3\,574\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,563\,c[6] + \\
& 3\,194\,627\,c[7] - 3\,594\,987\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,170\,059\,c[6] + 3\,199\,731\,c[7] - 3\,612\,411\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,707\,c[5] - 1\,160\,907\,c[6] + \\
& 3\,124\,035\,c[7] - 3\,386\,691\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,707\,c[5] - 1\,160\,875\,c[6] + 3\,123\,459\,c[7] - 3\,384\,099\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,723\,c[5] - 1\,161\,403\,c[6] + \\
& 3\,129\,139\,c[7] - 3\,404\,115\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,723\,c[5] - 1\,161\,371\,c[6] + 3\,128\,499\,c[7] - 3\,400\,947\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,723\,c[5] - 1\,161\,339\,c[6] + \\
& 3\,127\,923\,c[7] - 3\,398\,355\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,739\,c[5] - 1\,161\,899\,c[6] + 3\,134\,243\,c[7] - 3\,421\,539\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,867\,c[6] + \\
& 3\,133\,603\,c[7] - 3\,418\,371\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,739\,c[5] - 1\,161\,835\,c[6] + 3\,132\,963\,c[7] - 3\,415\,203\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,835\,c[6] + \\
& 3\,133\,027\,c[7] - 3\,415\,779\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,739\,c[5] - 1\,161\,803\,c[6] + 3\,132\,323\,c[7] - 3\,412\,035\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,739\,c[5] - 1\,161\,803\,c[6] + \\
& 3\,132\,387\,c[7] - 3\,412\,611\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,755\,c[5] - 1\,162\,363\,c[6] + 3\,138\,707\,c[7] - 3\,435\,795\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,755\,c[5] - 1\,162\,331\,c[6] + \\
& 3\,138\,067\,c[7] - 3\,432\,627\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,755\,c[5] - 1\,162\,299\,c[6] + 3\,137\,427\,c[7] - 3\,429\,459\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229755 c[5] - 1162267 c[6] + \\
& \quad 3136787 c[7] - 3426291 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162859 c[6] + 3143811 c[7] - 3453219 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162827 c[6] + \\
& \quad 3143171 c[7] - 3450051 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162795 c[6] + 3142531 c[7] - 3446883 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162763 c[6] + \\
& \quad 3141891 c[7] - 3443715 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163323 c[6] + 3148275 c[7] - 3467475 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163291 c[6] + \\
& \quad 3147635 c[7] - 3464307 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163259 c[6] + 3146931 c[7] - 3460435 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163259 c[6] + \\
& \quad 3146995 c[7] - 3461139 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163819 c[6] + 3153379 c[7] - 3484899 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163787 c[6] + \\
& \quad 3152739 c[7] - 3481731 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163755 c[6] + 3152035 c[7] - 3477859 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163755 c[6] + \\
& \quad 3152099 c[7] - 3478563 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229819 c[5] - 1164283 c[6] + 3157843 c[7] - 3499155 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229835 c[5] - 1164779 c[6] + \\
& \quad 3162947 c[7] - 3516579 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + \\
& \quad 229387 c[5] - 1156155 c[6] + 3092995 c[7] - 3311451 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229403 c[5] - 1156619 c[6] + \\
& \quad 3097459 c[7] - 3325707 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + \\
& \quad 229403 c[5] - 1156587 c[6] + 3096819 c[7] - 3322539 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229419 c[5] - 1157115 c[6] + \\
& \quad 3102563 c[7] - 3343131 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + \\
& \quad 229419 c[5] - 1157083 c[6] + 3101923 c[7] - 3339963 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229419 c[5] - 1157051 c[6] + \\
& \quad 3101283 c[7] - 3336795 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + \\
& \quad 229435 c[5] - 1157579 c[6] + 3107027 c[7] - 3357387 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229435 c[5] - 1157547 c[6] + \\
& \quad 3106387 c[7] - 3354219 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + \\
& \quad 229435 c[5] - 1157515 c[6] + 3105747 c[7] - 3351051 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229451 c[5] - 1158075 c[6] + \\
& \quad 3112131 c[7] - 3374811 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + \\
& \quad 229451 c[5] - 1158043 c[6] + 3111491 c[7] - 3371643 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229451 c[5] - 1158011 c[6] + \\
& \quad 3110851 c[7] - 3368475 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + \\
& \quad 229451 c[5] - 1157979 c[6] + 3110211 c[7] - 3365307 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229467 c[5] - 1158539 c[6] + \\
& \quad 3116595 c[7] - 3389067 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + \\
& \quad 229467 c[5] - 1158507 c[6] + 3115955 c[7] - 3385899 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229483 c[5] - 1159035 c[6] + \\
& \quad 3121699 c[7] - 3406491 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +
\end{aligned}$$

```

229 483 c[5] - 1 159 003 c[6] + 3 121 059 c[7] - 3 403 323 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 158 971 c[6] +
3 120 355 c[7] - 3 399 451 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 499 c[6] + 3 126 163 c[7] - 3 420 747 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 083 c[5] - 1 151 835 c[6] +
3 065 779 c[7] - 3 247 299 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 099 c[5] - 1 152 299 c[6] + 3 070 243 c[7] - 3 261 555 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 099 c[5] - 1 152 267 c[6] +
3 069 603 c[7] - 3 258 387 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 115 c[5] - 1 152 795 c[6] + 3 075 347 c[7] - 3 278 979 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 115 c[5] - 1 152 763 c[6] +
3 074 707 c[7] - 3 275 811 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 115 c[5] - 1 152 731 c[6] + 3 074 067 c[7] - 3 272 643 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 259 c[6] +
3 079 811 c[7] - 3 293 235 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 131 c[5] - 1 153 227 c[6] + 3 079 171 c[7] - 3 290 067 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 755 c[6] +
3 084 915 c[7] - 3 310 659 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 723 c[6] + 3 084 275 c[7] - 3 307 491 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 763 c[5] - 1 147 051 c[6] +
3 034 099 c[7] - 3 168 891 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 779 c[5] - 1 147 515 c[6] + 3 038 563 c[7] - 3 183 147 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 795 c[5] - 1 148 011 c[6] +
3 043 667 c[7] - 3 200 571 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 795 c[5] - 1 147 979 c[6] + 3 043 027 c[7] - 3 197 403 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 795 c[5] - 1 147 947 c[6] +
3 042 387 c[7] - 3 194 235 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 811 c[5] - 1 148 475 c[6] + 3 048 131 c[7] - 3 214 827 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 811 c[5] - 1 148 443 c[6] +
3 047 491 c[7] - 3 211 659 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 827 c[5] - 1 148 971 c[6] + 3 053 235 c[7] - 3 232 251 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 459 c[5] - 1 142 731 c[6] +
3 006 883 c[7] - 3 104 739 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 475 c[5] - 1 143 195 c[6] + 3 011 347 c[7] - 3 118 995 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 491 c[5] - 1 143 691 c[6] +
3 016 451 c[7] - 3 136 419 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] +
228 155 c[5] - 1 138 411 c[6] + 2 979 667 c[7] - 3 040 587 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] + 228 171 c[5] - 1 138 907 c[6] +
2 984 771 c[7] - 3 058 011 c[8] ≥ 0, Array[c, 8], Integers]]

{0, 0, 0, -100 965 325, -26 236 718, -4 280 496, -599 729, -77 921}

GCD[0, 0, 0, -100 965 325, -26 236 718, -4 280 496, -599 729, -77 921]

1

cert.g

-175 536 061

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{0, 0, 0, -100965325, -26236718, -4280496, -599729, -77921}.
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Reverse[gpart[listdim17[[74]]]]
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-175536061
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cert.Transpose[A]
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```

```
chi = listdim17[[75]]
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```
(-11 + x) (-9 + x)12 (5 + x)32 (8920 - 3899 x + 611 x2 - 41 x3 + x4)
```

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CoefficientList[feasibleinterlacingpolylist[chi], x]
```

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```
A // MatrixForm
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( 413 875 -315 232 95 923 -14 984 1273 -56 1 )
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( 401 355 -311 976 95 643 -14 976 1273 -56 1 )
( 403 227 -312 328 95 659 -14 976 1273 -56 1 )
( 386 019 -308 112 95 331 -14 968 1273 -56 1 )
( 385 731 -308 080 95 331 -14 968 1273 -56 1 )
( 387 891 -308 464 95 347 -14 968 1273 -56 1 )
( 387 603 -308 432 95 347 -14 968 1273 -56 1 )
( 389 763 -308 816 95 363 -14 968 1273 -56 1 )
( 389 475 -308 784 95 363 -14 968 1273 -56 1 )

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391 347	-309 136	95 379	-14 968	1273	-56	1
391 059	-309 104	95 379	-14 968	1273	-56	1
392 931	-309 456	95 395	-14 968	1273	-56	1
394 515	-309 776	95 411	-14 968	1273	-56	1
375 723	-305 240	95 067	-14 960	1273	-56	1
377 883	-305 624	95 083	-14 960	1273	-56	1
377 595	-305 592	95 083	-14 960	1273	-56	1
377 307	-305 560	95 083	-14 960	1273	-56	1
379 467	-305 944	95 099	-14 960	1273	-56	1
379 179	-305 912	95 099	-14 960	1273	-56	1
378 891	-305 880	95 099	-14 960	1273	-56	1
381 051	-306 264	95 115	-14 960	1273	-56	1
380 763	-306 232	95 115	-14 960	1273	-56	1
382 635	-306 584	95 131	-14 960	1273	-56	1
382 347	-306 552	95 131	-14 960	1273	-56	1
384 219	-306 904	95 147	-14 960	1273	-56	1
365 715	-302 400	94 803	-14 952	1273	-56	1
367 587	-302 752	94 819	-14 952	1273	-56	1
367 299	-302 720	94 819	-14 952	1273	-56	1
367 011	-302 688	94 819	-14 952	1273	-56	1
369 171	-303 072	94 835	-14 952	1273	-56	1
368 883	-303 040	94 835	-14 952	1273	-56	1
368 595	-303 008	94 835	-14 952	1273	-56	1
370 755	-303 392	94 851	-14 952	1273	-56	1
370 467	-303 360	94 851	-14 952	1273	-56	1
372 339	-303 712	94 867	-14 952	1273	-56	1
372 051	-303 680	94 867	-14 952	1273	-56	1
373 923	-304 032	94 883	-14 952	1273	-56	1
375 507	-304 352	94 899	-14 952	1273	-56	1
357 291	-299 880	94 555	-14 944	1273	-56	1
358 875	-300 200	94 571	-14 944	1273	-56	1
358 587	-300 168	94 571	-14 944	1273	-56	1
360 459	-300 520	94 587	-14 944	1273	-56	1
360 171	-300 488	94 587	-14 944	1273	-56	1
359 883	-300 456	94 587	-14 944	1273	-56	1
362 043	-300 840	94 603	-14 944	1273	-56	1
361 755	-300 808	94 603	-14 944	1273	-56	1
363 627	-301 160	94 619	-14 944	1273	-56	1
365 211	-301 480	94 635	-14 944	1273	-56	1
350 163	-297 648	94 323	-14 936	1273	-56	1
351 747	-297 968	94 339	-14 936	1273	-56	1
351 459	-297 936	94 339	-14 936	1273	-56	1
353 331	-298 288	94 355	-14 936	1273	-56	1
353 043	-298 256	94 355	-14 936	1273	-56	1
354 915	-298 608	94 371	-14 936	1273	-56	1
356 499	-298 928	94 387	-14 936	1273	-56	1
343 035	-295 416	94 091	-14 928	1273	-56	1
344 619	-295 736	94 107	-14 928	1273	-56	1
346 203	-296 056	94 123	-14 928	1273	-56	1
335 907	-293 184	93 859	-14 920	1273	-56	1
337 491	-293 504	93 875	-14 920	1273	-56	1

Dimensions[A]

{67, 7}

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 039 955, -15 381 168, 4 694 355, -734 040, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```
{410 067 c[1] - 314 528 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 411 939 c[1] - 314 880 c[2] + 95 907 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 875 c[1] - 315 232 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 413 523 c[1] - 315 200 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 397 899 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 400 059 c[1] - 311 688 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 399 771 c[1] - 311 656 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 401 643 c[1] - 312 008 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 401 355 c[1] - 311 976 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 227 c[1] - 312 328 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 386 019 c[1] - 308 112 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 385 731 c[1] - 308 080 c[2] + 95 331 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 387 891 c[1] - 308 464 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 387 603 c[1] - 308 432 c[2] + 95 347 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 389 763 c[1] - 308 816 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 389 475 c[1] - 308 784 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 391 347 c[1] - 309 136 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 391 059 c[1] - 309 104 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 392 931 c[1] - 309 456 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 394 515 c[1] - 309 776 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 375 723 c[1] - 305 240 c[2] + 95 067 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 377 883 c[1] - 305 624 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 377 595 c[1] - 305 592 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 377 307 c[1] - 305 560 c[2] + 95 083 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 379 467 c[1] - 305 944 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 379 179 c[1] - 305 912 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 378 891 c[1] - 305 880 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 381 051 c[1] - 306 264 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 380 763 c[1] - 306 232 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 382 635 c[1] - 306 584 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 382 347 c[1] - 306 552 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 384 219 c[1] - 306 904 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 365 715 c[1] - 302 400 c[2] + 94 803 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 367 587 c[1] - 302 752 c[2] + 94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 367 299 c[1] - 302 720 c[2] + 94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 367 011 c[1] - 302 688 c[2] + 94 819 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 369 171 c[1] - 303 072 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 368 883 c[1] - 303 040 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 368 595 c[1] - 303 008 c[2] + 94 835 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 370 755 c[1] - 303 392 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 370 467 c[1] - 303 360 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 372 339 c[1] - 303 712 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 372 051 c[1] - 303 680 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
```

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373 923 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
375 507 c[1] - 304 352 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
357 291 c[1] - 299 880 c[2] + 94 555 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
358 875 c[1] - 300 200 c[2] + 94 571 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
358 587 c[1] - 300 168 c[2] + 94 571 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
360 459 c[1] - 300 520 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
360 171 c[1] - 300 488 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
359 883 c[1] - 300 456 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
362 043 c[1] - 300 840 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
361 755 c[1] - 300 808 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
363 627 c[1] - 301 160 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
365 211 c[1] - 301 480 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
350 163 c[1] - 297 648 c[2] + 94 323 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
351 747 c[1] - 297 968 c[2] + 94 339 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
351 459 c[1] - 297 936 c[2] + 94 339 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
353 331 c[1] - 298 288 c[2] + 94 355 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
353 043 c[1] - 298 256 c[2] + 94 355 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
354 915 c[1] - 298 608 c[2] + 94 371 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
356 499 c[1] - 298 928 c[2] + 94 387 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
343 035 c[1] - 295 416 c[2] + 94 091 c[3] - 14 928 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
344 619 c[1] - 295 736 c[2] + 94 107 c[3] - 14 928 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
346 203 c[1] - 296 056 c[2] + 94 123 c[3] - 14 928 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
335 907 c[1] - 293 184 c[2] + 93 859 c[3] - 14 920 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
337 491 c[1] - 293 504 c[2] + 93 875 c[3] - 14 920 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 039 955 c[1] - 15 381 168 c[2] + 4 694 355 c[3] -
734 040 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 039 955 c[1] - 15 381 168 c[2] + 4 694 355 c[3] -
734 040 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
410 067 c[1] - 314 528 c[2] + 95 891 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 411 939 c[1] - 314 880 c[2] + 95 907 c[3] - 14 984 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 413 875 c[1] - 315 232 c[2] +
95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
413 523 c[1] - 315 200 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 397 899 c[1] - 311 304 c[2] + 95 611 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 400 059 c[1] - 311 688 c[2] +
95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
399 771 c[1] - 311 656 c[2] + 95 627 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 401 643 c[1] - 312 008 c[2] + 95 643 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 401 355 c[1] - 311 976 c[2] +
95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
403 227 c[1] - 312 328 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 386 019 c[1] - 308 112 c[2] + 95 331 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 385 731 c[1] - 308 080 c[2] +

```

$$\begin{aligned}
& 95\,331\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 387\,891\,c[1] - 308\,464\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 387\,603\,c[1] - 308\,432\,c[2] + 95\,347\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 389\,763\,c[1] - 308\,816\,c[2] + \\
& 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 389\,475\,c[1] - 308\,784\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 391\,347\,c[1] - 309\,136\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 391\,059\,c[1] - 309\,104\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 392\,931\,c[1] - 309\,456\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 394\,515\,c[1] - 309\,776\,c[2] + 95\,411\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 375\,723\,c[1] - 305\,240\,c[2] + \\
& 95\,067\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 377\,883\,c[1] - 305\,624\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 377\,595\,c[1] - 305\,592\,c[2] + 95\,083\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 377\,307\,c[1] - 305\,560\,c[2] + \\
& 95\,083\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 379\,467\,c[1] - 305\,944\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 379\,179\,c[1] - 305\,912\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 378\,891\,c[1] - 305\,880\,c[2] + \\
& 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 381\,051\,c[1] - 306\,264\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 380\,763\,c[1] - 306\,232\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 382\,635\,c[1] - 306\,584\,c[2] + \\
& 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 382\,347\,c[1] - 306\,552\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 384\,219\,c[1] - 306\,904\,c[2] + 95\,147\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 365\,715\,c[1] - 302\,400\,c[2] + \\
& 94\,803\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 367\,587\,c[1] - 302\,752\,c[2] + 94\,819\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 367\,299\,c[1] - 302\,720\,c[2] + 94\,819\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 367\,011\,c[1] - 302\,688\,c[2] + \\
& 94\,819\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 369\,171\,c[1] - 303\,072\,c[2] + 94\,835\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 368\,883\,c[1] - 303\,040\,c[2] + 94\,835\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 368\,595\,c[1] - 303\,008\,c[2] + \\
& 94\,835\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 370\,755\,c[1] - 303\,392\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 370\,467\,c[1] - 303\,360\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 372\,339\,c[1] - 303\,712\,c[2] + \\
& 94\,867\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 372\,051\,c[1] - 303\,680\,c[2] + 94\,867\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 373\,923\,c[1] - 304\,032\,c[2] + 94\,883\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 375\,507\,c[1] - 304\,352\,c[2] + \\
& 94\,899\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 357\,291\,c[1] - 299\,880\,c[2] + 94\,555\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 358\,875\,c[1] - 300\,200\,c[2] + 94\,571\,c[3] - 14\,944\,c[4] +
\end{aligned}$$

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1273 c[5] - 56 c[6] + c[7] ≥ 0 && 358 587 c[1] - 300 168 c[2] +
94 571 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
360 459 c[1] - 300 520 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 360 171 c[1] - 300 488 c[2] + 94 587 c[3] - 14 944 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 359 883 c[1] - 300 456 c[2] +
94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
362 043 c[1] - 300 840 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 361 755 c[1] - 300 808 c[2] + 94 603 c[3] - 14 944 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 363 627 c[1] - 301 160 c[2] +
94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
365 211 c[1] - 301 480 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 350 163 c[1] - 297 648 c[2] + 94 323 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 351 747 c[1] - 297 968 c[2] +
94 339 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
351 459 c[1] - 297 936 c[2] + 94 339 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 353 331 c[1] - 298 288 c[2] + 94 355 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 353 043 c[1] - 298 256 c[2] +
94 355 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
354 915 c[1] - 298 608 c[2] + 94 371 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 356 499 c[1] - 298 928 c[2] + 94 387 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 343 035 c[1] - 295 416 c[2] +
94 091 c[3] - 14 928 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
344 619 c[1] - 295 736 c[2] + 94 107 c[3] - 14 928 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 346 203 c[1] - 296 056 c[2] + 94 123 c[3] -
14 928 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
335 907 c[1] - 293 184 c[2] + 93 859 c[3] - 14 920 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 337 491 c[1] - 293 504 c[2] + 93 875 c[3] - 14 920 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-113 651, -1 221 759, -13 410 925, -149 992 114, 0, 0, -1 299 165 141 433}

GCD[-113 651, -1 221 759, -13 410 925, -149 992 114, 0, 0, -1 299 165 141 433]
1

Reverse[cert]
{-1 299 165 141 433, 0, 0, -149 992 114, -13 410 925, -1 221 759, -113 651}

cert.g
-3 889 225

{-113 651, -1 221 759, -13 410 925, -149 992 114, 0, 0, -1 299 165 141 433}.
gpart[listdim17[[75]]]
-3 889 225

```

```
cert.Transpose[A]
```

```
{2 575 703, 5 305 399, 7 614 31, 1 670 295, 1 652 143, 10 746 639, 4 381 839, 7 111 535,
 746 735, 3 476 431, 7 093 383, 7 285 83, 9 823 079, 3 458 279, 12 552 775, 6 187 975,
 8 917 671, 2 552 871, 5 282 567, 1 647 463, 8 899 519, 17 994 015, 11 629 215,
 5 264 415, 14 358 911, 7 994 111, 1 629 311, 10 723 807, 4 359 007, 7 088 703, 7 23 903,
 3 453 599, 17 070 455, 19 800 151, 13 435 351, 7 070 551, 16 165 047, 9 800 247,
 3 435 447, 12 529 943, 6 165 143, 8 894 839, 2 530 039, 5 259 735, 1 624 631,
 21 606 287, 17 971 183, 11 606 383, 14 336 079, 7 971 279, 1 606 479, 10 700 975,
 4 336 175, 7 065 871, 3 430 767, 16 142 215, 12 507 111, 6 142 311, 8 872 007,
 2 507 207, 5 236 903, 1 601 799, 10 678 143, 7 043 039, 3 407 935, 5 214 071, 1 578 967}
```

```
chi = listdim17[[76]]
```

```
 $(-11 + x)^3 (-9 + x)^9 (-8 + x) (-7 + x) (5 + x)^{32} (-965 + 307 x - 31 x^2 + x^3)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -61, 1565, -21881, 179891, -868263, 2272303, -2477475},
      {1, -61, 1565, -21881, 179907, -868759, 2277151, -2492595},
      {1, -61, 1565, -21881, 179907, -868727, 2276639, -2490579},
      {1, -61, 1565, -21881, 179907, -868695, 2276063, -2488115},
      {1, -61, 1565, -21881, 179907, -868695, 2276127, -2488563},
      {1, -61, 1565, -21881, 179923, -869127, 2279887, -2499203},
      {1, -61, 1565, -21881, 179923, -869095, 2279375, -2497187},
      {1, -61, 1565, -21873, 179587, -864039, 2246751, -2420523},
      {1, -61, 1565, -21873, 179603, -864471, 2250575, -2431611},
      {1, -61, 1565, -21873, 179603, -864439, 2250063, -2429595},
      {1, -61, 1565, -21873, 179619, -864871, 2253887, -2440683},
      {1, -61, 1565, -21873, 179619, -864839, 2253375, -2438667},
      {1, -61, 1565, -21873, 179635, -865303, 2257711, -2451771},
      {1, -61, 1565, -21873, 179635, -865271, 2257135, -2449307},
      {1, -61, 1565, -21873, 179635, -865271, 2257199, -2449755},
      {1, -61, 1565, -21873, 179651, -865703, 2261023, -2460843},
      {1, -61, 1565, -21873, 179651, -865671, 2260447, -2458379},
      {1, -61, 1565, -21865, 179315, -860583, 2227311, -2379699},
      {1, -61, 1565, -21865, 179331, -861015, 2231135, -2390787},
      {1, -61, 1565, -21865, 179331, -860983, 2230623, -2388771},
      {1, -61, 1565, -21865, 179347, -861447, 2234959, -2401875},
      {1, -61, 1565, -21865, 179347, -861415, 2234447, -2399859},
      {1, -61, 1565, -21865, 179363, -861847, 2238271, -2410947},
      {1, -61, 1565, -21865, 179363, -861815, 2237695, -2408483},
      {1, -61, 1565, -21865, 179379, -862279, 2242095, -2422035},
      {1, -61, 1565, -21865, 179379, -862247, 2241519, -2419571},
      {1, -61, 1565, -21857, 179043, -857159, 2208383, -2340891},
      {1, -61, 1565, -21857, 179059, -857591, 2212207, -2351979},
      {1, -61, 1565, -21857, 179059, -857591, 2212271, -2352555},
      {1, -61, 1565, -21857, 179059, -857559, 2211695, -2349963},
      {1, -61, 1565, -21857, 179075, -857991, 2215519, -2361051},
      {1, -61, 1565, -21857, 179091, -858423, 2219343, -2372139},
      {1, -61, 1565, -21857, 179107, -858855, 2223167, -2383227},
      {1, -61, 1565, -21849, 178755, -853303, 2185631, -2290995},
      {1, -61, 1565, -21849, 178771, -853703, 2188943, -2300067},
      {1, -61, 1565, -21849, 178787, -854167, 2193343, -2313747},
      {1, -61, 1565, -21849, 178787, -854135, 2192767, -2311155},
      {1, -61, 1565, -21849, 178803, -854567, 2196591, -2322243},
      {1, -61, 1565, -21841, 178499, -850279, 2170015, -2261259},
      {1, -61, 1565, -21833, 178211, -846423, 2147263, -2211363}};

```

A // MatrixForm

```
( 1 -61 1565 -21881 179891 -868263 2272303 -2477475
 1 -61 1565 -21881 179907 -868759 2277151 -2492595
 1 -61 1565 -21881 179907 -868727 2276639 -2490579
 1 -61 1565 -21881 179907 -868695 2276063 -2488115
 1 -61 1565 -21881 179907 -868695 2276127 -2488563
 1 -61 1565 -21881 179923 -869127 2279887 -2499203
 1 -61 1565 -21881 179923 -869095 2279375 -2497187
 1 -61 1565 -21873 179587 -864039 2246751 -2420523
 1 -61 1565 -21873 179603 -864471 2250575 -2431611
 1 -61 1565 -21873 179603 -864439 2250063 -2429595
 1 -61 1565 -21873 179619 -864871 2253887 -2440683
 1 -61 1565 -21873 179619 -864839 2253375 -2438667
 1 -61 1565 -21873 179635 -865303 2257711 -2451771
 1 -61 1565 -21873 179635 -865271 2257135 -2449307
 1 -61 1565 -21873 179635 -865271 2257199 -2449755
 1 -61 1565 -21873 179651 -865703 2261023 -2460843
 1 -61 1565 -21873 179651 -865671 2260447 -2458379
 1 -61 1565 -21865 179315 -860583 2227311 -2379699
 1 -61 1565 -21865 179331 -861015 2231135 -2390787
 1 -61 1565 -21865 179331 -860983 2230623 -2388771
 1 -61 1565 -21865 179347 -861447 2234959 -2401875
 1 -61 1565 -21865 179347 -861415 2234447 -2399859
 1 -61 1565 -21865 179363 -861847 2238271 -2410947
 1 -61 1565 -21865 179363 -861815 2237695 -2408483
 1 -61 1565 -21865 179379 -862279 2242095 -2422035
 1 -61 1565 -21865 179379 -862247 2241519 -2419571
 1 -61 1565 -21857 179043 -857159 2208383 -2340891
 1 -61 1565 -21857 179059 -857591 2212207 -2351979
 1 -61 1565 -21857 179059 -857591 2212271 -2352555
 1 -61 1565 -21857 179059 -857559 2211695 -2349963
 1 -61 1565 -21857 179075 -857991 2215519 -2361051
 1 -61 1565 -21857 179091 -858423 2219343 -2372139
 1 -61 1565 -21857 179107 -858855 2223167 -2383227
 1 -61 1565 -21849 178755 -853303 2185631 -2290995
 1 -61 1565 -21849 178771 -853703 2188943 -2300067
 1 -61 1565 -21849 178787 -854167 2193343 -2313747
 1 -61 1565 -21849 178787 -854135 2192767 -2311155
 1 -61 1565 -21849 178803 -854567 2196591 -2322243
 1 -61 1565 -21841 178499 -850279 2170015 -2261259
 1 -61 1565 -21833 178211 -846423 2147263 -2211363)
```

Dimensions[A]

{40, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -2989, 76685, -1071993, 8810131, -42508103, 111258479, -121478355}

Array[c, 8].Transpose[A]

```
{c[1] - 61 c[2] + 1565 c[3] - 21881 c[4] + 179891 c[5] -
 868263 c[6] + 2272303 c[7] - 2477475 c[8], c[1] - 61 c[2] + 1565 c[3] -
 21881 c[4] + 179907 c[5] - 868759 c[6] + 2277151 c[7] - 2492595 c[8],
```


$$\begin{aligned}
& c[1] - 61 c[2] + 1565 c[3] - 21881 c[4] + 179907 c[5] - 868727 c[6] + \\
& 2276639 c[7] - 2490579 c[8], c[1] - 61 c[2] + 1565 c[3] - 21881 c[4] + \\
& 179907 c[5] - 868695 c[6] + 2276063 c[7] - 2488115 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21881 c[4] + 179907 c[5] - 868695 c[6] + \\
& 2276127 c[7] - 2488563 c[8], c[1] - 61 c[2] + 1565 c[3] - 21881 c[4] + \\
& 179923 c[5] - 869127 c[6] + 2279887 c[7] - 2499203 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21881 c[4] + 179923 c[5] - 869095 c[6] + \\
& 2279375 c[7] - 2497187 c[8], c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + \\
& 179587 c[5] - 864039 c[6] + 2246751 c[7] - 2420523 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + 179603 c[5] - 864471 c[6] + \\
& 2250575 c[7] - 2431611 c[8], c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + \\
& 179603 c[5] - 864439 c[6] + 2250063 c[7] - 2429595 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + 179619 c[5] - 864871 c[6] + \\
& 2253887 c[7] - 2440683 c[8], c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + \\
& 179619 c[5] - 864839 c[6] + 2253375 c[7] - 2438667 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + 179635 c[5] - 865303 c[6] + \\
& 2257711 c[7] - 2451771 c[8], c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + \\
& 179635 c[5] - 865271 c[6] + 2257135 c[7] - 2449307 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + 179635 c[5] - 865271 c[6] + \\
& 2257199 c[7] - 2449755 c[8], c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + \\
& 179651 c[5] - 865703 c[6] + 2261023 c[7] - 2460843 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21873 c[4] + 179651 c[5] - 865671 c[6] + \\
& 2260447 c[7] - 2458379 c[8], c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + \\
& 179315 c[5] - 860583 c[6] + 2227311 c[7] - 2379699 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179331 c[5] - 861015 c[6] + \\
& 2231135 c[7] - 2390787 c[8], c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + \\
& 179331 c[5] - 860983 c[6] + 2230623 c[7] - 2388771 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179347 c[5] - 861447 c[6] + \\
& 2234959 c[7] - 2401875 c[8], c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + \\
& 179347 c[5] - 861415 c[6] + 2234447 c[7] - 2399859 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179363 c[5] - 861847 c[6] + \\
& 2238271 c[7] - 2410947 c[8], c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + \\
& 179363 c[5] - 861815 c[6] + 2237695 c[7] - 2408483 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179379 c[5] - 862279 c[6] + \\
& 2242095 c[7] - 2422035 c[8], c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + \\
& 179379 c[5] - 862247 c[6] + 2241519 c[7] - 2419571 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179043 c[5] - 857159 c[6] + \\
& 2208383 c[7] - 2340891 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + \\
& 179059 c[5] - 857591 c[6] + 2212207 c[7] - 2351979 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179059 c[5] - 857591 c[6] + \\
& 2212271 c[7] - 2352555 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + \\
& 179059 c[5] - 857559 c[6] + 2211695 c[7] - 2349963 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179075 c[5] - 857991 c[6] + \\
& 2215519 c[7] - 2361051 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + \\
& 179091 c[5] - 858423 c[6] + 2219343 c[7] - 2372139 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179107 c[5] - 858855 c[6] + \\
& 2223167 c[7] - 2383227 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
\end{aligned}$$

```

178 755 c[5] - 853 303 c[6] + 2 185 631 c[7] - 2 290 995 c[8] ,
c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] + 178 771 c[5] - 853 703 c[6] +
2 188 943 c[7] - 2 300 067 c[8] , c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] +
178 787 c[5] - 854 167 c[6] + 2 193 343 c[7] - 2 313 747 c[8] ,
c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] + 178 787 c[5] - 854 135 c[6] +
2 192 767 c[7] - 2 311 155 c[8] , c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] +
178 803 c[5] - 854 567 c[6] + 2 196 591 c[7] - 2 322 243 c[8] ,
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 499 c[5] - 850 279 c[6] +
2 170 015 c[7] - 2 261 259 c[8] , c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 211 c[5] - 846 423 c[6] + 2 147 263 c[7] - 2 211 363 c[8] }

```

Array[c, 8].g

```

49 c[1] - 2989 c[2] + 76 685 c[3] - 1 071 993 c[4] +
8 810 131 c[5] - 42 508 103 c[6] + 111 258 479 c[7] - 121 478 355 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2989 c[2] + 76 685 c[3] - 1 071 993 c[4] +
8 810 131 c[5] - 42 508 103 c[6] + 111 258 479 c[7] - 121 478 355 c[8] < 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 881 c[4] + 179 891 c[5] - 868 263 c[6] +
2 272 303 c[7] - 2 477 475 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 881 c[4] +
179 907 c[5] - 868 759 c[6] + 2 277 151 c[7] - 2 492 595 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 881 c[4] + 179 907 c[5] - 868 727 c[6] +
2 276 639 c[7] - 2 490 579 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 881 c[4] +
179 907 c[5] - 868 695 c[6] + 2 276 063 c[7] - 2 488 115 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 881 c[4] + 179 907 c[5] -
868 695 c[6] + 2 276 127 c[7] - 2 488 563 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 881 c[4] + 179 923 c[5] - 869 127 c[6] +
2 279 887 c[7] - 2 499 203 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 881 c[4] +
179 923 c[5] - 869 095 c[6] + 2 279 375 c[7] - 2 497 187 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] + 179 587 c[5] - 864 039 c[6] +
2 246 751 c[7] - 2 420 523 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] +
179 603 c[5] - 864 471 c[6] + 2 250 575 c[7] - 2 431 611 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] + 179 603 c[5] - 864 439 c[6] +
2 250 063 c[7] - 2 429 595 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] +
179 619 c[5] - 864 871 c[6] + 2 253 887 c[7] - 2 440 683 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] + 179 619 c[5] - 864 839 c[6] +
2 253 375 c[7] - 2 438 667 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] +
179 635 c[5] - 865 303 c[6] + 2 257 711 c[7] - 2 451 771 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] + 179 635 c[5] - 865 271 c[6] +
2 257 135 c[7] - 2 449 307 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] +
179 635 c[5] - 865 271 c[6] + 2 257 199 c[7] - 2 449 755 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] + 179 651 c[5] - 865 703 c[6] +
2 261 023 c[7] - 2 460 843 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 873 c[4] +
179 651 c[5] - 865 671 c[6] + 2 260 447 c[7] - 2 458 379 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 865 c[4] + 179 315 c[5] - 860 583 c[6] +
2 227 311 c[7] - 2 379 699 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 865 c[4] +
179 331 c[5] - 861 015 c[6] + 2 231 135 c[7] - 2 390 787 c[8] ≥ 0 &&

```

```

c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179331 c[5] - 860983 c[6] +
  2230623 c[7] - 2388771 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] +
  179347 c[5] - 861447 c[6] + 2234959 c[7] - 2401875 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179347 c[5] - 861415 c[6] +
  2234447 c[7] - 2399859 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] +
  179363 c[5] - 861847 c[6] + 2238271 c[7] - 2410947 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179363 c[5] - 861815 c[6] +
  2237695 c[7] - 2408483 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] +
  179379 c[5] - 862279 c[6] + 2242095 c[7] - 2422035 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179379 c[5] - 862247 c[6] +
  2241519 c[7] - 2419571 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] +
  179043 c[5] - 857159 c[6] + 2208383 c[7] - 2340891 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179059 c[5] - 857591 c[6] +
  2212207 c[7] - 2351979 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] +
  179059 c[5] - 857591 c[6] + 2212271 c[7] - 2352555 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179059 c[5] - 857559 c[6] +
  2211695 c[7] - 2349963 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] +
  179075 c[5] - 857991 c[6] + 2215519 c[7] - 2361051 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179091 c[5] - 858423 c[6] +
  2219343 c[7] - 2372139 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] +
  179107 c[5] - 858855 c[6] + 2223167 c[7] - 2383227 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178755 c[5] - 853303 c[6] +
  2185631 c[7] - 2290995 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178771 c[5] - 853703 c[6] + 2188943 c[7] - 2300067 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178787 c[5] - 854167 c[6] +
  2193343 c[7] - 2313747 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178787 c[5] - 854135 c[6] + 2192767 c[7] - 2311155 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178803 c[5] - 854567 c[6] +
  2196591 c[7] - 2322243 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] +
  178499 c[5] - 850279 c[6] + 2170015 c[7] - 2261259 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178211 c[5] - 846423 c[6] +
  2147263 c[7] - 2211363 c[8] ≥ 0, Array[c, 8], Integers]]
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GCD[0, 0, 11091944806, 1414982133, 88436388, 0, -1403751, -356509]
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cert.g
-65098165

{0, 0, 11091944806, 1414982133, 88436388, 0, -1403751, -356509}.
Reverse[gpart[listdim17[[76]]]]
-65098165

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cert.Transpose[A]

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chi = listdim17[[77]]

$$(-11 + x)^2 (-9 + x)^{11} (-7 + x) (5 + x)^{32} (-1048 + 327 x - 32 x^2 + x^3)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

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327 217	-260 934	82 639	-13 412	1183	-54	1
326 865	-260 902	82 639	-13 412	1183	-54	1
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314 937	-257 518	82 343	-13 404	1183	-54	1
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304 073	-253 726	81 911	-13 388	1183	-54	1
304 137	-253 726	81 911	-13 388	1183	-54	1
306 009	-254 078	81 927	-13 388	1183	-54	1
305 657	-254 046	81 927	-13 388	1183	-54	1
305 305	-254 014	81 927	-13 388	1183	-54	1
307 241	-254 366	81 943	-13 388	1183	-54	1
297 297	-251 526	81 679	-13 380	1183	-54	1
298 881	-251 846	81 695	-13 380	1183	-54	1
300 500	-251 814	81 695	-13 380	1183	-54	1

$$\begin{pmatrix} 298529 & -251814 & 81695 & -13380 & 1183 & -54 & 1 \\ 300465 & -252166 & 81711 & -13380 & 1183 & -54 & 1 \end{pmatrix}$$

Dimensions[A]

{92, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{16490113, -12941478, 4066399, -657796, 57967, -2646, 49}

Array[c, 7].Transpose[A]

```
{338017 c[1] - 264726 c[2] + 83071 c[3] - 13428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 339185 c[1] - 265014 c[2] + 83087 c[3] - 13428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 340417 c[1] - 265302 c[2] + 83103 c[3] - 13428 c[4] + 1183 c[5] - 54 c[6] + c[7],
 328489 c[1] - 261918 c[2] + 82807 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 328553 c[1] - 261918 c[2] + 82807 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 330297 c[1] - 262270 c[2] + 82823 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 330361 c[1] - 262270 c[2] + 82823 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 329945 c[1] - 262238 c[2] + 82823 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 330009 c[1] - 262238 c[2] + 82823 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 330073 c[1] - 262238 c[2] + 82823 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 329721 c[1] - 262206 c[2] + 82823 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 331529 c[1] - 262558 c[2] + 82839 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 331177 c[1] - 262526 c[2] + 82839 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 331241 c[1] - 262526 c[2] + 82839 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 332409 c[1] - 262814 c[2] + 82855 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 332473 c[1] - 262814 c[2] + 82855 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 333641 c[1] - 263102 c[2] + 82871 c[3] - 13420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 320481 c[1] - 259430 c[2] + 82559 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 322641 c[1] - 259814 c[2] + 82575 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 322289 c[1] - 259782 c[2] + 82575 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 322353 c[1] - 259782 c[2] + 82575 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 321937 c[1] - 259750 c[2] + 82575 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 322001 c[1] - 259750 c[2] + 82575 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 322065 c[1] - 259750 c[2] + 82575 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 321713 c[1] - 259718 c[2] + 82575 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 323873 c[1] - 260102 c[2] + 82591 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 323521 c[1] - 260070 c[2] + 82591 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 323585 c[1] - 260070 c[2] + 82591 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 323649 c[1] - 260070 c[2] + 82591 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 323169 c[1] - 260038 c[2] + 82591 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 323233 c[1] - 260038 c[2] + 82591 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 323297 c[1] - 260038 c[2] + 82591 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 322945 c[1] - 260006 c[2] + 82591 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 324753 c[1] - 260358 c[2] + 82607 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 324817 c[1] - 260358 c[2] + 82607 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 324401 c[1] - 260326 c[2] + 82607 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 324465 c[1] - 260326 c[2] + 82607 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 325985 c[1] - 260646 c[2] + 82623 c[3] - 13412 c[4] + 1183 c[5] - 54 c[6] + c[7],
```

[illegible]

```

305 657 c[1] - 254 046 c[2] + 81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
305 305 c[1] - 254 014 c[2] + 81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
307 241 c[1] - 254 366 c[2] + 81 943 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
297 297 c[1] - 251 526 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
298 881 c[1] - 251 846 c[2] + 81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
298 529 c[1] - 251 814 c[2] + 81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
300 465 c[1] - 252 166 c[2] + 81 711 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] }

```

Array[c, 7].g

```

16 490 113 c[1] - 12 941 478 c[2] + 4 066 399 c[3] -
657 796 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[16 490 113 c[1] - 12 941 478 c[2] + 4 066 399 c[3] -
657 796 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7] < 0 &&
338 017 c[1] - 264 726 c[2] + 83 071 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 339 185 c[1] - 265 014 c[2] + 83 087 c[3] - 13 428 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 340 417 c[1] - 265 302 c[2] +
83 103 c[3] - 13 428 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
328 489 c[1] - 261 918 c[2] + 82 807 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 328 553 c[1] - 261 918 c[2] + 82 807 c[3] - 13 420 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 330 297 c[1] - 262 270 c[2] +
82 823 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
330 361 c[1] - 262 270 c[2] + 82 823 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 329 945 c[1] - 262 238 c[2] + 82 823 c[3] - 13 420 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 330 009 c[1] - 262 238 c[2] +
82 823 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
330 073 c[1] - 262 238 c[2] + 82 823 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 329 721 c[1] - 262 206 c[2] + 82 823 c[3] - 13 420 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 331 529 c[1] - 262 558 c[2] +
82 839 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
331 177 c[1] - 262 526 c[2] + 82 839 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 331 241 c[1] - 262 526 c[2] + 82 839 c[3] - 13 420 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 332 409 c[1] - 262 814 c[2] +
82 855 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
332 473 c[1] - 262 814 c[2] + 82 855 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 333 641 c[1] - 263 102 c[2] + 82 871 c[3] - 13 420 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 320 481 c[1] - 259 430 c[2] +
82 559 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
322 641 c[1] - 259 814 c[2] + 82 575 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 322 289 c[1] - 259 782 c[2] + 82 575 c[3] - 13 412 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 322 353 c[1] - 259 782 c[2] +
82 575 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
321 937 c[1] - 259 750 c[2] + 82 575 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 322 001 c[1] - 259 750 c[2] + 82 575 c[3] - 13 412 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 322 065 c[1] - 259 750 c[2] +
82 575 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&

```

$$\begin{aligned}
& 321\,713\,c[1] - 259\,718\,c[2] + 82\,575\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 323\,873\,c[1] - 260\,102\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 323\,521\,c[1] - 260\,070\,c[2] + \\
& 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 323\,585\,c[1] - 260\,070\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 323\,649\,c[1] - 260\,070\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 323\,169\,c[1] - 260\,038\,c[2] + \\
& 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 323\,233\,c[1] - 260\,038\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 323\,297\,c[1] - 260\,038\,c[2] + 82\,591\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 322\,945\,c[1] - 260\,006\,c[2] + \\
& 82\,591\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 324\,753\,c[1] - 260\,358\,c[2] + 82\,607\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 324\,817\,c[1] - 260\,358\,c[2] + 82\,607\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 324\,401\,c[1] - 260\,326\,c[2] + \\
& 82\,607\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 324\,465\,c[1] - 260\,326\,c[2] + 82\,607\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 325\,985\,c[1] - 260\,646\,c[2] + 82\,623\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 326\,049\,c[1] - 260\,646\,c[2] + \\
& 82\,623\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 325\,633\,c[1] - 260\,614\,c[2] + 82\,623\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 325\,697\,c[1] - 260\,614\,c[2] + 82\,623\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 327\,217\,c[1] - 260\,934\,c[2] + \\
& 82\,639\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 326\,865\,c[1] - 260\,902\,c[2] + 82\,639\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 313\,929\,c[1] - 257\,262\,c[2] + 82\,327\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 315\,513\,c[1] - 257\,582\,c[2] + \\
& 82\,343\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 315\,161\,c[1] - 257\,550\,c[2] + 82\,343\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 315\,225\,c[1] - 257\,550\,c[2] + 82\,343\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 314\,937\,c[1] - 257\,518\,c[2] + \\
& 82\,343\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 317\,097\,c[1] - 257\,902\,c[2] + 82\,359\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 316\,745\,c[1] - 257\,870\,c[2] + 82\,359\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 316\,809\,c[1] - 257\,870\,c[2] + \\
& 82\,359\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 316\,393\,c[1] - 257\,838\,c[2] + 82\,359\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 316\,457\,c[1] - 257\,838\,c[2] + 82\,359\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 316\,521\,c[1] - 257\,838\,c[2] + \\
& 82\,359\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 318\,329\,c[1] - 258\,190\,c[2] + 82\,375\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 317\,977\,c[1] - 258\,158\,c[2] + 82\,375\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 318\,041\,c[1] - 258\,158\,c[2] + \\
& 82\,375\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 317\,625\,c[1] - 258\,126\,c[2] + 82\,375\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 317\,689\,c[1] - 258\,126\,c[2] + 82\,375\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 319\,561\,c[1] - 258\,478\,c[2] +
\end{aligned}$$

```

82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
319 209 c[1] - 258 446 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 319 273 c[1] - 258 446 c[2] + 82 391 c[3] - 13 404 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 318 857 c[1] - 258 414 c[2] +
82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
320 441 c[1] - 258 734 c[2] + 82 407 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 320 089 c[1] - 258 702 c[2] + 82 407 c[3] - 13 404 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 308 385 c[1] - 255 350 c[2] +
82 111 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
309 969 c[1] - 255 670 c[2] + 82 127 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 309 617 c[1] - 255 638 c[2] + 82 127 c[3] - 13 396 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 309 681 c[1] - 255 638 c[2] +
82 127 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
311 553 c[1] - 255 990 c[2] + 82 143 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 311 201 c[1] - 255 958 c[2] + 82 143 c[3] - 13 396 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 311 265 c[1] - 255 958 c[2] +
82 143 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
310 849 c[1] - 255 926 c[2] + 82 143 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 310 913 c[1] - 255 926 c[2] + 82 143 c[3] - 13 396 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 312 785 c[1] - 256 278 c[2] +
82 159 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
312 849 c[1] - 256 278 c[2] + 82 159 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 312 433 c[1] - 256 246 c[2] + 82 159 c[3] - 13 396 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 312 081 c[1] - 256 214 c[2] +
82 159 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
314 017 c[1] - 256 566 c[2] + 82 175 c[3] - 13 396 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 313 665 c[1] - 256 534 c[2] + 82 175 c[3] - 13 396 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 302 841 c[1] - 253 438 c[2] +
81 895 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
304 425 c[1] - 253 758 c[2] + 81 911 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 304 073 c[1] - 253 726 c[2] + 81 911 c[3] - 13 388 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 304 137 c[1] - 253 726 c[2] +
81 911 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
306 009 c[1] - 254 078 c[2] + 81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 305 657 c[1] - 254 046 c[2] + 81 927 c[3] - 13 388 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 305 305 c[1] - 254 014 c[2] +
81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
307 241 c[1] - 254 366 c[2] + 81 943 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 297 297 c[1] - 251 526 c[2] + 81 679 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 298 881 c[1] - 251 846 c[2] +
81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
298 529 c[1] - 251 814 c[2] + 81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 300 465 c[1] - 252 166 c[2] + 81 711 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-267 316, -2 673 161, -28 068 180, -304 205 617, 0, 0, -2 370 518 793 825}

```

```
GCD[-267 316, -2 673 161, -28 068 180, -304 205 617, 0, 0, -2 370 518 793 825]
```

```
1
```

```
Reverse[cert]
```

```
{-2 370 518 793 825, 0, 0, -304 205 617, -28 068 180, -2 673 161, -267 316}
```

```
cert.g
```

```
-18 715 863
```

```
{-267 316, -2 673 161, -28 068 180, -304 205 617, 0, 0, -2 370 518 793 825}.
```

```
gpart[listdim17[[77]]]
```

```
-18 715 863
```

```
cert.Transpose[A]
```

```
{316 985, 8871 385, 317 561, 17 422 329, 314 105, 25 976 793, 8868 569, 34 530 873,
17 422 649, 314 425, 8868 505, 17 422 969, 25 977 049, 8868 825, 17 423 225,
315 001, 8869 401, 34 527 993, 34 528 377, 43 082 457, 25 974 233, 51 636 537,
34 528 313, 17 420 089, 25 974 169, 25 974 553, 34 528 633, 17 420 409, 312 185,
43 082 713, 25 974 489, 8866 265, 17 420 345, 25 974 809, 8866 585, 34 528 889,
17 420 665, 17 420 985, 312 761, 25 975 065, 8866 841, 8867 161, 17 421 241,
68 742 201, 51 634 297, 60 188 377, 43 080 153, 34 526 009, 34 526 393, 43 080 473,
25 972 249, 51 634 553, 34 526 329, 17 418 105, 25 972 569, 34 526 649, 17 418 425,
43 080 729, 25 972 505, 17 418 745, 25 972 825, 8864 601, 34 526 905, 17 419 001,
25 973 081, 68 740 217, 51 632 313, 60 186 393, 43 078 169, 34 524 409, 43 078 489,
25 970 265, 51 632 569, 34 524 345, 25 970 585, 8862 361, 34 524 665, 43 078 745,
17 416 761, 25 970 841, 68 738 233, 51 630 329, 60 184 409, 43 076 185, 34 522 425,
43 076 505, 51 630 585, 25 968 601, 68 736 249, 51 628 345, 60 182 425, 34 520 441}
```

```
chi = listdim17[[78]]
```

```
 $(-11 + x)^2 (-9 + x)^{10} (-8 + x) (5 + x)^{32} (113 - 22 x + x^2) (73 - 18 x + x^2)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -63, 1669, -24 075, 203 923, -1 012 365, 2 720 743, -3 043 881},
      {1, -63, 1669, -24 075, 203 923, -1 012 333, 2 720 039, -3 040 265},
      {1, -63, 1669, -24 075, 203 939, -1 012 797, 2 724 439, -3 053 945},
      {1, -63, 1669, -24 067, 203 587, -1 007 149, 2 685 239, -2 954 385},
      {1, -63, 1669, -24 067, 203 603, -1 007 645, 2 690 215, -2 970 657},
      {1, -63, 1669, -24 067, 203 603, -1 007 613, 2 689 511, -2 967 041},
      {1, -63, 1669, -24 067, 203 603, -1 007 613, 2 689 639, -2 968 065},
      {1, -63, 1669, -24 067, 203 619, -1 008 141, 2 695 191, -2 986 929},
      {1, -63, 1669, -24 067, 203 619, -1 008 109, 2 694 615, -2 984 337},
      {1, -63, 1669, -24 067, 203 635, -1 008 573, 2 699 015, -2 998 017},
      {1, -63, 1669, -24 067, 203 635, -1 008 541, 2 698 503, -2 996 001},
      {1, -63, 1669, -24 067, 203 635, -1 008 509, 2 697 799, -2 992 385},
      {1, -63, 1669, -24 067, 203 651, -1 008 941, 2 701 687, -3 004 049},
      {1, -63, 1669, -24 059, 203 251, -1 001 933, 2 649 735, -2 864 889},
      {1, -63, 1669, -24 059, 203 267, -1 002 429, 2 654 711, -2 881 161},
      {1, -63, 1669, -24 059, 203 283, -1 002 925, 2 659 687, -2 897 433},
      {1, -63, 1669, -24 059, 203 283, -1 002 893, 2 659 111, -2 894 841},
      {1, -63, 1669, -24 059, 203 299, -1 003 325, 2 662 999, -2 906 505},
      {1, -63, 1669, -24 059, 203 315, -1 003 821, 2 667 975, -2 922 777},
      {1, -63, 1669, -24 059, 203 315, -1 003 789, 2 667 399, -2 920 185},
      {1, -63, 1669, -24 059, 203 315, -1 003 725, 2 666 183, -2 914 553},
      {1, -63, 1669, -24 059, 203 331, -1 004 253, 2 671 863, -2 934 441},
      {1, -63, 1669, -24 059, 203 331, -1 004 221, 2 671 287, -2 931 849},
      {1, -63, 1669, -24 059, 203 347, -1 004 717, 2 676 263, -2 948 121},
      {1, -63, 1669, -24 059, 203 347, -1 004 685, 2 675 687, -2 945 529},
      {1, -63, 1669, -24 059, 203 363, -1 005 149, 2 680 151, -2 959 785},
      {1, -63, 1669, -24 051, 202 947, -997 709, 2 624 183, -2 807 937},
      {1, -63, 1669, -24 051, 202 979, -998 605, 2 632 471, -2 833 281},
      {1, -63, 1669, -24 051, 202 979, -998 541, 2 631 383, -2 828 673},
      {1, -63, 1669, -24 051, 202 995, -999 037, 2 636 359, -2 844 945},
      {1, -63, 1669, -24 051, 203 011, -999 501, 2 640 759, -2 858 625},
      {1, -63, 1669, -24 051, 203 027, -999 933, 2 644 647, -2 870 289},
      {1, -63, 1669, -24 051, 203 043, -1 000 397, 2 649 047, -2 883 969},
      {1, -63, 1669, -24 051, 203 043, -1 000 333, 2 647 831, -2 878 337},
      {1, -63, 1669, -24 051, 203 059, -1 000 861, 2 653 511, -2 898 225},
      {1, -63, 1669, -24 043, 202 659, -993 821, 2 600 855, -2 755 449},
      {1, -63, 1669, -24 043, 202 691, -994 717, 2 609 143, -2 780 793},
      {1, -63, 1669, -24 043, 202 723, -995 645, 2 618 007, -2 808 729},
      {1, -63, 1669, -24 035, 202 387, -990 429, 2 582 503, -2 719 233},
      {1, -63, 1669, -24 035, 202 419, -991 325, 2 590 791, -2 744 577}};

```


A // MatrixForm

```
{ 1 -63 1669 -24 075 203 923 -1 012 365 2 720 743 -3 043 881
 1 -63 1669 -24 075 203 923 -1 012 333 2 720 039 -3 040 265
 1 -63 1669 -24 075 203 939 -1 012 797 2 724 439 -3 053 945
 1 -63 1669 -24 067 203 587 -1 007 149 2 685 239 -2 954 385
 1 -63 1669 -24 067 203 603 -1 007 645 2 690 215 -2 970 657
 1 -63 1669 -24 067 203 603 -1 007 613 2 689 511 -2 967 041
 1 -63 1669 -24 067 203 603 -1 007 613 2 689 639 -2 968 065
 1 -63 1669 -24 067 203 619 -1 008 141 2 695 191 -2 986 929
 1 -63 1669 -24 067 203 619 -1 008 109 2 694 615 -2 984 337
 1 -63 1669 -24 067 203 635 -1 008 573 2 699 015 -2 998 017
 1 -63 1669 -24 067 203 635 -1 008 541 2 698 503 -2 996 001
 1 -63 1669 -24 067 203 635 -1 008 509 2 697 799 -2 992 385
 1 -63 1669 -24 067 203 651 -1 008 941 2 701 687 -3 004 049
 1 -63 1669 -24 059 203 251 -1 001 933 2 649 735 -2 864 889
 1 -63 1669 -24 059 203 267 -1 002 429 2 654 711 -2 881 161
 1 -63 1669 -24 059 203 283 -1 002 925 2 659 687 -2 897 433
 1 -63 1669 -24 059 203 283 -1 002 893 2 659 111 -2 894 841
 1 -63 1669 -24 059 203 299 -1 003 325 2 662 999 -2 906 505
 1 -63 1669 -24 059 203 315 -1 003 821 2 667 975 -2 922 777
 1 -63 1669 -24 059 203 315 -1 003 789 2 667 399 -2 920 185
 1 -63 1669 -24 059 203 315 -1 003 725 2 666 183 -2 914 553
 1 -63 1669 -24 059 203 331 -1 004 253 2 671 863 -2 934 441
 1 -63 1669 -24 059 203 331 -1 004 221 2 671 287 -2 931 849
 1 -63 1669 -24 059 203 347 -1 004 717 2 676 263 -2 948 121
 1 -63 1669 -24 059 203 347 -1 004 685 2 675 687 -2 945 529
 1 -63 1669 -24 059 203 363 -1 005 149 2 680 151 -2 959 785
 1 -63 1669 -24 051 202 947 -997 709 2 624 183 -2 807 937
 1 -63 1669 -24 051 202 979 -998 605 2 632 471 -2 833 281
 1 -63 1669 -24 051 202 979 -998 541 2 631 383 -2 828 673
 1 -63 1669 -24 051 202 995 -999 037 2 636 359 -2 844 945
 1 -63 1669 -24 051 203 011 -999 501 2 640 759 -2 858 625
 1 -63 1669 -24 051 203 027 -999 933 2 644 647 -2 870 289
 1 -63 1669 -24 051 203 043 -1 000 397 2 649 047 -2 883 969
 1 -63 1669 -24 051 203 043 -1 000 333 2 647 831 -2 878 337
 1 -63 1669 -24 051 203 059 -1 000 861 2 653 511 -2 898 225
 1 -63 1669 -24 043 202 659 -993 821 2 600 855 -2 755 449
 1 -63 1669 -24 043 202 691 -994 717 2 609 143 -2 780 793
 1 -63 1669 -24 043 202 723 -995 645 2 618 007 -2 808 729
 1 -63 1669 -24 035 202 387 -990 429 2 582 503 -2 719 233
 1 -63 1669 -24 035 202 419 -991 325 2 590 791 -2 744 577 }
```

Dimensions[A]

```
{40, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3087, 81 781, -1 179 499, 9 986 563, -49 537 661, 132 940 759, -148 330 121}
```

Array[c, 8].Transpose[A]

```
{ c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 923 c[5] -
 1 012 365 c[6] + 2 720 743 c[7] - 3 043 881 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24 075 c[4] + 203 923 c[5] - 1 012 333 c[6] + 2 720 039 c[7] - 3 040 265 c[8],
```

$c[1] - 63 c[2] + 1669 c[3] - 24\,075 c[4] + 203\,939 c[5] - 1\,012\,797 c[6] +$
 $2\,724\,439 c[7] - 3\,053\,945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,587 c[5] - 1\,007\,149 c[6] + 2\,685\,239 c[7] - 2\,954\,385 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,603 c[5] - 1\,007\,645 c[6] +$
 $2\,690\,215 c[7] - 2\,970\,657 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,603 c[5] - 1\,007\,613 c[6] + 2\,689\,511 c[7] - 2\,967\,041 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,603 c[5] - 1\,007\,613 c[6] +$
 $2\,689\,639 c[7] - 2\,968\,065 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,619 c[5] - 1\,008\,141 c[6] + 2\,695\,191 c[7] - 2\,986\,929 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,619 c[5] - 1\,008\,109 c[6] +$
 $2\,694\,615 c[7] - 2\,984\,337 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,635 c[5] - 1\,008\,573 c[6] + 2\,699\,015 c[7] - 2\,998\,017 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,635 c[5] - 1\,008\,541 c[6] +$
 $2\,698\,503 c[7] - 2\,996\,001 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,635 c[5] - 1\,008\,509 c[6] + 2\,697\,799 c[7] - 2\,992\,385 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,651 c[5] - 1\,008\,941 c[6] +$
 $2\,701\,687 c[7] - 3\,004\,049 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,251 c[5] - 1\,001\,933 c[6] + 2\,649\,735 c[7] - 2\,864\,889 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,267 c[5] - 1\,002\,429 c[6] +$
 $2\,654\,711 c[7] - 2\,881\,161 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,283 c[5] - 1\,002\,925 c[6] + 2\,659\,687 c[7] - 2\,897\,433 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,283 c[5] - 1\,002\,893 c[6] +$
 $2\,659\,111 c[7] - 2\,894\,841 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,299 c[5] - 1\,003\,325 c[6] + 2\,662\,999 c[7] - 2\,906\,505 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,315 c[5] - 1\,003\,821 c[6] +$
 $2\,667\,975 c[7] - 2\,922\,777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,315 c[5] - 1\,003\,789 c[6] + 2\,667\,399 c[7] - 2\,920\,185 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,315 c[5] - 1\,003\,725 c[6] +$
 $2\,666\,183 c[7] - 2\,914\,553 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,331 c[5] - 1\,004\,253 c[6] + 2\,671\,863 c[7] - 2\,934\,441 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,221 c[6] +$
 $2\,671\,287 c[7] - 2\,931\,849 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,347 c[5] - 1\,004\,717 c[6] + 2\,676\,263 c[7] - 2\,948\,121 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,685 c[6] +$
 $2\,675\,687 c[7] - 2\,945\,529 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,363 c[5] - 1\,005\,149 c[6] + 2\,680\,151 c[7] - 2\,959\,785 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,947 c[5] - 997\,709 c[6] +$
 $2\,624\,183 c[7] - 2\,807\,937 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $202\,979 c[5] - 998\,605 c[6] + 2\,632\,471 c[7] - 2\,833\,281 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,979 c[5] - 998\,541 c[6] +$
 $2\,631\,383 c[7] - 2\,828\,673 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $202\,995 c[5] - 999\,037 c[6] + 2\,636\,359 c[7] - 2\,844\,945 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,501 c[6] +$
 $2\,640\,759 c[7] - 2\,858\,625 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,027 c[5] - 999\,933 c[6] + 2\,644\,647 c[7] - 2\,870\,289 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] +$
 $2\,649\,047 c[7] - 2\,883\,969 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$

```

203 043 c[5] - 1 000 333 c[6] + 2 647 831 c[7] - 2 878 337 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 059 c[5] - 1 000 861 c[6] +
2 653 511 c[7] - 2 898 225 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 659 c[5] - 993 821 c[6] + 2 600 855 c[7] - 2 755 449 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 691 c[5] - 994 717 c[6] +
2 609 143 c[7] - 2 780 793 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 723 c[5] - 995 645 c[6] + 2 618 007 c[7] - 2 808 729 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 387 c[5] - 990 429 c[6] +
2 582 503 c[7] - 2 719 233 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 419 c[5] - 991 325 c[6] + 2 590 791 c[7] - 2 744 577 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 499 c[4] +
9 986 563 c[5] - 49 537 661 c[6] + 132 940 759 c[7] - 148 330 121 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 499 c[4] +
9 986 563 c[5] - 49 537 661 c[6] + 132 940 759 c[7] - 148 330 121 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 923 c[5] - 1 012 365 c[6] +
2 720 743 c[7] - 3 043 881 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] +
203 923 c[5] - 1 012 333 c[6] + 2 720 039 c[7] - 3 040 265 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 939 c[5] - 1 012 797 c[6] +
2 724 439 c[7] - 3 053 945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 587 c[5] - 1 007 149 c[6] + 2 685 239 c[7] - 2 954 385 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 603 c[5] - 1 007 645 c[6] +
2 690 215 c[7] - 2 970 657 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 603 c[5] - 1 007 613 c[6] + 2 689 511 c[7] - 2 967 041 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 603 c[5] - 1 007 613 c[6] +
2 689 639 c[7] - 2 968 065 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 619 c[5] - 1 008 141 c[6] + 2 695 191 c[7] - 2 986 929 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 619 c[5] - 1 008 109 c[6] +
2 694 615 c[7] - 2 984 337 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 635 c[5] - 1 008 573 c[6] + 2 699 015 c[7] - 2 998 017 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 635 c[5] - 1 008 541 c[6] +
2 698 503 c[7] - 2 996 001 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 635 c[5] - 1 008 509 c[6] + 2 697 799 c[7] - 2 992 385 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] - 1 008 941 c[6] +
2 701 687 c[7] - 3 004 049 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 251 c[5] - 1 001 933 c[6] + 2 649 735 c[7] - 2 864 889 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 267 c[5] - 1 002 429 c[6] +
2 654 711 c[7] - 2 881 161 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 283 c[5] - 1 002 925 c[6] + 2 659 687 c[7] - 2 897 433 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 283 c[5] - 1 002 893 c[6] +
2 659 111 c[7] - 2 894 841 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 299 c[5] - 1 003 325 c[6] + 2 662 999 c[7] - 2 906 505 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 315 c[5] - 1 003 821 c[6] +
2 667 975 c[7] - 2 922 777 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +

```

```

203 315 c[5] - 1 003 789 c[6] + 2 667 399 c[7] - 2 920 185 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 315 c[5] -
1 003 725 c[6] + 2 666 183 c[7] - 2 914 553 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 331 c[5] - 1 004 253 c[6] +
2 671 863 c[7] - 2 934 441 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 331 c[5] - 1 004 221 c[6] + 2 671 287 c[7] - 2 931 849 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 347 c[5] - 1 004 717 c[6] +
2 676 263 c[7] - 2 948 121 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 347 c[5] - 1 004 685 c[6] + 2 675 687 c[7] - 2 945 529 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 363 c[5] - 1 005 149 c[6] +
2 680 151 c[7] - 2 959 785 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
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cert.Transpose[A]

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Dimensions[A]

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{184, 8}
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g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

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Array[c, 8].Transpose[A]

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  230779 c[5] - 1178443 c[6] + 3248915 c[7] - 3713963 c[8],
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$3\,254\,467\,c[7] - 3\,732\,443\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] +$
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& 3222851 c[7] - 3654739 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
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& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230475 c[5] - 1174155 c[6] + \\
& 3222211 c[7] - 3651571 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
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& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230491 c[5] - 1174651 c[6] + \\
& 3227251 c[7] - 3668291 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
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& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167515 c[6] + \\
& 3172931 c[7] - 3518955 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230091 c[5] - 1167515 c[6] + 3172995 c[7] - 3519531 c[8], \\
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& 3178611 c[7] - 3538843 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230107 c[5] - 1168043 c[6] + 3178675 c[7] - 3539547 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168043 c[6] + \\
& 3178739 c[7] - 3540123 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230107 c[5] - 1168011 c[6] + 3177971 c[7] - 3535675 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1168011 c[6] + \\
& 3178035 c[7] - 3536379 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230107 c[5] - 1168011 c[6] + 3178099 c[7] - 3536955 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167979 c[6] + \\
& 3177395 c[7] - 3533211 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230107 c[5] - 1167979 c[6] + 3177395 c[7] - 3533083 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167947 c[6] + \\
& 3176755 c[7] - 3530043 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168603 c[6] + 3185059 c[7] - 3563307 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168571 c[6] + \\
& 3184355 c[7] - 3559435 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168571 c[6] + 3184419 c[7] - 3560139 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168539 c[6] + \\
& 3183651 c[7] - 3555563 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168539 c[6] + 3183715 c[7] - 3556267 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168539 c[6] + \\
& 3183779 c[7] - 3556971 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168507 c[6] + 3182947 c[7] - 3551691 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168507 c[6] + \\
& 3183011 c[7] - 3552395 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168507 c[6] + 3183075 c[7] - 3553099 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168507 c[6] + \\
& 3183139 c[7] - 3553803 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168507 c[6] + 3183203 c[7] - 3554379 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168475 c[6] + \\
& 3182371 c[7] - 3549227 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
\end{aligned}$$

$230\,123\,c[5] - 1\,168\,475\,c[6] + 3\,182\,435\,c[7] - 3\,549\,931\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,475\,c[6] +$
 $3\,182\,499\,c[7] - 3\,550\,635\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,123\,c[5] - 1\,168\,443\,c[6] + 3\,181\,795\,c[7] - 3\,546\,763\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,067\,c[6] +$
 $3\,189\,459\,c[7] - 3\,576\,859\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,139\,c[5] - 1\,169\,067\,c[6] + 3\,189\,523\,c[7] - 3\,577\,563\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,035\,c[6] +$
 $3\,188\,755\,c[7] - 3\,572\,987\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,139\,c[5] - 1\,169\,035\,c[6] + 3\,188\,819\,c[7] - 3\,573\,691\,c[8],$
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 $3\,188\,179\,c[7] - 3\,570\,523\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,139\,c[5] - 1\,169\,003\,c[6] + 3\,188\,243\,c[7] - 3\,571\,227\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] +$
 $3\,187\,411\,c[7] - 3\,565\,947\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,475\,c[7] - 3\,566\,651\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] +$
 $3\,187\,539\,c[7] - 3\,567\,355\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,603\,c[7] - 3\,568\,059\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,939\,c[6] +$
 $3\,186\,835\,c[7] - 3\,563\,483\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,155\,c[5] - 1\,169\,531\,c[6] + 3\,193\,859\,c[7] - 3\,590\,411\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,499\,c[6] +$
 $3\,193\,219\,c[7] - 3\,587\,243\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,155\,c[5] - 1\,169\,499\,c[6] + 3\,193\,283\,c[7] - 3\,587\,947\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,467\,c[6] +$
 $3\,192\,515\,c[7] - 3\,583\,371\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,155\,c[5] - 1\,169\,467\,c[6] + 3\,192\,579\,c[7] - 3\,584\,075\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,467\,c[6] +$
 $3\,192\,643\,c[7] - 3\,584\,779\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,191\,811\,c[7] - 3\,579\,499\,c[8],$
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 $3\,191\,875\,c[7] - 3\,580\,203\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,191\,939\,c[7] - 3\,580\,907\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,963\,c[6] +$
 $3\,197\,619\,c[7] - 3\,600\,795\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,171\,c[5] - 1\,169\,963\,c[6] + 3\,197\,683\,c[7] - 3\,601\,499\,c[8],$
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 $3\,196\,979\,c[7] - 3\,597\,627\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,771\,c[5] - 1\,162\,827\,c[6] + 3\,143\,107\,c[7] - 3\,449\,347\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,827\,c[6] +$
 $3\,143\,171\,c[7] - 3\,450\,051\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,771\,c[5] - 1\,162\,795\,c[6] + 3\,142\,531\,c[7] - 3\,446\,883\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,763\,c[6] +$

$$\begin{aligned}
& 3\,141\,955\,c[7] - 3\,444\,291\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,355\,c[6] + 3\,148\,915\,c[7] - 3\,470\,643\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,323\,c[6] + \\
& 3\,148\,211\,c[7] - 3\,466\,771\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,323\,c[6] + 3\,148\,275\,c[7] - 3\,467\,475\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,291\,c[6] + \\
& 3\,147\,571\,c[7] - 3\,463\,603\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,291\,c[6] + 3\,147\,635\,c[7] - 3\,464\,307\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,259\,c[6] + \\
& 3\,146\,931\,c[7] - 3\,460\,435\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,259\,c[6] + 3\,146\,995\,c[7] - 3\,461\,139\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,259\,c[6] + \\
& 3\,147\,059\,c[7] - 3\,461\,715\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,227\,c[6] + 3\,146\,355\,c[7] - 3\,457\,971\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,851\,c[6] + \\
& 3\,154\,019\,c[7] - 3\,488\,067\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,819\,c[6] + 3\,153\,379\,c[7] - 3\,484\,899\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,787\,c[6] + \\
& 3\,152\,675\,c[7] - 3\,481\,027\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,787\,c[6] + 3\,152\,739\,c[7] - 3\,481\,731\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& 3\,151\,971\,c[7] - 3\,477\,155\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,035\,c[7] - 3\,477\,859\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& 3\,152\,099\,c[7] - 3\,478\,563\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,395\,c[7] - 3\,474\,691\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] + \\
& 3\,151\,459\,c[7] - 3\,475\,395\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,755\,c[7] - 3\,471\,523\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& 3\,150\,819\,c[7] - 3\,472\,227\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,315\,c[6] + 3\,158\,483\,c[7] - 3\,502\,323\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,283\,c[6] + \\
& 3\,157\,779\,c[7] - 3\,498\,451\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,283\,c[6] + 3\,157\,843\,c[7] - 3\,499\,155\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& 3\,157\,075\,c[7] - 3\,494\,579\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,251\,c[6] + 3\,157\,139\,c[7] - 3\,495\,283\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& 3\,157\,203\,c[7] - 3\,495\,987\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,435\,c[7] - 3\,491\,411\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& 3\,156\,499\,c[7] - 3\,492\,115\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,563\,c[7] - 3\,492\,819\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,187\,c[6] + \\
& 3\,155\,795\,c[7] - 3\,488\,243\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,187\,c[6] + 3\,155\,859\,c[7] - 3\,488\,947\,c[8],
\end{aligned}$$

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 $c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229835 c[5] - 1164747 c[6] +$
 $3162307 c[7] - 3513411 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229835 c[5] - 1164715 c[6] + 3161539 c[7] - 3508835 c[8],$
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 $229835 c[5] - 1164683 c[6] + 3160835 c[7] - 3504963 c[8],$
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 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229467 c[5] - 1158571 c[6] +$
 $3117235 c[7] - 3392235 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
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 $3120355 c[7] - 3399451 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
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 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229499 c[5] - 1159499 c[6] +$
 $3126099 c[7] - 3420043 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
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 $3125459 c[7] - 3416875 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229499 c[5] - 1159467 c[6] + 3125523 c[7] - 3417579 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229499 c[5] - 1159435 c[6] +$
 $3124755 c[7] - 3413003 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$

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229 499 c[5] - 1 159 435 c[6] + 3 124 819 c[7] - 3 413 707 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 160 027 c[6] +
3 131 907 c[7] - 3 441 339 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 159 995 c[6] + 3 131 203 c[7] - 3 437 467 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 995 c[6] +
3 131 267 c[7] - 3 438 171 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 159 963 c[6] + 3 130 563 c[7] - 3 434 299 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 931 c[6] +
3 129 859 c[7] - 3 430 427 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 531 c[5] - 1 160 523 c[6] + 3 137 011 c[7] - 3 458 763 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 531 c[5] - 1 160 491 c[6] +
3 136 371 c[7] - 3 455 595 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 787 c[6] + 3 085 555 c[7] - 3 313 827 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 755 c[6] +
3 084 915 c[7] - 3 310 659 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 251 c[6] + 3 090 019 c[7] - 3 328 083 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 219 c[6] +
3 089 315 c[7] - 3 324 211 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 219 c[6] + 3 089 379 c[7] - 3 324 915 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 187 c[6] +
3 088 739 c[7] - 3 321 747 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 179 c[5] - 1 154 747 c[6] + 3 095 123 c[7] - 3 345 507 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 715 c[6] +
3 094 419 c[7] - 3 341 635 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 179 c[5] - 1 154 715 c[6] + 3 094 483 c[7] - 3 342 339 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 683 c[6] +
3 093 779 c[7] - 3 338 467 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 195 c[5] - 1 155 243 c[6] + 3 100 227 c[7] - 3 362 931 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 195 c[5] - 1 155 211 c[6] +
3 099 587 c[7] - 3 359 763 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 843 c[5] - 1 149 467 c[6] + 3 058 339 c[7] - 3 249 675 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 859 c[5] - 1 149 963 c[6] +
3 063 443 c[7] - 3 267 099 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 875 c[5] - 1 150 459 c[6] + 3 068 547 c[7] - 3 284 523 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 433 c[4] +
11 302 155 c[5] - 57 670 459 c[6] + 158 823 651 c[7] - 181 310 667 c[8]

```

cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 433 c[4] +
11 302 155 c[5] - 57 670 459 c[6] + 158 823 651 c[7] - 181 310 667 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 177 947 c[6] +
3 243 875 c[7] - 3 697 243 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 779 c[5] - 1 178 475 c[6] + 3 249 555 c[7] - 3 717 131 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 779 c[5] - 1 178 443 c[6] +
3 248 851 c[7] - 3 713 259 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +

```

$$\begin{aligned}
& 230\,779\,c[5] - 1\,178\,443\,c[6] + 3\,248\,915\,c[7] - 3\,713\,963\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,795\,c[5] - 1\,178\,971\,c[6] + \\
& \quad 3\,254\,467\,c[7] - 3\,732\,443\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,795\,c[5] - 1\,178\,939\,c[6] + 3\,253\,827\,c[7] - 3\,729\,275\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,795\,c[5] - 1\,178\,939\,c[6] + \\
& \quad 3\,253\,891\,c[7] - 3\,729\,979\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,795\,c[5] - 1\,178\,907\,c[6] + 3\,253\,251\,c[7] - 3\,726\,811\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,763\,c[6] + \\
& \quad 3\,209\,139\,c[7] - 3\,612\,195\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,427\,c[5] - 1\,172\,731\,c[6] + 3\,208\,435\,c[7] - 3\,608\,451\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,731\,c[6] + \\
& \quad 3\,208\,435\,c[7] - 3\,608\,323\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,427\,c[5] - 1\,172\,699\,c[6] + 3\,207\,795\,c[7] - 3\,605\,283\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,291\,c[6] + \\
& \quad 3\,214\,883\,c[7] - 3\,632\,787\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,259\,c[6] + 3\,214\,115\,c[7] - 3\,628\,339\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,259\,c[6] + \\
& \quad 3\,214\,179\,c[7] - 3\,629\,043\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,259\,c[6] + 3\,214\,179\,c[7] - 3\,628\,915\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,259\,c[6] + \\
& \quad 3\,214\,243\,c[7] - 3\,629\,619\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,227\,c[6] + 3\,213\,411\,c[7] - 3\,624\,467\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,227\,c[6] + \\
& \quad 3\,213\,475\,c[7] - 3\,625\,171\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,227\,c[6] + 3\,213\,475\,c[7] - 3\,625\,043\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - \\
& \quad 1\,173\,227\,c[6] + 3\,213\,539\,c[7] - 3\,625\,875\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,195\,c[6] + \\
& \quad 3\,212\,835\,c[7] - 3\,622\,003\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,787\,c[6] + 3\,219\,795\,c[7] - 3\,648\,227\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,755\,c[6] + \\
& \quad 3\,219\,091\,c[7] - 3\,644\,355\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,755\,c[6] + 3\,219\,155\,c[7] - 3\,645\,059\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,755\,c[6] + \\
& \quad 3\,219\,219\,c[7] - 3\,645\,763\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,755\,c[6] + 3\,219\,283\,c[7] - 3\,646\,467\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,755\,c[6] + \\
& \quad 3\,219\,283\,c[7] - 3\,646\,339\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,723\,c[6] + 3\,218\,387\,c[7] - 3\,640\,483\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,723\,c[6] + \\
& \quad 3\,218\,451\,c[7] - 3\,641\,187\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,723\,c[6] + 3\,218\,515\,c[7] - 3\,641\,891\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,723\,c[6] + \\
& \quad 3\,218\,579\,c[7] - 3\,642\,595\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,723\,c[6] + 3\,218\,643\,c[7] - 3\,643\,299\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] + \\
& \quad 3\,217\,811\,c[7] - 3\,638\,019\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,217\,875\,c[7] - 3\,638\,723\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,219\,c[6] + \\
& \quad 3\,223\,491\,c[7] - 3\,657\,907\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,219\,c[6] + 3\,223\,555\,c[7] - 3\,658\,611\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,219\,c[6] + \\
& \quad 3\,223\,619\,c[7] - 3\,659\,315\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,222\,851\,c[7] - 3\,654\,739\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,187\,c[6] + \\
& \quad 3\,222\,915\,c[7] - 3\,655\,443\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,155\,c[6] + 3\,222\,211\,c[7] - 3\,651\,571\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,491\,c[5] - 1\,174\,683\,c[6] + \\
& \quad 3\,227\,955\,c[7] - 3\,672\,163\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,491\,c[5] - 1\,174\,651\,c[6] + 3\,227\,251\,c[7] - 3\,668\,291\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,547\,c[6] + \\
& \quad 3\,173\,635\,c[7] - 3\,522\,699\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,091\,c[5] - 1\,167\,515\,c[6] + 3\,172\,931\,c[7] - 3\,518\,955\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,515\,c[6] + \\
& \quad 3\,172\,995\,c[7] - 3\,519\,531\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,611\,c[7] - 3\,538\,843\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,043\,c[6] + \\
& \quad 3\,178\,675\,c[7] - 3\,539\,547\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,168\,043\,c[6] + 3\,178\,739\,c[7] - 3\,540\,123\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,011\,c[6] + \\
& \quad 3\,177\,971\,c[7] - 3\,535\,675\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,168\,011\,c[6] + 3\,178\,035\,c[7] - 3\,536\,379\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,168\,011\,c[6] + \\
& \quad 3\,178\,099\,c[7] - 3\,536\,955\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,167\,979\,c[6] + 3\,177\,395\,c[7] - 3\,533\,211\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,979\,c[6] + \\
& \quad 3\,177\,395\,c[7] - 3\,533\,083\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,167\,947\,c[6] + 3\,176\,755\,c[7] - 3\,530\,043\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,603\,c[6] + \\
& \quad 3\,185\,059\,c[7] - 3\,563\,307\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,571\,c[6] + 3\,184\,355\,c[7] - 3\,559\,435\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,571\,c[6] + \\
& \quad 3\,184\,419\,c[7] - 3\,560\,139\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,539\,c[6] + 3\,183\,651\,c[7] - 3\,555\,563\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,539\,c[6] + \\
& \quad 3\,183\,715\,c[7] - 3\,556\,267\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,539\,c[6] + 3\,183\,779\,c[7] - 3\,556\,971\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,507\,c[6] + \\
& \quad 3\,182\,947\,c[7] - 3\,551\,691\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,507\,c[6] + 3\,183\,011\,c[7] - 3\,552\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,507\,c[6] + \\
& \quad 3\,183\,075\,c[7] - 3\,553\,099\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,507\,c[6] + 3\,183\,139\,c[7] - 3\,553\,803\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,507\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,183\,203\,c[7] - 3\,554\,379\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,475\,c[6] + 3\,182\,371\,c[7] - 3\,549\,227\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,475\,c[6] + \\
& 3\,182\,435\,c[7] - 3\,549\,931\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,475\,c[6] + 3\,182\,499\,c[7] - 3\,550\,635\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,443\,c[6] + \\
& 3\,181\,795\,c[7] - 3\,546\,763\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,067\,c[6] + 3\,189\,459\,c[7] - 3\,576\,859\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,067\,c[6] + \\
& 3\,189\,523\,c[7] - 3\,577\,563\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,035\,c[6] + 3\,188\,755\,c[7] - 3\,572\,987\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,035\,c[6] + \\
& 3\,188\,819\,c[7] - 3\,573\,691\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,035\,c[6] + 3\,188\,883\,c[7] - 3\,574\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,003\,c[6] + \\
& 3\,188\,115\,c[7] - 3\,569\,819\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,003\,c[6] + 3\,188\,179\,c[7] - 3\,570\,523\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,003\,c[6] + \\
& 3\,188\,243\,c[7] - 3\,571\,227\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,411\,c[7] - 3\,565\,947\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& 3\,187\,475\,c[7] - 3\,566\,651\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,539\,c[7] - 3\,567\,355\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& 3\,187\,603\,c[7] - 3\,568\,059\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,186\,835\,c[7] - 3\,563\,483\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,531\,c[6] + \\
& 3\,193\,859\,c[7] - 3\,590\,411\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,499\,c[6] + 3\,193\,219\,c[7] - 3\,587\,243\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,499\,c[6] + \\
& 3\,193\,283\,c[7] - 3\,587\,947\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,467\,c[6] + 3\,192\,515\,c[7] - 3\,583\,371\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,467\,c[6] + \\
& 3\,192\,579\,c[7] - 3\,584\,075\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,467\,c[6] + 3\,192\,643\,c[7] - 3\,584\,779\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,435\,c[6] + \\
& 3\,191\,811\,c[7] - 3\,579\,499\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,191\,875\,c[7] - 3\,580\,203\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,435\,c[6] + \\
& 3\,191\,939\,c[7] - 3\,580\,907\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,169\,963\,c[6] + 3\,197\,619\,c[7] - 3\,600\,795\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,963\,c[6] + \\
& 3\,197\,683\,c[7] - 3\,601\,499\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,169\,931\,c[6] + 3\,196\,979\,c[7] - 3\,597\,627\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,827\,c[6] + \\
& 3\,143\,107\,c[7] - 3\,449\,347\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,771\,c[5] - 1\,162\,827\,c[6] + 3\,143\,171\,c[7] - 3\,450\,051\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162795 c[6] + \\
& \quad 3142531 c[7] - 3446883 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162763 c[6] + 3141955 c[7] - 3444291 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163355 c[6] + \\
& \quad 3148915 c[7] - 3470643 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163323 c[6] + 3148211 c[7] - 3466771 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163323 c[6] + \\
& \quad 3148275 c[7] - 3467475 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163291 c[6] + 3147571 c[7] - 3463603 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163291 c[6] + \\
& \quad 3147635 c[7] - 3464307 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163259 c[6] + 3146931 c[7] - 3460435 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163259 c[6] + \\
& \quad 3146995 c[7] - 3461139 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163259 c[6] + 3147059 c[7] - 3461715 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163227 c[6] + \\
& \quad 3146355 c[7] - 3457971 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163851 c[6] + 3154019 c[7] - 3488067 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163819 c[6] + \\
& \quad 3153379 c[7] - 3484899 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163787 c[6] + 3152675 c[7] - 3481027 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163787 c[6] + \\
& \quad 3152739 c[7] - 3481731 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163755 c[6] + 3151971 c[7] - 3477155 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163755 c[6] + \\
& \quad 3152035 c[7] - 3477859 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163755 c[6] + 3152099 c[7] - 3478563 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163723 c[6] + \\
& \quad 3151395 c[7] - 3474691 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163723 c[6] + 3151459 c[7] - 3475395 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163691 c[6] + \\
& \quad 3150755 c[7] - 3471523 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163691 c[6] + 3150819 c[7] - 3472227 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164315 c[6] + \\
& \quad 3158483 c[7] - 3502323 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229819 c[5] - 1164283 c[6] + 3157779 c[7] - 3498451 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164283 c[6] + \\
& \quad 3157843 c[7] - 3499155 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229819 c[5] - 1164251 c[6] + 3157075 c[7] - 3494579 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164251 c[6] + \\
& \quad 3157139 c[7] - 3495283 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229819 c[5] - 1164251 c[6] + 3157203 c[7] - 3495987 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164219 c[6] + \\
& \quad 3156435 c[7] - 3491411 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229819 c[5] - 1164219 c[6] + 3156499 c[7] - 3492115 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164219 c[6] + \\
& \quad 3156563 c[7] - 3492819 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 229\,819\,c[5] - 1\,164\,187\,c[6] + 3\,155\,795\,c[7] - 3\,488\,243\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,187\,c[6] + \\
& \quad 3\,155\,859\,c[7] - 3\,488\,947\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,811\,c[6] + 3\,163\,587\,c[7] - 3\,519\,747\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,779\,c[6] + \\
& \quad 3\,162\,883\,c[7] - 3\,515\,875\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,779\,c[6] + 3\,162\,947\,c[7] - 3\,516\,579\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,747\,c[6] + \\
& \quad 3\,162\,243\,c[7] - 3\,512\,707\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,747\,c[6] + 3\,162\,307\,c[7] - 3\,513\,411\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,715\,c[6] + \\
& \quad 3\,161\,539\,c[7] - 3\,508\,835\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,715\,c[6] + 3\,161\,603\,c[7] - 3\,509\,539\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,683\,c[6] + \\
& \quad 3\,160\,835\,c[7] - 3\,504\,963\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,683\,c[6] + 3\,160\,899\,c[7] - 3\,505\,667\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,243\,c[6] + \\
& \quad 3\,167\,347\,c[7] - 3\,530\,131\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,851\,c[5] - 1\,165\,211\,c[6] + 3\,166\,643\,c[7] - 3\,526\,259\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,179\,c[6] + \\
& \quad 3\,165\,939\,c[7] - 3\,522\,387\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,451\,c[5] - 1\,158\,075\,c[6] + 3\,112\,131\,c[7] - 3\,374\,811\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,158\,043\,c[6] + \\
& \quad 3\,111\,491\,c[7] - 3\,371\,643\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,467\,c[5] - 1\,158\,571\,c[6] + 3\,117\,235\,c[7] - 3\,392\,235\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,539\,c[6] + \\
& \quad 3\,116\,595\,c[7] - 3\,389\,067\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,467\,c[5] - 1\,158\,507\,c[6] + 3\,115\,955\,c[7] - 3\,385\,899\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,475\,c[6] + \\
& \quad 3\,115\,315\,c[7] - 3\,382\,731\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,483\,c[5] - 1\,159\,067\,c[6] + 3\,122\,339\,c[7] - 3\,409\,659\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,159\,035\,c[6] + \\
& \quad 3\,121\,699\,c[7] - 3\,406\,491\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,483\,c[5] - 1\,159\,003\,c[6] + 3\,120\,995\,c[7] - 3\,402\,619\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,159\,003\,c[6] + \\
& \quad 3\,121\,059\,c[7] - 3\,403\,323\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,483\,c[5] - 1\,158\,971\,c[6] + 3\,120\,355\,c[7] - 3\,399\,451\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,971\,c[6] + \\
& \quad 3\,120\,419\,c[7] - 3\,400\,155\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,483\,c[5] - 1\,158\,939\,c[6] + 3\,119\,779\,c[7] - 3\,396\,987\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,531\,c[6] + \\
& \quad 3\,126\,803\,c[7] - 3\,423\,915\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,499\,c[5] - 1\,159\,499\,c[6] + 3\,126\,099\,c[7] - 3\,420\,043\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,499\,c[6] + \\
& \quad 3\,126\,163\,c[7] - 3\,420\,747\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,499\,c[5] - 1\,159\,467\,c[6] + 3\,125\,459\,c[7] - 3\,416\,875\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,467\,c[6] +
\end{aligned}$$

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3 125 523 c[7] - 3 417 579 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 435 c[6] + 3 124 755 c[7] - 3 413 003 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 435 c[6] +
3 124 819 c[7] - 3 413 707 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 160 027 c[6] + 3 131 907 c[7] - 3 441 339 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 995 c[6] +
3 131 203 c[7] - 3 437 467 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 159 995 c[6] + 3 131 267 c[7] - 3 438 171 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 963 c[6] +
3 130 563 c[7] - 3 434 299 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 159 931 c[6] + 3 129 859 c[7] - 3 430 427 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 531 c[5] - 1 160 523 c[6] +
3 137 011 c[7] - 3 458 763 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 531 c[5] - 1 160 491 c[6] + 3 136 371 c[7] - 3 455 595 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 787 c[6] +
3 085 555 c[7] - 3 313 827 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 755 c[6] + 3 084 915 c[7] - 3 310 659 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 251 c[6] +
3 090 019 c[7] - 3 328 083 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 219 c[6] + 3 089 315 c[7] - 3 324 211 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 219 c[6] +
3 089 379 c[7] - 3 324 915 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 187 c[6] + 3 088 739 c[7] - 3 321 747 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 747 c[6] +
3 095 123 c[7] - 3 345 507 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 179 c[5] - 1 154 715 c[6] + 3 094 419 c[7] - 3 341 635 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 715 c[6] +
3 094 483 c[7] - 3 342 339 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 179 c[5] - 1 154 683 c[6] + 3 093 779 c[7] - 3 338 467 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 195 c[5] - 1 155 243 c[6] +
3 100 227 c[7] - 3 362 931 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 195 c[5] - 1 155 211 c[6] + 3 099 587 c[7] - 3 359 763 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 843 c[5] - 1 149 467 c[6] +
3 058 339 c[7] - 3 249 675 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 859 c[5] - 1 149 963 c[6] + 3 063 443 c[7] - 3 267 099 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 875 c[5] - 1 150 459 c[6] +
3 068 547 c[7] - 3 284 523 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, -77 300 917 310, -10 532 936 094, -956 541 670, -87 328 370, -8 017 435, -740 071}

GCD[0, 0, -77 300 917 310, -10 532 936 094,
-956 541 670, -87 328 370, -8 017 435, -740 071]

1

cert.g

-338 269 776

```



```
{0, 0, -77 300 917 310, -10 532 936 094, -956 541 670, -87 328 370, -8 017 435, -740 071}.
```

```
Reverse[gpart[listdim17[[79]]]]
```

```
-338 269 776
```

```
cert.Transpose[A]
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Dimensions[A]

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 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] +$
 $3\,217\,939\,c[7] - 3\,639\,427\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,217\,939\,c[7] - 3\,639\,299\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] +$
 $3\,218\,003\,c[7] - 3\,640\,131\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,218\,003\,c[7] - 3\,640\,003\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] +$
 $3\,218\,067\,c[7] - 3\,640\,707\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,459\,c[5] - 1\,173\,659\,c[6] + 3\,217\,235\,c[7] - 3\,635\,555\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,659\,c[6] +$
 $3\,217\,299\,c[7] - 3\,636\,259\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,459\,c[5] - 1\,173\,659\,c[6] + 3\,217\,299\,c[7] - 3\,636\,131\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,659\,c[6] +$
 $3\,217\,363\,c[7] - 3\,636\,963\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,459\,c[5] - 1\,173\,627\,c[6] + 3\,216\,659\,c[7] - 3\,633\,091\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,219\,c[6] +$
 $3\,223\,619\,c[7] - 3\,659\,315\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,475\,c[5] - 1\,174\,219\,c[6] + 3\,223\,683\,c[7] - 3\,660\,019\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,219\,c[6] +$
 $3\,223\,747\,c[7] - 3\,660\,595\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,222\,915\,c[7] - 3\,655\,443\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,187\,c[6] +$
 $3\,222\,979\,c[7] - 3\,656\,147\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,223\,043\,c[7] - 3\,656\,851\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,187\,c[6] +$
 $3\,223\,107\,c[7] - 3\,657\,555\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,223\,107\,c[7] - 3\,657\,427\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,155\,c[6] +$
 $3\,222\,275\,c[7] - 3\,652\,275\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,475\,c[5] - 1\,174\,155\,c[6] + 3\,222\,339\,c[7] - 3\,652\,979\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,155\,c[6] +$
 $3\,222\,403\,c[7] - 3\,653\,683\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +$
 $230\,491\,c[5] - 1\,174\,651\,c[6] + 3\,227\,379\,c[7] - 3\,669\,699\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,491\,c[5] - 1\,174\,651\,c[6] +$
 $3\,227\,443\,c[7] - 3\,670\,403\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,091\,c[5] - 1\,167\,483\,c[6] + 3\,172\,419\,c[7] - 3\,516\,939\,c[8],$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230091 c[5] - 1167451 c[6] + \\
& 3171779 c[7] - 3513771 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230107 c[5] - 1167979 c[6] + 3177395 c[7] - 3533083 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167979 c[6] + \\
& 3177459 c[7] - 3533787 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230107 c[5] - 1167979 c[6] + 3177523 c[7] - 3534363 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167947 c[6] + \\
& 3176755 c[7] - 3530043 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230107 c[5] - 1167947 c[6] + 3176819 c[7] - 3530619 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167947 c[6] + \\
& 3176819 c[7] - 3530491 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230107 c[5] - 1167947 c[6] + 3176883 c[7] - 3531195 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167915 c[6] + \\
& 3176179 c[7] - 3527451 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168507 c[6] + 3183139 c[7] - 3553803 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168507 c[6] + \\
& 3183203 c[7] - 3554379 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168475 c[6] + 3182371 c[7] - 3549227 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168475 c[6] + \\
& 3182435 c[7] - 3549931 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168475 c[6] + 3182499 c[7] - 3550635 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168475 c[6] + \\
& 3182499 c[7] - 3550507 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168475 c[6] + 3182563 c[7] - 3551211 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168475 c[6] + \\
& 3182627 c[7] - 3551787 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168443 c[6] + 3181795 c[7] - 3546763 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168443 c[6] + \\
& 3181859 c[7] - 3547467 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168443 c[6] + 3181859 c[7] - 3547339 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168443 c[6] + \\
& 3181923 c[7] - 3548043 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168411 c[6] + 3181155 c[7] - 3543595 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168411 c[6] + \\
& 3181219 c[7] - 3544299 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230123 c[5] - 1168411 c[6] + 3181219 c[7] - 3544171 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168379 c[6] + \\
& 3180579 c[7] - 3541131 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230139 c[5] - 1169035 c[6] + 3188819 c[7] - 3573691 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1169035 c[6] + \\
& 3188883 c[7] - 3574395 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230139 c[5] - 1169035 c[6] + 3188947 c[7] - 3574971 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1169003 c[6] + \\
& 3188179 c[7] - 3570523 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& 230139 c[5] - 1169003 c[6] + 3188243 c[7] - 3571227 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1169003 c[6] + \\
& 3188307 c[7] - 3571803 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,475\,c[7] - 3\,566\,651\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& \quad 3\,187\,539\,c[7] - 3\,567\,355\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,603\,c[7] - 3\,568\,059\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& \quad 3\,187\,603\,c[7] - 3\,567\,931\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,667\,c[7] - 3\,568\,635\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,939\,c[6] + \\
& \quad 3\,186\,835\,c[7] - 3\,563\,483\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,186\,899\,c[7] - 3\,564\,187\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,939\,c[6] + \\
& \quad 3\,186\,963\,c[7] - 3\,564\,891\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,186\,963\,c[7] - 3\,564\,763\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,907\,c[6] + \\
& \quad 3\,186\,195\,c[7] - 3\,560\,315\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,907\,c[6] + 3\,186\,259\,c[7] - 3\,561\,019\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,907\,c[6] + \\
& \quad 3\,186\,259\,c[7] - 3\,560\,891\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,139\,c[5] - 1\,168\,907\,c[6] + 3\,186\,323\,c[7] - 3\,561\,723\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,531\,c[6] + \\
& \quad 3\,193\,987\,c[7] - 3\,591\,819\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,499\,c[6] + 3\,193\,283\,c[7] - 3\,587\,947\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,499\,c[6] + \\
& \quad 3\,193\,347\,c[7] - 3\,588\,651\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,499\,c[6] + 3\,193\,411\,c[7] - 3\,589\,227\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,467\,c[6] + \\
& \quad 3\,192\,643\,c[7] - 3\,584\,779\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,467\,c[6] + 3\,192\,707\,c[7] - 3\,585\,483\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,467\,c[6] + \\
& \quad 3\,192\,771\,c[7] - 3\,586\,059\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,191\,939\,c[7] - 3\,580\,907\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,435\,c[6] + \\
& \quad 3\,192\,003\,c[7] - 3\,581\,611\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,192\,067\,c[7] - 3\,582\,315\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,403\,c[6] + \\
& \quad 3\,191\,299\,c[7] - 3\,577\,739\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,403\,c[6] + 3\,191\,363\,c[7] - 3\,578\,443\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,963\,c[6] + \\
& \quad 3\,197\,747\,c[7] - 3\,602\,203\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,171\,c[5] - 1\,169\,931\,c[6] + 3\,197\,043\,c[7] - 3\,598\,331\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,931\,c[6] + \\
& \quad 3\,197\,107\,c[7] - 3\,599\,035\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,763\,c[6] + 3\,141\,955\,c[7] - 3\,444\,291\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,731\,c[6] + \\
& \quad 3\,141\,251\,c[7] - 3\,440\,547\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,731\,c[6] + 3\,141\,315\,c[7] - 3\,441\,123\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,731\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,141\,379\,c[7] - 3\,441\,699\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,771\,c[5] - 1\,162\,699\,c[6] + 3\,140\,739\,c[7] - 3\,438\,531\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,259\,c[6] + \\
& 3\,146\,931\,c[7] - 3\,460\,435\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,259\,c[6] + 3\,146\,995\,c[7] - 3\,461\,139\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,259\,c[6] + \\
& 3\,147\,059\,c[7] - 3\,461\,715\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,227\,c[6] + 3\,146\,291\,c[7] - 3\,457\,267\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,227\,c[6] + \\
& 3\,146\,355\,c[7] - 3\,457\,971\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,227\,c[6] + 3\,146\,419\,c[7] - 3\,458\,547\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,195\,c[6] + \\
& 3\,145\,715\,c[7] - 3\,454\,803\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,195\,c[6] + 3\,145\,779\,c[7] - 3\,455\,379\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,163\,c[6] + \\
& 3\,145\,139\,c[7] - 3\,452\,211\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,819\,c[6] + 3\,153\,379\,c[7] - 3\,484\,899\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,787\,c[6] + \\
& 3\,152\,739\,c[7] - 3\,481\,731\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,035\,c[7] - 3\,477\,859\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& 3\,152\,099\,c[7] - 3\,478\,563\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,163\,c[7] - 3\,479\,139\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] + \\
& 3\,151\,395\,c[7] - 3\,474\,691\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,459\,c[7] - 3\,475\,395\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] + \\
& 3\,151\,523\,c[7] - 3\,475\,971\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,755\,c[7] - 3\,471\,523\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& 3\,150\,819\,c[7] - 3\,472\,227\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,819\,c[7] - 3\,472\,099\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& 3\,150\,883\,c[7] - 3\,472\,803\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,659\,c[6] + 3\,150\,179\,c[7] - 3\,469\,059\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,283\,c[6] + \\
& 3\,157\,843\,c[7] - 3\,499\,155\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,251\,c[6] + 3\,157\,203\,c[7] - 3\,495\,987\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& 3\,156\,499\,c[7] - 3\,492\,115\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,563\,c[7] - 3\,492\,819\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& 3\,156\,627\,c[7] - 3\,493\,395\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,187\,c[6] + 3\,155\,859\,c[7] - 3\,488\,947\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,187\,c[6] + \\
& 3\,155\,923\,c[7] - 3\,489\,651\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,155\,c[6] + 3\,155\,155\,c[7] - 3\,485\,075\,c[8],
\end{aligned}$$

$c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164155 c[6] +$
 $3155219 c[7] - 3485779 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229835 c[5] - 1164779 c[6] + 3162947 c[7] - 3516579 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229835 c[5] - 1164747 c[6] +$
 $3162307 c[7] - 3513411 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229835 c[5] - 1164715 c[6] + 3161603 c[7] - 3509539 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229835 c[5] - 1164715 c[6] +$
 $3161667 c[7] - 3510243 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229835 c[5] - 1164683 c[6] + 3160963 c[7] - 3506371 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229835 c[5] - 1164683 c[6] +$
 $3161027 c[7] - 3507075 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229835 c[5] - 1164651 c[6] + 3160259 c[7] - 3502499 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229851 c[5] - 1165243 c[6] +$
 $3167411 c[7] - 3530835 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229851 c[5] - 1165211 c[6] + 3166771 c[7] - 3527667 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229451 c[5] - 1158043 c[6] +$
 $3111491 c[7] - 3371643 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229451 c[5] - 1158011 c[6] + 3110851 c[7] - 3368475 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229451 c[5] - 1158011 c[6] +$
 $3110915 c[7] - 3369051 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229451 c[5] - 1157979 c[6] + 3110275 c[7] - 3365883 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229467 c[5] - 1158539 c[6] +$
 $3116595 c[7] - 3389067 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229467 c[5] - 1158507 c[6] + 3115955 c[7] - 3385899 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229467 c[5] - 1158475 c[6] +$
 $3115251 c[7] - 3382027 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229467 c[5] - 1158475 c[6] + 3115315 c[7] - 3382731 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229467 c[5] - 1158475 c[6] +$
 $3115379 c[7] - 3383307 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229467 c[5] - 1158443 c[6] + 3114675 c[7] - 3379563 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229467 c[5] - 1158443 c[6] +$
 $3114739 c[7] - 3380139 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229483 c[5] - 1159035 c[6] + 3121699 c[7] - 3406491 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229483 c[5] - 1159003 c[6] +$
 $3121059 c[7] - 3403323 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229483 c[5] - 1158971 c[6] + 3120355 c[7] - 3399451 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229483 c[5] - 1158971 c[6] +$
 $3120419 c[7] - 3400155 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229483 c[5] - 1158971 c[6] + 3120483 c[7] - 3400731 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229483 c[5] - 1158939 c[6] +$
 $3119715 c[7] - 3396283 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229483 c[5] - 1158939 c[6] + 3119779 c[7] - 3396987 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229483 c[5] - 1158907 c[6] +$
 $3119139 c[7] - 3393819 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229499 c[5] - 1159499 c[6] + 3126163 c[7] - 3420747 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229499 c[5] - 1159467 c[6] +$
 $3125523 c[7] - 3417579 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$

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229 499 c[5] - 1 159 435 c[6] + 3 124 819 c[7] - 3 413 707 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 435 c[6] +
3 124 883 c[7] - 3 414 411 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 403 c[6] + 3 124 179 c[7] - 3 410 539 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 995 c[6] +
3 131 267 c[7] - 3 438 171 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 159 963 c[6] + 3 130 627 c[7] - 3 435 003 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 931 c[6] +
3 129 923 c[7] - 3 431 131 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 115 c[5] - 1 152 795 c[6] + 3 075 347 c[7] - 3 278 979 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 259 c[6] +
3 079 811 c[7] - 3 293 235 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 755 c[6] + 3 084 915 c[7] - 3 310 659 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 723 c[6] +
3 084 275 c[7] - 3 307 491 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 691 c[6] + 3 083 635 c[7] - 3 304 323 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 691 c[6] +
3 083 699 c[7] - 3 304 899 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 219 c[6] + 3 089 379 c[7] - 3 324 915 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 187 c[6] +
3 088 739 c[7] - 3 321 747 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 179 c[5] - 1 154 715 c[6] + 3 094 483 c[7] - 3 342 339 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 683 c[6] +
3 093 843 c[7] - 3 339 171 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 827 c[5] - 1 148 971 c[6] + 3 053 235 c[7] - 3 232 251 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 827 c[5] - 1 148 939 c[6] +
3 052 595 c[7] - 3 229 083 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 843 c[5] - 1 149 435 c[6] + 3 057 699 c[7] - 3 246 507 c[8]}

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Array[c, 8].g

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49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 433 c[4] +
11 302 155 c[5] - 57 669 051 c[6] + 158 800 931 c[7] - 181 230 091 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 433 c[4] +
11 302 155 c[5] - 57 669 051 c[6] + 158 800 931 c[7] - 181 230 091 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 763 c[5] - 1 177 883 c[6] +
3 242 659 c[7] - 3 691 611 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 779 c[5] - 1 178 443 c[6] + 3 249 107 c[7] - 3 715 947 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 779 c[5] - 1 178 411 c[6] +
3 248 339 c[7] - 3 711 371 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 779 c[5] - 1 178 411 c[6] + 3 248 403 c[7] - 3 712 203 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 779 c[5] - 1 178 411 c[6] +
3 248 403 c[7] - 3 712 075 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 779 c[5] - 1 178 379 c[6] + 3 247 699 c[7] - 3 708 331 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 795 c[5] - 1 178 907 c[6] +
3 253 315 c[7] - 3 727 515 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +

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$$\begin{aligned}
& 230\,795\,c[5] - 1\,178\,907\,c[6] + 3\,253\,379\,c[7] - 3\,728\,219\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,795\,c[5] - 1\,178\,907\,c[6] + \\
& \quad 3\,253\,379\,c[7] - 3\,728\,091\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,795\,c[5] - 1\,178\,907\,c[6] + 3\,253\,443\,c[7] - 3\,728\,923\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,795\,c[5] - 1\,178\,907\,c[6] + \\
& \quad 3\,253\,443\,c[7] - 3\,728\,795\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + \\
& \quad 230\,795\,c[5] - 1\,178\,875\,c[6] + 3\,252\,739\,c[7] - 3\,725\,051\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,441\,c[4] + 230\,811\,c[5] - 1\,179\,371\,c[6] + \\
& \quad 3\,257\,779\,c[7] - 3\,741\,771\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,427\,c[5] - 1\,172\,731\,c[6] + 3\,208\,627\,c[7] - 3\,610\,179\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,427\,c[5] - 1\,172\,699\,c[6] + \\
& \quad 3\,207\,923\,c[7] - 3\,606\,435\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,427\,c[5] - 1\,172\,667\,c[6] + 3\,207\,219\,c[7] - 3\,602\,691\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,227\,c[6] + \\
& \quad 3\,213\,667\,c[7] - 3\,627\,027\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,195\,c[6] + 3\,212\,835\,c[7] - 3\,621\,875\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,195\,c[6] + \\
& \quad 3\,212\,899\,c[7] - 3\,622\,707\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,195\,c[6] + 3\,212\,899\,c[7] - 3\,622\,579\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - \\
& \quad 1\,173\,195\,c[6] + 3\,212\,963\,c[7] - 3\,623\,283\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,195\,c[6] + \\
& \quad 3\,212\,963\,c[7] - 3\,623\,155\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,163\,c[6] + 3\,212\,195\,c[7] - 3\,618\,835\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,163\,c[6] + \\
& \quad 3\,212\,259\,c[7] - 3\,619\,539\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,163\,c[6] + 3\,212\,259\,c[7] - 3\,619\,411\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,443\,c[5] - 1\,173\,163\,c[6] + \\
& \quad 3\,212\,323\,c[7] - 3\,620\,115\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,443\,c[5] - 1\,173\,131\,c[6] + 3\,211\,619\,c[7] - 3\,616\,371\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,755\,c[6] + \\
& \quad 3\,219\,347\,c[7] - 3\,647\,043\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,755\,c[6] + 3\,219\,411\,c[7] - 3\,647\,619\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,723\,c[6] + \\
& \quad 3\,218\,579\,c[7] - 3\,642\,595\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,723\,c[6] + 3\,218\,643\,c[7] - 3\,643\,299\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,723\,c[6] + \\
& \quad 3\,218\,643\,c[7] - 3\,643\,171\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,723\,c[6] + 3\,218\,707\,c[7] - 3\,643\,875\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] + \\
& \quad 3\,217\,875\,c[7] - 3\,638\,723\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,217\,939\,c[7] - 3\,639\,427\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] + \\
& \quad 3\,217\,939\,c[7] - 3\,639\,299\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,218\,003\,c[7] - 3\,640\,131\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,691\,c[6] + \\
& \quad 3\,218\,003\,c[7] - 3\,640\,003\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,459\,c[5] - 1\,173\,691\,c[6] + 3\,218\,067\,c[7] - 3\,640\,707\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,659\,c[6] + \\
& \quad 3\,217\,235\,c[7] - 3\,635\,555\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,659\,c[6] + 3\,217\,299\,c[7] - 3\,636\,259\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,659\,c[6] + \\
& \quad 3\,217\,299\,c[7] - 3\,636\,131\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,459\,c[5] - 1\,173\,659\,c[6] + 3\,217\,363\,c[7] - 3\,636\,963\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,627\,c[6] + \\
& \quad 3\,216\,659\,c[7] - 3\,633\,091\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,219\,c[6] + 3\,223\,619\,c[7] - 3\,659\,315\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,219\,c[6] + \\
& \quad 3\,223\,683\,c[7] - 3\,660\,019\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,219\,c[6] + 3\,223\,747\,c[7] - 3\,660\,595\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,187\,c[6] + \\
& \quad 3\,222\,915\,c[7] - 3\,655\,443\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,222\,979\,c[7] - 3\,656\,147\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,187\,c[6] + \\
& \quad 3\,223\,043\,c[7] - 3\,656\,851\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,223\,107\,c[7] - 3\,657\,555\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,187\,c[6] + \\
& \quad 3\,223\,107\,c[7] - 3\,657\,427\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,155\,c[6] + 3\,222\,275\,c[7] - 3\,652\,275\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,155\,c[6] + \\
& \quad 3\,222\,339\,c[7] - 3\,652\,979\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,475\,c[5] - 1\,174\,155\,c[6] + 3\,222\,403\,c[7] - 3\,653\,683\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,491\,c[5] - 1\,174\,651\,c[6] + \\
& \quad 3\,227\,379\,c[7] - 3\,669\,699\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& \quad 230\,491\,c[5] - 1\,174\,651\,c[6] + 3\,227\,443\,c[7] - 3\,670\,403\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,483\,c[6] + \\
& \quad 3\,172\,419\,c[7] - 3\,516\,939\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,091\,c[5] - 1\,167\,451\,c[6] + 3\,171\,779\,c[7] - 3\,513\,771\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,979\,c[6] + \\
& \quad 3\,177\,395\,c[7] - 3\,533\,083\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,167\,979\,c[6] + 3\,177\,459\,c[7] - 3\,533\,787\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,979\,c[6] + \\
& \quad 3\,177\,523\,c[7] - 3\,534\,363\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,167\,947\,c[6] + 3\,176\,755\,c[7] - 3\,530\,043\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,947\,c[6] + \\
& \quad 3\,176\,819\,c[7] - 3\,530\,619\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,167\,947\,c[6] + 3\,176\,819\,c[7] - 3\,530\,491\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,947\,c[6] + \\
& \quad 3\,176\,883\,c[7] - 3\,531\,195\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,107\,c[5] - 1\,167\,915\,c[6] + 3\,176\,179\,c[7] - 3\,527\,451\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,507\,c[6] + \\
& \quad 3\,183\,139\,c[7] - 3\,553\,803\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,123\,c[5] - 1\,168\,507\,c[6] + 3\,183\,203\,c[7] - 3\,554\,379\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,475\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,182\,371\,c[7] - 3\,549\,227\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,475\,c[6] + 3\,182\,435\,c[7] - 3\,549\,931\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,475\,c[6] + \\
& 3\,182\,499\,c[7] - 3\,550\,635\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,475\,c[6] + 3\,182\,499\,c[7] - 3\,550\,507\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,475\,c[6] + \\
& 3\,182\,563\,c[7] - 3\,551\,211\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,475\,c[6] + 3\,182\,627\,c[7] - 3\,551\,787\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,443\,c[6] + \\
& 3\,181\,795\,c[7] - 3\,546\,763\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,443\,c[6] + 3\,181\,859\,c[7] - 3\,547\,467\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,443\,c[6] + \\
& 3\,181\,859\,c[7] - 3\,547\,339\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,443\,c[6] + 3\,181\,923\,c[7] - 3\,548\,043\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,411\,c[6] + \\
& 3\,181\,155\,c[7] - 3\,543\,595\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,411\,c[6] + 3\,181\,219\,c[7] - 3\,544\,299\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,411\,c[6] + \\
& 3\,181\,219\,c[7] - 3\,544\,171\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,379\,c[6] + 3\,180\,579\,c[7] - 3\,541\,131\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,035\,c[6] + \\
& 3\,188\,819\,c[7] - 3\,573\,691\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,035\,c[6] + 3\,188\,883\,c[7] - 3\,574\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,035\,c[6] + \\
& 3\,188\,947\,c[7] - 3\,574\,971\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,003\,c[6] + 3\,188\,179\,c[7] - 3\,570\,523\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,169\,003\,c[6] + \\
& 3\,188\,243\,c[7] - 3\,571\,227\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,169\,003\,c[6] + 3\,188\,307\,c[7] - 3\,571\,803\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& 3\,187\,475\,c[7] - 3\,566\,651\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,539\,c[7] - 3\,567\,355\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& 3\,187\,603\,c[7] - 3\,568\,059\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,603\,c[7] - 3\,567\,931\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& 3\,187\,667\,c[7] - 3\,568\,635\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,186\,835\,c[7] - 3\,563\,483\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,939\,c[6] + \\
& 3\,186\,899\,c[7] - 3\,564\,187\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,186\,963\,c[7] - 3\,564\,891\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,939\,c[6] + \\
& 3\,186\,963\,c[7] - 3\,564\,763\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,907\,c[6] + 3\,186\,195\,c[7] - 3\,560\,315\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,907\,c[6] + \\
& 3\,186\,259\,c[7] - 3\,561\,019\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,907\,c[6] + 3\,186\,259\,c[7] - 3\,560\,891\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168907 c[6] + \\
& \quad 3186323 c[7] - 3561723 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169531 c[6] + 3193987 c[7] - 3591819 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169499 c[6] + \\
& \quad 3193283 c[7] - 3587947 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169499 c[6] + 3193347 c[7] - 3588651 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169499 c[6] + \\
& \quad 3193411 c[7] - 3589227 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169467 c[6] + 3192643 c[7] - 3584779 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169467 c[6] + \\
& \quad 3192707 c[7] - 3585483 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169467 c[6] + 3192771 c[7] - 3586059 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169435 c[6] + \\
& \quad 3191939 c[7] - 3580907 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169435 c[6] + 3192003 c[7] - 3581611 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169435 c[6] + \\
& \quad 3192067 c[7] - 3582315 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169403 c[6] + 3191299 c[7] - 3577739 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169403 c[6] + \\
& \quad 3191363 c[7] - 3578443 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230171 c[5] - 1169963 c[6] + 3197747 c[7] - 3602203 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230171 c[5] - 1169931 c[6] + \\
& \quad 3197043 c[7] - 3598331 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230171 c[5] - 1169931 c[6] + 3197107 c[7] - 3599035 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162763 c[6] + \\
& \quad 3141955 c[7] - 3444291 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162731 c[6] + 3141251 c[7] - 3440547 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162731 c[6] + \\
& \quad 3141315 c[7] - 3441123 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162731 c[6] + 3141379 c[7] - 3441699 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229771 c[5] - 1162699 c[6] + \\
& \quad 3140739 c[7] - 3438531 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163259 c[6] + 3146931 c[7] - 3460435 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163259 c[6] + \\
& \quad 3146995 c[7] - 3461139 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163259 c[6] + 3147059 c[7] - 3461715 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163227 c[6] + \\
& \quad 3146291 c[7] - 3457267 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163227 c[6] + 3146355 c[7] - 3457971 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163227 c[6] + \\
& \quad 3146419 c[7] - 3458547 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163195 c[6] + 3145715 c[7] - 3454803 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163195 c[6] + \\
& \quad 3145779 c[7] - 3455379 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163163 c[6] + 3145139 c[7] - 3452211 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163819 c[6] + \\
& \quad 3153379 c[7] - 3484899 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 229\,803\,c[5] - 1\,163\,787\,c[6] + 3\,152\,739\,c[7] - 3\,481\,731\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& \quad 3\,152\,035\,c[7] - 3\,477\,859\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,099\,c[7] - 3\,478\,563\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& \quad 3\,152\,163\,c[7] - 3\,479\,139\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,395\,c[7] - 3\,474\,691\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] + \\
& \quad 3\,151\,459\,c[7] - 3\,475\,395\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,523\,c[7] - 3\,475\,971\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& \quad 3\,150\,755\,c[7] - 3\,471\,523\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,819\,c[7] - 3\,472\,227\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& \quad 3\,150\,819\,c[7] - 3\,472\,099\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,883\,c[7] - 3\,472\,803\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,659\,c[6] + \\
& \quad 3\,150\,179\,c[7] - 3\,469\,059\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,283\,c[6] + 3\,157\,843\,c[7] - 3\,499\,155\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& \quad 3\,157\,203\,c[7] - 3\,495\,987\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,499\,c[7] - 3\,492\,115\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& \quad 3\,156\,563\,c[7] - 3\,492\,819\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,627\,c[7] - 3\,493\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,187\,c[6] + \\
& \quad 3\,155\,859\,c[7] - 3\,488\,947\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,187\,c[6] + 3\,155\,923\,c[7] - 3\,489\,651\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,155\,c[6] + \\
& \quad 3\,155\,155\,c[7] - 3\,485\,075\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,155\,c[6] + 3\,155\,219\,c[7] - 3\,485\,779\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,779\,c[6] + \\
& \quad 3\,162\,947\,c[7] - 3\,516\,579\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,747\,c[6] + 3\,162\,307\,c[7] - 3\,513\,411\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,715\,c[6] + \\
& \quad 3\,161\,603\,c[7] - 3\,509\,539\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,715\,c[6] + 3\,161\,667\,c[7] - 3\,510\,243\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,683\,c[6] + \\
& \quad 3\,160\,963\,c[7] - 3\,506\,371\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,683\,c[6] + 3\,161\,027\,c[7] - 3\,507\,075\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,651\,c[6] + \\
& \quad 3\,160\,259\,c[7] - 3\,502\,499\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,851\,c[5] - 1\,165\,243\,c[6] + 3\,167\,411\,c[7] - 3\,530\,835\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,211\,c[6] + \\
& \quad 3\,166\,771\,c[7] - 3\,527\,667\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,451\,c[5] - 1\,158\,043\,c[6] + 3\,111\,491\,c[7] - 3\,371\,643\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,158\,011\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,110\,851\,c[7] - 3\,368\,475\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,451\,c[5] - 1\,158\,011\,c[6] + 3\,110\,915\,c[7] - 3\,369\,051\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,979\,c[6] + \\
& 3\,110\,275\,c[7] - 3\,365\,883\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,539\,c[6] + 3\,116\,595\,c[7] - 3\,389\,067\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,507\,c[6] + \\
& 3\,115\,955\,c[7] - 3\,385\,899\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,251\,c[7] - 3\,382\,027\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,475\,c[6] + \\
& 3\,115\,315\,c[7] - 3\,382\,731\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,379\,c[7] - 3\,383\,307\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,443\,c[6] + \\
& 3\,114\,675\,c[7] - 3\,379\,563\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,443\,c[6] + 3\,114\,739\,c[7] - 3\,380\,139\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,159\,035\,c[6] + \\
& 3\,121\,699\,c[7] - 3\,406\,491\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,159\,003\,c[6] + 3\,121\,059\,c[7] - 3\,403\,323\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,971\,c[6] + \\
& 3\,120\,355\,c[7] - 3\,399\,451\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,971\,c[6] + 3\,120\,419\,c[7] - 3\,400\,155\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,971\,c[6] + \\
& 3\,120\,483\,c[7] - 3\,400\,731\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,939\,c[6] + 3\,119\,715\,c[7] - 3\,396\,283\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,939\,c[6] + \\
& 3\,119\,779\,c[7] - 3\,396\,987\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,907\,c[6] + 3\,119\,139\,c[7] - 3\,393\,819\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,499\,c[6] + \\
& 3\,126\,163\,c[7] - 3\,420\,747\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,499\,c[5] - 1\,159\,467\,c[6] + 3\,125\,523\,c[7] - 3\,417\,579\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,435\,c[6] + \\
& 3\,124\,819\,c[7] - 3\,413\,707\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,499\,c[5] - 1\,159\,435\,c[6] + 3\,124\,883\,c[7] - 3\,414\,411\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,403\,c[6] + \\
& 3\,124\,179\,c[7] - 3\,410\,539\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,515\,c[5] - 1\,159\,995\,c[6] + 3\,131\,267\,c[7] - 3\,438\,171\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,515\,c[5] - 1\,159\,963\,c[6] + \\
& 3\,130\,627\,c[7] - 3\,435\,003\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,515\,c[5] - 1\,159\,931\,c[6] + 3\,129\,923\,c[7] - 3\,431\,131\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,115\,c[5] - 1\,152\,795\,c[6] + \\
& 3\,075\,347\,c[7] - 3\,278\,979\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& 229\,131\,c[5] - 1\,153\,259\,c[6] + 3\,079\,811\,c[7] - 3\,293\,235\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,147\,c[5] - 1\,153\,755\,c[6] + \\
& 3\,084\,915\,c[7] - 3\,310\,659\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& 229\,147\,c[5] - 1\,153\,723\,c[6] + 3\,084\,275\,c[7] - 3\,307\,491\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,147\,c[5] - 1\,153\,691\,c[6] + \\
& 3\,083\,635\,c[7] - 3\,304\,323\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& 229\,147\,c[5] - 1\,153\,691\,c[6] + 3\,083\,699\,c[7] - 3\,304\,899\,c[8] \geq 0 \&\&
\end{aligned}$$

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c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 219 c[6] +
  3 089 379 c[7] - 3 324 915 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 163 c[5] - 1 154 187 c[6] + 3 088 739 c[7] - 3 321 747 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 715 c[6] +
  3 094 483 c[7] - 3 342 339 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 179 c[5] - 1 154 683 c[6] + 3 093 843 c[7] - 3 339 171 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 827 c[5] - 1 148 971 c[6] +
  3 053 235 c[7] - 3 232 251 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
  228 827 c[5] - 1 148 939 c[6] + 3 052 595 c[7] - 3 229 083 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 843 c[5] - 1 149 435 c[6] +
  3 057 699 c[7] - 3 246 507 c[8] ≥ 0, Array[c, 8], Integers]]
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GCD[0, 0, 0, -3 659 439 217, -950 921 617, -155 141 345, -21 736 416, -2 824 112]
1

cert.g
-70 624 183

{0, 0, 0, -3 659 439 217, -950 921 617, -155 141 345, -21 736 416, -2 824 112}.
Reverse[gpart[listdim17[[80]]]]
-70 624 183

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cert.Transpose[A]

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chi = listdim17[[81]]

$(-9 + x)^{12} (5 + x)^{32} (-98504 + 51841x - 10620x^2 + 1062x^3 - 52x^4 + x^5)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

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{366 795, -301 800, 94 651, -14 944, 1273, -56, 1},
{368 315, -302 120, 94 667, -14 944, 1273, -56, 1},
{356 499, -298 928, 94 387, -14 936, 1273, -56, 1}};

```

A // MatrixForm

```
( 414 339 -315 456 95 939 -14 984 1273 -56 1 )
402 171 -312 232 95 659 -14 976 1273 -56 1
404 395 -312 616 95 675 -14 976 1273 -56 1
404 459 -312 616 95 675 -14 976 1273 -56 1
404 043 -312 584 95 675 -14 976 1273 -56 1
406 683 -313 000 95 691 -14 976 1273 -56 1
406 331 -312 968 95 691 -14 976 1273 -56 1
405 979 -312 936 95 691 -14 976 1273 -56 1
405 563 -312 904 95 691 -14 976 1273 -56 1
408 267 -313 320 95 707 -14 976 1273 -56 1
407 499 -313 256 95 707 -14 976 1273 -56 1
392 227 -309 392 95 395 -14 968 1273 -56 1
392 291 -309 392 95 395 -14 968 1273 -56 1
394 515 -309 776 95 411 -14 968 1273 -56 1
394 099 -309 744 95 411 -14 968 1273 -56 1
394 163 -309 744 95 411 -14 968 1273 -56 1
393 811 -309 712 95 411 -14 968 1273 -56 1
396 035 -310 096 95 427 -14 968 1273 -56 1
396 099 -310 096 95 427 -14 968 1273 -56 1
395 683 -310 064 95 427 -14 968 1273 -56 1
397 971 -310 448 95 443 -14 968 1273 -56 1
397 619 -310 416 95 443 -14 968 1273 -56 1
399 139 -310 736 95 459 -14 968 1273 -56 1
380 475 -306 200 95 115 -14 960 1273 -56 1
382 347 -306 552 95 131 -14 960 1273 -56 1
381 995 -306 520 95 131 -14 960 1273 -56 1
384 219 -306 904 95 147 -14 960 1273 -56 1
383 867 -306 872 95 147 -14 960 1273 -56 1
383 931 -306 872 95 147 -14 960 1273 -56 1
383 515 -306 840 95 147 -14 960 1273 -56 1
385 803 -307 224 95 163 -14 960 1273 -56 1
385 387 -307 192 95 163 -14 960 1273 -56 1
387 323 -307 544 95 179 -14 960 1273 -56 1
389 259 -307 896 95 195 -14 960 1273 -56 1
370 179 -303 328 94 851 -14 952 1273 -56 1
372 051 -303 680 94 867 -14 952 1273 -56 1
373 923 -304 032 94 883 -14 952 1273 -56 1
373 571 -304 000 94 883 -14 952 1273 -56 1
373 635 -304 000 94 883 -14 952 1273 -56 1
375 507 -304 352 94 899 -14 952 1273 -56 1
375 155 -304 320 94 899 -14 952 1273 -56 1
377 027 -304 672 94 915 -14 952 1273 -56 1
376 675 -304 640 94 915 -14 952 1273 -56 1
378 963 -305 024 94 931 -14 952 1273 -56 1
363 339 -301 128 94 619 -14 944 1273 -56 1
365 211 -301 480 94 635 -14 944 1273 -56 1
366 795 -301 800 94 651 -14 944 1273 -56 1
368 315 -302 120 94 667 -14 944 1273 -56 1
356 499 -298 928 94 387 -14 936 1273 -56 1 )
```

Dimensions[A]

{49, 7}

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{20 126 067, -15 405 488, 4 695 795, -734 040, 62 377, -2744, 49}
```

```
Array[c, 7].Transpose[A]
```

```
{414 339 c[1] - 315 456 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
402 171 c[1] - 312 232 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
404 395 c[1] - 312 616 c[2] + 95 675 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
404 459 c[1] - 312 616 c[2] + 95 675 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
404 043 c[1] - 312 584 c[2] + 95 675 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
406 683 c[1] - 313 000 c[2] + 95 691 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
406 331 c[1] - 312 968 c[2] + 95 691 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
405 979 c[1] - 312 936 c[2] + 95 691 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
405 563 c[1] - 312 904 c[2] + 95 691 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
408 267 c[1] - 313 320 c[2] + 95 707 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
407 499 c[1] - 313 256 c[2] + 95 707 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
392 227 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
392 291 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 515 c[1] - 309 776 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 099 c[1] - 309 744 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
394 163 c[1] - 309 744 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
393 811 c[1] - 309 712 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
396 035 c[1] - 310 096 c[2] + 95 427 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
396 099 c[1] - 310 096 c[2] + 95 427 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
395 683 c[1] - 310 064 c[2] + 95 427 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
397 971 c[1] - 310 448 c[2] + 95 443 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
397 619 c[1] - 310 416 c[2] + 95 443 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
399 139 c[1] - 310 736 c[2] + 95 459 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
382 347 c[1] - 306 552 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
381 995 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
384 219 c[1] - 306 904 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
383 867 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
383 931 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
383 515 c[1] - 306 840 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
385 803 c[1] - 307 224 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
385 387 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
387 323 c[1] - 307 544 c[2] + 95 179 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
389 259 c[1] - 307 896 c[2] + 95 195 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
370 179 c[1] - 303 328 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
372 051 c[1] - 303 680 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
373 923 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
373 571 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
373 635 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
375 507 c[1] - 304 352 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
375 155 c[1] - 304 320 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
377 027 c[1] - 304 672 c[2] + 94 915 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
376 675 c[1] - 304 640 c[2] + 94 915 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
```

```

378 963 c[1] - 305 024 c[2] + 94 931 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
363 339 c[1] - 301 128 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
365 211 c[1] - 301 480 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
366 795 c[1] - 301 800 c[2] + 94 651 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
368 315 c[1] - 302 120 c[2] + 94 667 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ,
356 499 c[1] - 298 928 c[2] + 94 387 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] }

```

Array[c, 7].g

```

20 126 067 c[1] - 15 405 488 c[2] + 4 695 795 c[3] -
734 040 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[20 126 067 c[1] - 15 405 488 c[2] + 4 695 795 c[3] -
734 040 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7] < 0 &&
414 339 c[1] - 315 456 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 402 171 c[1] - 312 232 c[2] + 95 659 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 404 395 c[1] - 312 616 c[2] +
95 675 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
404 459 c[1] - 312 616 c[2] + 95 675 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 404 043 c[1] - 312 584 c[2] + 95 675 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 406 683 c[1] - 313 000 c[2] +
95 691 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
406 331 c[1] - 312 968 c[2] + 95 691 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 405 979 c[1] - 312 936 c[2] + 95 691 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 405 563 c[1] - 312 904 c[2] +
95 691 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
408 267 c[1] - 313 320 c[2] + 95 707 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 407 499 c[1] - 313 256 c[2] + 95 707 c[3] - 14 976 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 392 227 c[1] - 309 392 c[2] +
95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
392 291 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 394 515 c[1] - 309 776 c[2] + 95 411 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 394 099 c[1] - 309 744 c[2] +
95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
394 163 c[1] - 309 744 c[2] + 95 411 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 393 811 c[1] - 309 712 c[2] + 95 411 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 396 035 c[1] - 310 096 c[2] +
95 427 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
396 099 c[1] - 310 096 c[2] + 95 427 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 395 683 c[1] - 310 064 c[2] + 95 427 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 397 971 c[1] - 310 448 c[2] +
95 443 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
397 619 c[1] - 310 416 c[2] + 95 443 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 399 139 c[1] - 310 736 c[2] + 95 459 c[3] - 14 968 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 380 475 c[1] - 306 200 c[2] +
95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
382 347 c[1] - 306 552 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥

```

```

0 && 381 995 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 384 219 c[1] - 306 904 c[2] +
  95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
383 867 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 383 931 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 383 515 c[1] - 306 840 c[2] +
  95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
385 803 c[1] - 307 224 c[2] + 95 163 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 385 387 c[1] - 307 192 c[2] + 95 163 c[3] - 14 960 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 387 323 c[1] - 307 544 c[2] +
  95 179 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
389 259 c[1] - 307 896 c[2] + 95 195 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 370 179 c[1] - 303 328 c[2] + 94 851 c[3] - 14 952 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 372 051 c[1] - 303 680 c[2] +
  94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
373 923 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 373 571 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 373 635 c[1] - 304 000 c[2] +
  94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
375 507 c[1] - 304 352 c[2] + 94 899 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 375 155 c[1] - 304 320 c[2] + 94 899 c[3] - 14 952 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 377 027 c[1] - 304 672 c[2] +
  94 915 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
376 675 c[1] - 304 640 c[2] + 94 915 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 378 963 c[1] - 305 024 c[2] + 94 931 c[3] - 14 952 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0 && 363 339 c[1] - 301 128 c[2] +
  94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
365 211 c[1] - 301 480 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 366 795 c[1] - 301 800 c[2] + 94 651 c[3] -
  14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
368 315 c[1] - 302 120 c[2] + 94 667 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
  0 && 356 499 c[1] - 298 928 c[2] + 94 387 c[3] - 14 936 c[4] +
  1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{8668, 67 961, 446 418, 1 667 190, 0, 0, 0}

GCD[8668, 67 961, 446 418, 1 667 190, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 1 667 190, 446 418, 67 961, 8668}

cert.g
-16 356 502

{8668, 67 961, 446 418, 1 667 190, 0, 0, 0}.gpart[listdim17[[81]]]
-16 356 502

```

cert.Transpose[A]

```
{506 778, 2 481 298, 2 804 594, 3 359 346, 1 928 210, 3 682 642, 2 806 258,
 1 929 874, 4 98 738, 2 807 922, 500 402, 4 779 114, 5 333 866, 5 657 162,
 4 226 026, 4 780 778, 3 904 394, 4 227 690, 4 782 442, 3 351 306, 4 229 354,
 3 352 970, 1 923 498, 8 184 770, 7 631 682, 6 755 298, 7 078 594, 6 202 210,
 6 756 962, 5 325 826, 6 203 874, 4 772 738, 4 774 402, 4 776 066, 9 606 202,
 9 053 114, 8 500 026, 7 623 642, 8 178 394, 7 625 306, 6 748 922, 6 195 834,
 5 319 450, 6 197 498, 9 599 826, 9 046 738, 8 172 018, 6 742 546, 9 593 450}
```

chi = listdim17[[82]]

$(-13 + x) (-11 + x) (-9 + x)^{11} (-8 + x) (5 + x)^{32} (-775 + 267 x - 29 x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
A = {{1, -65, 1777, -26 449, 231 115, -1 183 563, 3 282 627, -3 795 363},
      {1, -65, 1777, -26 441, 230 763, -1 177 851, 3 242 147, -3 689 595},
      {1, -65, 1777, -26 441, 230 779, -1 178 443, 3 249 299, -3 717 675},
      {1, -65, 1777, -26 441, 230 779, -1 178 411, 3 248 595, -3 713 931},
      {1, -65, 1777, -26 441, 230 779, -1 178 379, 3 247 891, -3 710 187},
      {1, -65, 1777, -26 441, 230 779, -1 178 347, 3 247 187, -3 706 443},
      {1, -65, 1777, -26 441, 230 795, -1 178 907, 3 253 571, -3 730 075},
      {1, -65, 1777, -26 441, 230 795, -1 178 875, 3 252 867, -3 726 331},
      {1, -65, 1777, -26 441, 230 795, -1 178 875, 3 252 931, -3 727 035},
      {1, -65, 1777, -26 441, 230 795, -1 178 843, 3 252 163, -3 722 587},
      {1, -65, 1777, -26 441, 230 795, -1 178 843, 3 252 227, -3 723 291},
      {1, -65, 1777, -26 441, 230 811, -1 179 371, 3 257 843, -3 742 475},
      {1, -65, 1777, -26 433, 230 427, -1 172 667, 3 207 411, -3 604 419},
      {1, -65, 1777, -26 433, 230 427, -1 172 635, 3 206 707, -3 600 675},
      {1, -65, 1777, -26 433, 230 443, -1 173 163, 3 212 451, -3 621 267},
      {1, -65, 1777, -26 433, 230 443, -1 173 131, 3 211 747, -3 617 523},
      {1, -65, 1777, -26 433, 230 459, -1 173 691, 3 218 195, -3 641 859},
      {1, -65, 1777, -26 433, 230 459, -1 173 659, 3 217 491, -3 638 115},
      {1, -65, 1777, -26 433, 230 459, -1 173 627, 3 216 723, -3 633 795},
      {1, -65, 1777, -26 433, 230 459, -1 173 627, 3 216 723, -3 633 667},
      {1, -65, 1777, -26 433, 230 459, -1 173 627, 3 216 787, -3 634 371},
      {1, -65, 1777, -26 433, 230 459, -1 173 595, 3 216 083, -3 630 627},
      {1, -65, 1777, -26 433, 230 475, -1 174 219, 3 223 875, -3 661 875},
      {1, -65, 1777, -26 433, 230 475, -1 174 187, 3 223 171, -3 658 131},
      {1, -65, 1777, -26 433, 230 475, -1 174 187, 3 223 235, -3 658 707},
      {1, -65, 1777, -26 433, 230 475, -1 174 155, 3 222 467, -3 654 387},
      {1, -65, 1777, -26 433, 230 475, -1 174 155, 3 222 467, -3 654 259},
      {1, -65, 1777, -26 433, 230 475, -1 174 155, 3 222 531, -3 654 963},
```

```

{1, -65, 1777, -26433, 230475, -1174123, 3221763, -3650515},
{1, -65, 1777, -26433, 230475, -1174123, 3221827, -3651219},
{1, -65, 1777, -26433, 230491, -1174683, 3228147, -3674275},
{1, -65, 1777, -26433, 230491, -1174651, 3227507, -3671107},
{1, -65, 1777, -26433, 230491, -1174651, 3227571, -3671811},
{1, -65, 1777, -26425, 230091, -1167419, 3171267, -3511755},
{1, -65, 1777, -26425, 230107, -1167915, 3176243, -3528027},
{1, -65, 1777, -26425, 230107, -1167915, 3176307, -3528603},
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A // MatrixForm

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Dimensions[A]

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$$\begin{aligned}
& 230\,475\,c[5] - 1\,174\,219\,c[6] + 3\,223\,875\,c[7] - 3\,661\,875\,c[8], \\
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& 3\,223\,171\,c[7] - 3\,658\,131\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
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& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,155\,c[6] + \\
& 3\,222\,467\,c[7] - 3\,654\,387\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,475\,c[5] - 1\,174\,155\,c[6] + 3\,222\,467\,c[7] - 3\,654\,259\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,155\,c[6] + \\
& 3\,222\,531\,c[7] - 3\,654\,963\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
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& 3\,221\,827\,c[7] - 3\,651\,219\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,491\,c[5] - 1\,174\,683\,c[6] + 3\,228\,147\,c[7] - 3\,674\,275\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + 230\,491\,c[5] - 1\,174\,651\,c[6] + \\
& 3\,227\,507\,c[7] - 3\,671\,107\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,433\,c[4] + \\
& 230\,491\,c[5] - 1\,174\,651\,c[6] + 3\,227\,571\,c[7] - 3\,671\,811\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + 230\,091\,c[5] - 1\,167\,419\,c[6] + \\
& 3\,171\,267\,c[7] - 3\,511\,755\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,167\,915\,c[6] + 3\,176\,243\,c[7] - 3\,528\,027\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,915\,c[6] + \\
& 3\,176\,307\,c[7] - 3\,528\,603\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + \\
& 230\,107\,c[5] - 1\,167\,883\,c[6] + 3\,175\,603\,c[7] - 3\,524\,859\,c[8], \\
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& 3\,181\,987\,c[7] - 3\,548\,619\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,411\,c[6] + 3\,181\,283\,c[7] - 3\,544\,875\,c[8], \\
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& 3\,192\,771\,c[7] - 3\,586\,059\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,192\,067\,c[7] - 3\,582\,315\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,435\,c[6] + \\
& 3\,192\,131\,c[7] - 3\,582\,891\,c[8], \quad c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,403\,c[6] + 3\,191\,363\,c[7] - 3\,578\,443\,c[8], \\
& c[1] - 65\,c[2] + 1\,777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,403\,c[6] +
\end{aligned}$$

$3\,191\,427\,c[7] - 3\,579\,147\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,171\,c[5] - 1\,169\,995\,c[6] + 3\,198\,451\,c[7] - 3\,606\,075\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,963\,c[6] +$
 $3\,197\,811\,c[7] - 3\,602\,907\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] +$
 $230\,171\,c[5] - 1\,169\,931\,c[6] + 3\,197\,171\,c[7] - 3\,599\,739\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,667\,c[6] +$
 $3\,140\,099\,c[7] - 3\,435\,363\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,771\,c[5] - 1\,162\,667\,c[6] + 3\,140\,163\,c[7] - 3\,435\,939\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,195\,c[6] +$
 $3\,145\,843\,c[7] - 3\,455\,955\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,787\,c[5] - 1\,163\,163\,c[6] + 3\,145\,139\,c[7] - 3\,452\,211\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,163\,c[6] +$
 $3\,145\,203\,c[7] - 3\,452\,787\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,819\,c[7] - 3\,472\,227\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] +$
 $3\,150\,883\,c[7] - 3\,472\,803\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,803\,c[5] - 1\,163\,659\,c[6] + 3\,150\,179\,c[7] - 3\,469\,059\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,659\,c[6] +$
 $3\,150\,243\,c[7] - 3\,469\,635\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,803\,c[5] - 1\,163\,627\,c[6] + 3\,149\,539\,c[7] - 3\,465\,891\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] +$
 $3\,156\,563\,c[7] - 3\,492\,819\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,819\,c[5] - 1\,164\,187\,c[6] + 3\,155\,923\,c[7] - 3\,489\,651\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,187\,c[6] +$
 $3\,155\,987\,c[7] - 3\,490\,227\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,819\,c[5] - 1\,164\,155\,c[6] + 3\,155\,283\,c[7] - 3\,486\,483\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,715\,c[6] +$
 $3\,161\,667\,c[7] - 3\,510\,243\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,835\,c[5] - 1\,164\,683\,c[6] + 3\,161\,027\,c[7] - 3\,507\,075\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,947\,c[6] +$
 $3\,109\,635\,c[7] - 3\,362\,715\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,451\,c[5] - 1\,157\,947\,c[6] + 3\,109\,699\,c[7] - 3\,363\,291\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,915\,c[6] +$
 $3\,109\,059\,c[7] - 3\,360\,123\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,467\,c[5] - 1\,158\,443\,c[6] + 3\,114\,675\,c[7] - 3\,379\,563\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,443\,c[6] +$
 $3\,114\,739\,c[7] - 3\,380\,139\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,467\,c[5] - 1\,158\,411\,c[6] + 3\,114\,035\,c[7] - 3\,376\,395\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,411\,c[6] +$
 $3\,114\,099\,c[7] - 3\,376\,971\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,483\,c[5] - 1\,158\,971\,c[6] + 3\,120\,419\,c[7] - 3\,400\,155\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,939\,c[6] +$
 $3\,119\,779\,c[7] - 3\,396\,987\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,483\,c[5] - 1\,158\,939\,c[6] + 3\,119\,843\,c[7] - 3\,397\,563\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,907\,c[6] +$
 $3\,119\,139\,c[7] - 3\,393\,819\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,499\,c[5] - 1\,159\,435\,c[6] + 3\,124\,883\,c[7] - 3\,414\,411\,c[8],$

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c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 195 c[6] +
  3 078 531 c[7] - 3 286 899 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 131 c[5] - 1 153 195 c[6] + 3 078 595 c[7] - 3 287 475 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 723 c[6] +
  3 084 275 c[7] - 3 307 491 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 147 c[5] - 1 153 691 c[6] + 3 083 635 c[7] - 3 304 323 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 659 c[6] +
  3 082 995 c[7] - 3 301 155 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 163 c[5] - 1 154 187 c[6] + 3 088 739 c[7] - 3 321 747 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 795 c[5] - 1 147 979 c[6] +
  3 043 027 c[7] - 3 197 403 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
  228 811 c[5] - 1 148 443 c[6] + 3 047 491 c[7] - 3 211 659 c[8] }

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Array[c, 8].g

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49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 433 c[4] +
  11 302 155 c[5] - 57 667 643 c[6] + 158 778 211 c[7] - 181 149 515 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 433 c[4] +
  11 302 155 c[5] - 57 667 643 c[6] + 158 778 211 c[7] - 181 149 515 c[8] < 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 449 c[4] + 231 115 c[5] - 1 183 563 c[6] +
  3 282 627 c[7] - 3 795 363 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 763 c[5] - 1 177 851 c[6] + 3 242 147 c[7] - 3 689 595 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 779 c[5] - 1 178 443 c[6] +
  3 249 299 c[7] - 3 717 675 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 779 c[5] - 1 178 411 c[6] + 3 248 595 c[7] - 3 713 931 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 779 c[5] - 1 178 379 c[6] +
  3 247 891 c[7] - 3 710 187 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 779 c[5] - 1 178 347 c[6] + 3 247 187 c[7] - 3 706 443 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 795 c[5] - 1 178 907 c[6] +
  3 253 571 c[7] - 3 730 075 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 795 c[5] - 1 178 875 c[6] + 3 252 867 c[7] - 3 726 331 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 795 c[5] - 1 178 875 c[6] +
  3 252 931 c[7] - 3 727 035 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 795 c[5] - 1 178 843 c[6] + 3 252 163 c[7] - 3 722 587 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 795 c[5] - 1 178 843 c[6] +
  3 252 227 c[7] - 3 723 291 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 811 c[5] - 1 179 371 c[6] + 3 257 843 c[7] - 3 742 475 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 427 c[5] - 1 172 667 c[6] +
  3 207 411 c[7] - 3 604 419 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
  230 427 c[5] - 1 172 635 c[6] + 3 206 707 c[7] - 3 600 675 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 443 c[5] - 1 173 163 c[6] +
  3 212 451 c[7] - 3 621 267 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
  230 443 c[5] - 1 173 131 c[6] + 3 211 747 c[7] - 3 617 523 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 459 c[5] - 1 173 691 c[6] +
  3 218 195 c[7] - 3 641 859 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
  230 459 c[5] - 1 173 659 c[6] + 3 217 491 c[7] - 3 638 115 c[8] ≥ 0 &&

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$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230459 c[5] - 1173627 c[6] + \\
& \quad 3216723 c[7] - 3633795 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230459 c[5] - 1173627 c[6] + 3216723 c[7] - 3633667 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230459 c[5] - 1173627 c[6] + \\
& \quad 3216787 c[7] - 3634371 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230459 c[5] - 1173595 c[6] + 3216083 c[7] - 3630627 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230475 c[5] - 1174219 c[6] + \\
& \quad 3223875 c[7] - 3661875 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230475 c[5] - 1174187 c[6] + 3223171 c[7] - 3658131 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230475 c[5] - 1174187 c[6] + \\
& \quad 3223235 c[7] - 3658707 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230475 c[5] - 1174155 c[6] + 3222467 c[7] - 3654387 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230475 c[5] - 1174155 c[6] + \\
& \quad 3222467 c[7] - 3654259 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230475 c[5] - 1174155 c[6] + 3222531 c[7] - 3654963 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230475 c[5] - 1174123 c[6] + \\
& \quad 3221763 c[7] - 3650515 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230475 c[5] - 1174123 c[6] + 3221827 c[7] - 3651219 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230491 c[5] - 1174683 c[6] + \\
& \quad 3228147 c[7] - 3674275 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230491 c[5] - 1174651 c[6] + 3227507 c[7] - 3671107 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230491 c[5] - 1174651 c[6] + \\
& \quad 3227571 c[7] - 3671811 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230091 c[5] - 1167419 c[6] + 3171267 c[7] - 3511755 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167915 c[6] + \\
& \quad 3176243 c[7] - 3528027 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230107 c[5] - 1167915 c[6] + 3176307 c[7] - 3528603 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167883 c[6] + \\
& \quad 3175603 c[7] - 3524859 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168443 c[6] + 3181987 c[7] - 3548619 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168411 c[6] + \\
& \quad 3181283 c[7] - 3544875 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168411 c[6] + 3181347 c[7] - 3545451 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168379 c[6] + \\
& \quad 3180579 c[7] - 3541131 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168379 c[6] + 3180643 c[7] - 3541707 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168939 c[6] + \\
& \quad 3187027 c[7] - 3565467 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168939 c[6] + 3187091 c[7] - 3566043 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168907 c[6] + \\
& \quad 3186259 c[7] - 3561019 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168907 c[6] + 3186323 c[7] - 3561723 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168907 c[6] + \\
& \quad 3186387 c[7] - 3562299 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168875 c[6] + 3185619 c[7] - 3557851 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168875 c[6] + \\
& \quad 3185683 c[7] - 3558555 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,155\,c[5] - 1\,169\,467\,c[6] + 3\,192\,771\,c[7] - 3\,586\,059\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,435\,c[6] + \\
& \quad 3\,192\,067\,c[7] - 3\,582\,315\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,192\,131\,c[7] - 3\,582\,891\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,403\,c[6] + \\
& \quad 3\,191\,363\,c[7] - 3\,578\,443\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,403\,c[6] + 3\,191\,427\,c[7] - 3\,579\,147\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,995\,c[6] + \\
& \quad 3\,198\,451\,c[7] - 3\,606\,075\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,171\,c[5] - 1\,169\,963\,c[6] + 3\,197\,811\,c[7] - 3\,602\,907\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,931\,c[6] + \\
& \quad 3\,197\,171\,c[7] - 3\,599\,739\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,771\,c[5] - 1\,162\,667\,c[6] + 3\,140\,099\,c[7] - 3\,435\,363\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,667\,c[6] + \\
& \quad 3\,140\,163\,c[7] - 3\,435\,939\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,195\,c[6] + 3\,145\,843\,c[7] - 3\,455\,955\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,163\,c[6] + \\
& \quad 3\,145\,139\,c[7] - 3\,452\,211\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,163\,c[6] + 3\,145\,203\,c[7] - 3\,452\,787\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& \quad 3\,150\,819\,c[7] - 3\,472\,227\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,883\,c[7] - 3\,472\,803\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,659\,c[6] + \\
& \quad 3\,150\,179\,c[7] - 3\,469\,059\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,659\,c[6] + 3\,150\,243\,c[7] - 3\,469\,635\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,627\,c[6] + \\
& \quad 3\,149\,539\,c[7] - 3\,465\,891\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,563\,c[7] - 3\,492\,819\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,187\,c[6] + \\
& \quad 3\,155\,923\,c[7] - 3\,489\,651\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,187\,c[6] + 3\,155\,987\,c[7] - 3\,490\,227\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,155\,c[6] + \\
& \quad 3\,155\,283\,c[7] - 3\,486\,483\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,715\,c[6] + 3\,161\,667\,c[7] - 3\,510\,243\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,683\,c[6] + \\
& \quad 3\,161\,027\,c[7] - 3\,507\,075\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,451\,c[5] - 1\,157\,947\,c[6] + 3\,109\,635\,c[7] - 3\,362\,715\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,947\,c[6] + \\
& \quad 3\,109\,699\,c[7] - 3\,363\,291\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,451\,c[5] - 1\,157\,915\,c[6] + 3\,109\,059\,c[7] - 3\,360\,123\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,443\,c[6] + \\
& \quad 3\,114\,675\,c[7] - 3\,379\,563\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,467\,c[5] - 1\,158\,443\,c[6] + 3\,114\,739\,c[7] - 3\,380\,139\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,411\,c[6] + \\
& \quad 3\,114\,035\,c[7] - 3\,376\,395\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,467\,c[5] - 1\,158\,411\,c[6] + 3\,114\,099\,c[7] - 3\,376\,971\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,971\,c[6] +
\end{aligned}$$


```

3 120 419 c[7] - 3 400 155 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 483 c[5] - 1 158 939 c[6] + 3 119 779 c[7] - 3 396 987 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 158 939 c[6] +
3 119 843 c[7] - 3 397 563 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 483 c[5] - 1 158 907 c[6] + 3 119 139 c[7] - 3 393 819 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 435 c[6] +
3 124 883 c[7] - 3 414 411 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 131 c[5] - 1 153 195 c[6] + 3 078 531 c[7] - 3 286 899 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 195 c[6] +
3 078 595 c[7] - 3 287 475 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 723 c[6] + 3 084 275 c[7] - 3 307 491 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 691 c[6] +
3 083 635 c[7] - 3 304 323 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 659 c[6] + 3 082 995 c[7] - 3 301 155 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 187 c[6] +
3 088 739 c[7] - 3 321 747 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 795 c[5] - 1 147 979 c[6] + 3 043 027 c[7] - 3 197 403 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 811 c[5] - 1 148 443 c[6] +
3 047 491 c[7] - 3 211 659 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, -27 280 263 472, -3 518 058 798, -293 088 094, -25 041 704, -2 203 669, -200 334}

```

```

GCD[0, 0, -27 280 263 472, -3 518 058 798,
-293 088 094, -25 041 704, -2 203 669, -200 334]

```

```
1
```

```
cert.g
```

```
-153 604 969
```

```
{0, 0, -27 280 263 472, -3 518 058 798, -293 088 094, -25 041 704, -2 203 669, -200 334}.
```

```
Reverse[gpart[listdim17[[82]]]]
```

```
-153 604 969
```

```
cert.Transpose[A]
```

```

{5 317 879, 5 237 943, 5 255 239, 5 253 191, 5 251 143, 5 249 095, 5 264 023, 5 261 975,
5 262 295, 5 259 927, 5 260 247, 5 272 807, 5 171 207, 5 169 159, 5 182 359, 5 180 311,
5 195 559, 5 193 511, 30 833 895, 5 191 143, 5 191 463, 5 189 415, 30 851 191,
30 849 143, 5 206 711, 30 847 095, 5 204 343, 5 204 663, 5 202 295, 5 202 615,
30 859 975, 5 215 495, 5 215 815, 5 100 375, 30 753 959, 5 111 527, 5 109 479,
30 767 159, 30 765 111, 5 122 679, 30 763 063, 5 120 631, 30 778 311, 5 135 879,
30 775 943, 30 776 263, 5 133 831, 5 131 463, 5 131 783, 30 791 511, 30 789 463,
5 147 031, 5 144 663, 5 144 983, 56 447 143, 30 802 663, 5 158 183, 30 683 127,
5 040 695, 30 696 327, 30 694 279, 5 051 847, 56 349 911, 30 707 479, 30 705 431,
5 062 999, 5 060 951, 56 363 111, 30 718 631, 5 076 199, 5 074 151, 30 731 831,
5 087 351, 56 267 927, 30 625 495, 4 981 015, 56 279 079, 30 636 647, 30 634 599,
4 992 167, 56 292 279, 30 647 799, 5 005 367, 5 003 319, 5 016 519, 56 208 247,
30 565 815, 56 221 447, 30 576 967, 4 932 487, 4 945 687, 81 781 895, 30 506 135}

```

```
chi = listdim17[[83]]
```

$$(-11 + x) (-9 + x)^9 (5 + x)^{32} (95 - 20x + x^2) (-68920 + 38373x - 8408x^2 + 906x^3 - 48x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -83, 3028, -63692, 850670, -7474906, 43166756,
      -157759644, 330489625, -301627755}, {1, -83, 3028, -63692,
      850670, -7474874, 43165476, -157740636, 330365465, -301326795},
      {1, -83, 3028, -63692, 850686, -7475658, 43180740, -157888252,
      331074665, -302681115}, {1, -83, 3028, -63692, 850686, -7475626,
      43179460, -157869244, 330950505, -302380155}, {1, -83, 3028, -63684,
      850190, -7463026, 43011428, -156627588, 326127033, -294679539},
      {1, -83, 3028, -63684, 850190, -7462994, 43010276, -156612164,
      326036025, -294479955}, {1, -83, 3028, -63684, 850190,
      -7462962, 43008996, -156593156, 325911865, -294178995},
      {1, -83, 3028, -63684, 850206, -7463810, 43026692, -156775204,
      326836233, -296033859}, {1, -83, 3028, -63684, 850206,
      -7463778, 43025412, -156756196, 326712073, -295732899},
      {1, -83, 3028, -63684, 850206, -7463778, 43025540, -156759780,
      326745225, -295834275}, {1, -83, 3028, -63684, 850206,
      -7463746, 43024260, -156740772, 326621065, -295533315},
      {1, -83, 3028, -63684, 850222, -7464530, 43039524, -156888388,
      327330265, -296887635}, {1, -83, 3028, -63684, 850222,
      -7464498, 43038244, -156869380, 327206105, -296586675},
      {1, -83, 3028, -63676, 849726, -7451834, 42867780, -155593292,
      322167465, -288385515}, {1, -83, 3028, -63676, 849742,
      -7452714, 42886628, -155790764, 323182841, -290439963},
      {1, -83, 3028, -63676, 849742, -7452650, 42884196, -155756332,
      322967673, -289939419}, {1, -83, 3028, -63676, 849742,
      -7452618, 42883044, -155740908, 322876665, -289739835},
      {1, -83, 3028, -63676, 849742, -7452586, 42881764, -155721900,
      322752505, -289438875}, {1, -83, 3028, -63676, 849758,
      -7453466, 42900740, -155922956, 323801033, -291594699},
      {1, -83, 3028, -63676, 849758, -7453434, 42899460, -155903948,
      323676873, -291293739}, {1, -83, 3028, -63676, 849758,
      -7453402, 42898308, -155888524, 323585865, -291094155},
      {1, -83, 3028, -63676, 849758, -7453370, 42897028, -155869516,
      323461705, -290793195}, {1, -83, 3028, -63668, 849262,
      -7440674, 42725284, -154574420, 318298905, -282291075},
      {1, -83, 3028, -63668, 849278, -7441490, 42741700, -154737460,
      319099113, -283844979}, {1, -83, 3028, -63668, 849278,
      -7441458, 42740548, -154722036, 319008105, -283645395},
```

```
{1, -83, 3028, -63 668, 849 294, -7 442 306, 42 758 244, -154 904 084,
 319 932 473, -285 500 259}, {1, -83, 3028, -63 668, 849 294,
-7 442 242, 42 755 812, -154 869 652, 319 717 305, -284 999 715},
{1, -83, 3028, -63 668, 849 310, -7 443 058, 42 772 292, -155 034 420,
 320 532 809, -286 597 971}, {1, -83, 3028, -63 668, 849 310,
-7 443 058, 42 772 356, -155 036 276, 320 550 665, -286 654 995},
{1, -83, 3028, -63 668, 849 310, -7 443 026, 42 771 076, -155 017 268,
 320 426 505, -286 354 035}, {1, -83, 3028, -63 660, 848 814,
-7 430 298, 42 598 052, -153 703 164, 315 139 545, -277 550 955},
{1, -83, 3028, -63 660, 848 830, -7 431 082, 42 613 316, -153 850 780,
 315 848 745, -278 905 275}, {1, -83, 3028, -63 660, 848 846,
-7 431 898, 42 629 860, -154 017 404, 316 682 105, -280 560 555}};
```

A // MatrixForm

```
1 -83 3028 -63 692 850 670 -7 474 906 43 166 756 -157 759 644 330 489 625 -301 627 75
1 -83 3028 -63 692 850 670 -7 474 874 43 165 476 -157 740 636 330 365 465 -301 326 79
1 -83 3028 -63 692 850 686 -7 475 658 43 180 740 -157 888 252 331 074 665 -302 681 11
1 -83 3028 -63 692 850 686 -7 475 626 43 179 460 -157 869 244 330 950 505 -302 380 15
1 -83 3028 -63 684 850 190 -7 463 026 43 011 428 -156 627 588 326 127 033 -294 679 53
1 -83 3028 -63 684 850 190 -7 462 994 43 010 276 -156 612 164 326 036 025 -294 479 95
1 -83 3028 -63 684 850 190 -7 462 962 43 008 996 -156 593 156 325 911 865 -294 178 99
1 -83 3028 -63 684 850 206 -7 463 810 43 026 692 -156 775 204 326 836 233 -296 033 85
1 -83 3028 -63 684 850 206 -7 463 778 43 025 412 -156 756 196 326 712 073 -295 732 89
1 -83 3028 -63 684 850 206 -7 463 778 43 025 540 -156 759 780 326 745 225 -295 834 27
1 -83 3028 -63 684 850 206 -7 463 746 43 024 260 -156 740 772 326 621 065 -295 533 31
1 -83 3028 -63 684 850 222 -7 464 530 43 039 524 -156 888 388 327 330 265 -296 887 63
1 -83 3028 -63 684 850 222 -7 464 498 43 038 244 -156 869 380 327 206 105 -296 586 67
1 -83 3028 -63 676 849 726 -7 451 834 42 867 780 -155 593 292 322 167 465 -288 385 51
1 -83 3028 -63 676 849 742 -7 452 714 42 886 628 -155 790 764 323 182 841 -290 439 96
1 -83 3028 -63 676 849 742 -7 452 650 42 884 196 -155 756 332 322 967 673 -289 939 41
1 -83 3028 -63 676 849 742 -7 452 618 42 883 044 -155 740 908 322 876 665 -289 739 83
1 -83 3028 -63 676 849 742 -7 452 586 42 881 764 -155 721 900 322 752 505 -289 438 87
1 -83 3028 -63 676 849 758 -7 453 466 42 900 740 -155 922 956 323 801 033 -291 594 69
1 -83 3028 -63 676 849 758 -7 453 434 42 899 460 -155 903 948 323 676 873 -291 293 73
1 -83 3028 -63 676 849 758 -7 453 402 42 898 308 -155 888 524 323 585 865 -291 094 15
1 -83 3028 -63 676 849 758 -7 453 370 42 897 028 -155 869 516 323 461 705 -290 793 19
1 -83 3028 -63 668 849 262 -7 440 674 42 725 284 -154 574 420 318 298 905 -282 291 07
1 -83 3028 -63 668 849 278 -7 441 490 42 741 700 -154 737 460 319 099 113 -283 844 97
1 -83 3028 -63 668 849 278 -7 441 458 42 740 548 -154 722 036 319 008 105 -283 645 39
1 -83 3028 -63 668 849 294 -7 442 306 42 758 244 -154 904 084 319 932 473 -285 500 25
1 -83 3028 -63 668 849 294 -7 442 242 42 755 812 -154 869 652 319 717 305 -284 999 71
1 -83 3028 -63 668 849 310 -7 443 058 42 772 292 -155 034 420 320 532 809 -286 597 97
1 -83 3028 -63 668 849 310 -7 443 058 42 772 356 -155 036 276 320 550 665 -286 654 99
1 -83 3028 -63 668 849 310 -7 443 026 42 771 076 -155 017 268 320 426 505 -286 354 03
1 -83 3028 -63 660 848 814 -7 430 298 42 598 052 -153 703 164 315 139 545 -277 550 95
1 -83 3028 -63 660 848 830 -7 431 082 42 613 316 -153 850 780 315 848 745 -278 905 27
1 -83 3028 -63 660 848 846 -7 431 898 42 629 860 -154 017 404 316 682 105 -280 560 55
```

Dimensions[A]

```
{33, 10}
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse
```

```
{49, -4067, 148372, -3120732, 41673582, -366071626,  
 2112935460, -7716347340, 16148911145, -14719768875}
```

```
Array[c, 10].Transpose[A]
```

```
{c[1] - 83 c[2] + 3028 c[3] - 63692 c[4] + 850670 c[5] - 7474906 c[6] +  
 43166756 c[7] - 157759644 c[8] + 330489625 c[9] - 301627755 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63692 c[4] + 850670 c[5] - 7474874 c[6] +  
 43165476 c[7] - 157740636 c[8] + 330365465 c[9] - 301326795 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63692 c[4] + 850686 c[5] - 7475658 c[6] +  
 43180740 c[7] - 157888252 c[8] + 331074665 c[9] - 302681115 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63692 c[4] + 850686 c[5] - 7475626 c[6] +  
 43179460 c[7] - 157869244 c[8] + 330950505 c[9] - 302380155 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850190 c[5] - 7463026 c[6] +  
 43011428 c[7] - 156627588 c[8] + 326127033 c[9] - 294679539 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850190 c[5] - 7462994 c[6] +  
 43010276 c[7] - 156612164 c[8] + 326036025 c[9] - 294479955 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850190 c[5] - 7462962 c[6] +  
 43008996 c[7] - 156593156 c[8] + 325911865 c[9] - 294178995 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850206 c[5] - 7463810 c[6] +  
 43026692 c[7] - 156775204 c[8] + 326836233 c[9] - 296033859 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850206 c[5] - 7463778 c[6] +  
 43025412 c[7] - 156756196 c[8] + 326712073 c[9] - 295732899 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850206 c[5] - 7463778 c[6] +  
 43025540 c[7] - 156759780 c[8] + 326745225 c[9] - 295834275 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850206 c[5] - 7463746 c[6] +  
 43024260 c[7] - 156740772 c[8] + 326621065 c[9] - 295533315 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850222 c[5] - 7464530 c[6] +  
 43039524 c[7] - 156888388 c[8] + 327330265 c[9] - 296887635 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850222 c[5] - 7464498 c[6] +  
 43038244 c[7] - 156869380 c[8] + 327206105 c[9] - 296586675 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849726 c[5] - 7451834 c[6] +  
 42867780 c[7] - 155593292 c[8] + 322167465 c[9] - 288385515 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849742 c[5] - 7452714 c[6] +  
 42886628 c[7] - 155790764 c[8] + 323182841 c[9] - 290439963 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849742 c[5] - 7452650 c[6] +  
 42884196 c[7] - 155756332 c[8] + 322967673 c[9] - 289939419 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849742 c[5] - 7452618 c[6] +  
 42883044 c[7] - 155740908 c[8] + 322876665 c[9] - 289739835 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849742 c[5] - 7452586 c[6] +  
 42881764 c[7] - 155721900 c[8] + 322752505 c[9] - 289438875 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849758 c[5] - 7453466 c[6] +  
 42900740 c[7] - 155922956 c[8] + 323801033 c[9] - 291594699 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849758 c[5] - 7453434 c[6] +  
 42899460 c[7] - 155903948 c[8] + 323676873 c[9] - 291293739 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849758 c[5] - 7453402 c[6] +  
 42898308 c[7] - 155888524 c[8] + 323585865 c[9] - 291094155 c[10],
```

```

c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 758 c[5] - 7 453 370 c[6] +
  42 897 028 c[7] - 155 869 516 c[8] + 323 461 705 c[9] - 290 793 195 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 262 c[5] - 7 440 674 c[6] +
  42 725 284 c[7] - 154 574 420 c[8] + 318 298 905 c[9] - 282 291 075 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 278 c[5] - 7 441 490 c[6] +
  42 741 700 c[7] - 154 737 460 c[8] + 319 099 113 c[9] - 283 844 979 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 278 c[5] - 7 441 458 c[6] +
  42 740 548 c[7] - 154 722 036 c[8] + 319 008 105 c[9] - 283 645 395 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 294 c[5] - 7 442 306 c[6] +
  42 758 244 c[7] - 154 904 084 c[8] + 319 932 473 c[9] - 285 500 259 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 294 c[5] - 7 442 242 c[6] +
  42 755 812 c[7] - 154 869 652 c[8] + 319 717 305 c[9] - 284 999 715 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 058 c[6] +
  42 772 292 c[7] - 155 034 420 c[8] + 320 532 809 c[9] - 286 597 971 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 058 c[6] +
  42 772 356 c[7] - 155 036 276 c[8] + 320 550 665 c[9] - 286 654 995 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 026 c[6] +
  42 771 076 c[7] - 155 017 268 c[8] + 320 426 505 c[9] - 286 354 035 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 814 c[5] - 7 430 298 c[6] +
  42 598 052 c[7] - 153 703 164 c[8] + 315 139 545 c[9] - 277 550 955 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 830 c[5] - 7 431 082 c[6] +
  42 613 316 c[7] - 153 850 780 c[8] + 315 848 745 c[9] - 278 905 275 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 898 c[6] +
  42 629 860 c[7] - 154 017 404 c[8] + 316 682 105 c[9] - 280 560 555 c[10] }

```

Array[c, 10].g

```

49 c[1] - 4067 c[2] + 148 372 c[3] - 3 120 732 c[4] + 41 673 582 c[5] - 366 071 626 c[6] +
  2 112 935 460 c[7] - 7 716 347 340 c[8] + 16 148 911 145 c[9] - 14 719 768 875 c[10]

```

cert = Flatten[Array[c, 10] /. FindInstance[

```

  49 c[1] - 4067 c[2] + 148 372 c[3] - 3 120 732 c[4] + 41 673 582 c[5] - 366 071 626 c[6] +
    2 112 935 460 c[7] - 7 716 347 340 c[8] + 16 148 911 145 c[9] - 14 719 768 875 c[10] <
    0 && c[1] - 83 c[2] + 3028 c[3] - 63 692 c[4] + 850 670 c[5] - 7 474 906 c[6] +
    43 166 756 c[7] - 157 759 644 c[8] + 330 489 625 c[9] - 301 627 755 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 692 c[4] + 850 670 c[5] - 7 474 874 c[6] +
    43 165 476 c[7] - 157 740 636 c[8] + 330 365 465 c[9] - 301 326 795 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 692 c[4] + 850 686 c[5] - 7 475 658 c[6] +
    43 180 740 c[7] - 157 888 252 c[8] + 331 074 665 c[9] - 302 681 115 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 692 c[4] + 850 686 c[5] - 7 475 626 c[6] +
    43 179 460 c[7] - 157 869 244 c[8] + 330 950 505 c[9] - 302 380 155 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 684 c[4] + 850 190 c[5] - 7 463 026 c[6] +
    43 011 428 c[7] - 156 627 588 c[8] + 326 127 033 c[9] - 294 679 539 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 684 c[4] + 850 190 c[5] - 7 462 994 c[6] +
    43 010 276 c[7] - 156 612 164 c[8] + 326 036 025 c[9] - 294 479 955 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 684 c[4] + 850 190 c[5] - 7 462 962 c[6] +
    43 008 996 c[7] - 156 593 156 c[8] + 325 911 865 c[9] - 294 178 995 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 684 c[4] + 850 206 c[5] - 7 463 810 c[6] +

```

$$\begin{aligned}
& 43\,026\,692\,c[7] - 156\,775\,204\,c[8] + 326\,836\,233\,c[9] - 296\,033\,859\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,206\,c[5] - 7\,463\,778\,c[6] + \\
& 43\,025\,412\,c[7] - 156\,756\,196\,c[8] + 326\,712\,073\,c[9] - 295\,732\,899\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,206\,c[5] - 7\,463\,778\,c[6] + \\
& 43\,025\,540\,c[7] - 156\,759\,780\,c[8] + 326\,745\,225\,c[9] - 295\,834\,275\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,206\,c[5] - 7\,463\,746\,c[6] + \\
& 43\,024\,260\,c[7] - 156\,740\,772\,c[8] + 326\,621\,065\,c[9] - 295\,533\,315\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,222\,c[5] - 7\,464\,530\,c[6] + \\
& 43\,039\,524\,c[7] - 156\,888\,388\,c[8] + 327\,330\,265\,c[9] - 296\,887\,635\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,222\,c[5] - 7\,464\,498\,c[6] + \\
& 43\,038\,244\,c[7] - 156\,869\,380\,c[8] + 327\,206\,105\,c[9] - 296\,586\,675\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,726\,c[5] - 7\,451\,834\,c[6] + \\
& 42\,867\,780\,c[7] - 155\,593\,292\,c[8] + 322\,167\,465\,c[9] - 288\,385\,515\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,742\,c[5] - 7\,452\,714\,c[6] + \\
& 42\,886\,628\,c[7] - 155\,790\,764\,c[8] + 323\,182\,841\,c[9] - 290\,439\,963\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,742\,c[5] - 7\,452\,650\,c[6] + \\
& 42\,884\,196\,c[7] - 155\,756\,332\,c[8] + 322\,967\,673\,c[9] - 289\,939\,419\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,742\,c[5] - 7\,452\,618\,c[6] + \\
& 42\,883\,044\,c[7] - 155\,740\,908\,c[8] + 322\,876\,665\,c[9] - 289\,739\,835\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,742\,c[5] - 7\,452\,586\,c[6] + \\
& 42\,881\,764\,c[7] - 155\,721\,900\,c[8] + 322\,752\,505\,c[9] - 289\,438\,875\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,758\,c[5] - 7\,453\,466\,c[6] + \\
& 42\,900\,740\,c[7] - 155\,922\,956\,c[8] + 323\,801\,033\,c[9] - 291\,594\,699\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,758\,c[5] - 7\,453\,434\,c[6] + \\
& 42\,899\,460\,c[7] - 155\,903\,948\,c[8] + 323\,676\,873\,c[9] - 291\,293\,739\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,758\,c[5] - 7\,453\,402\,c[6] + \\
& 42\,898\,308\,c[7] - 155\,888\,524\,c[8] + 323\,585\,865\,c[9] - 291\,094\,155\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,758\,c[5] - 7\,453\,370\,c[6] + \\
& 42\,897\,028\,c[7] - 155\,869\,516\,c[8] + 323\,461\,705\,c[9] - 290\,793\,195\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,262\,c[5] - 7\,440\,674\,c[6] + \\
& 42\,725\,284\,c[7] - 154\,574\,420\,c[8] + 318\,298\,905\,c[9] - 282\,291\,075\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,278\,c[5] - 7\,441\,490\,c[6] + \\
& 42\,741\,700\,c[7] - 154\,737\,460\,c[8] + 319\,099\,113\,c[9] - 283\,844\,979\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,278\,c[5] - 7\,441\,458\,c[6] + \\
& 42\,740\,548\,c[7] - 154\,722\,036\,c[8] + 319\,008\,105\,c[9] - 283\,645\,395\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,294\,c[5] - 7\,442\,306\,c[6] + \\
& 42\,758\,244\,c[7] - 154\,904\,084\,c[8] + 319\,932\,473\,c[9] - 285\,500\,259\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,294\,c[5] - 7\,442\,242\,c[6] + \\
& 42\,755\,812\,c[7] - 154\,869\,652\,c[8] + 319\,717\,305\,c[9] - 284\,999\,715\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,310\,c[5] - 7\,443\,058\,c[6] + \\
& 42\,772\,292\,c[7] - 155\,034\,420\,c[8] + 320\,532\,809\,c[9] - 286\,597\,971\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,310\,c[5] - 7\,443\,058\,c[6] + \\
& 42\,772\,356\,c[7] - 155\,036\,276\,c[8] + 320\,550\,665\,c[9] - 286\,654\,995\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,310\,c[5] - 7\,443\,026\,c[6] + \\
& 42\,771\,076\,c[7] - 155\,017\,268\,c[8] + 320\,426\,505\,c[9] - 286\,354\,035\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,814\,c[5] - 7\,430\,298\,c[6] + \\
& 42\,598\,052\,c[7] - 153\,703\,164\,c[8] + 315\,139\,545\,c[9] - 277\,550\,955\,c[10] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 830 c[5] - 7 431 082 c[6] +
42 613 316 c[7] - 153 850 780 c[8] + 315 848 745 c[9] - 278 905 275 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 898 c[6] +
42 629 860 c[7] - 154 017 404 c[8] + 316 682 105 c[9] -
280 560 555 c[10] ≥ 0, Array[c, 10], Integers]]

```

```
{0, 0, 0, 0, 0, 0, -1 064 222, 0, 285 444, 160 397}
```

```
GCD[0, 0, 0, 0, 0, 0, -1 064 222, 0, 285 444, 160 397]
```

```
1
```

```
cert.g
```

```
-29 376 482 115
```

```
{0, 0, 0, 0, 0, 0, -1 064 222, 0, 285 444, 160 397}.Reverse[gpart[listdim17[[83]]]]
```

```
-29 376 482 115
```

```
cert.Transpose[A]
```

```

{17 082 095 933, 31 276 654 173, 240 389 325, 14 434 947 565,
51 582 861 653, 58 843 832 693, 73 038 390 933, 20 546 596 805, 34 741 155 045,
27 807 567 845, 42 002 126 085, 10 965 861 237, 25 160 419 477, 83 763 862 845,
24 011 097 677, 45 466 626 957, 52 727 597 997, 66 922 156 237, 235 803 869,
14 430 362 109, 21 691 333 149, 35 885 891 389, 108 683 892 997,
70 386 657 109, 77 647 628 149, 25 155 834 021, 46 611 363 301, 5 498 240 885,
1 380 540 213, 15 575 098 453, 102 567 658 301, 71 531 393 453, 26 300 570 365}

```

```
chi = listdim17[[84]]
```

```
 $(-9 + x)^{10} (5 + x)^{32} (-1009 + 311 x - 31 x^2 + x^3) (7928 - 3481 x + 559 x^2 - 39 x^3 + x^4)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -74, 2362, -42 434, 468 764, -3 255 998, 13 861 622, -32 989 622, 33 491 763},
{1, -74, 2362, -42 434, 468 764, -3 255 998, 13 861 686, -32 991 030, 33 499 251},
{1, -74, 2362, -42 434, 468 780, -3 256 670, 13 871 990, -33 059 222, 33 663 267},
{1, -74, 2362, -42 426, 468 356, -3 247 790, 13 780 166, -32 590 542, 32 718 843},
{1, -74, 2362, -42 426, 468 356, -3 247 790, 13 780 230, -32 591 950, 32 726 331},
{1, -74, 2362, -42 426, 468 356, -3 247 758, 13 779 238, -32 581 870, 32 692 635},
{1, -74, 2362, -42 426, 468 356, -3 247 758, 13 779 302, -32 583 150, 32 698 971},
{1, -74, 2362, -42 426, 468 356, -3 247 726, 13 778 310, -32 573 070, 32 665 275},
{1, -74, 2362, -42 426, 468 372, -3 248 430, 13 789 606, -32 651 470, 32 864 139},
{1, -74, 2362, -42 426, 468 372, -3 248 430, 13 789 670, -32 652 878, 32 871 627},
{1, -74, 2362, -42 426, 468 372, -3 248 430, 13 789 670, -32 652 750, 32 870 475},
{1, -74, 2362, -42 426, 468 372, -3 248 430, 13 789 734, -32 654 158, 32 877 963},
{1, -74, 2362, -42 426, 468 372, -3 248 430, 13 789 734, -32 654 030, 32 876 811},

```

{1, -74, 2362, -42 426, 468 372, -3 248 398, 13 788 742, -32 643 950, 32 843 115},
 {1, -74, 2362, -42 426, 468 372, -3 248 398, 13 788 742, -32 643 822, 32 841 963},
 {1, -74, 2362, -42 426, 468 372, -3 248 398, 13 788 806, -32 645 230, 32 849 451},
 {1, -74, 2362, -42 426, 468 372, -3 248 366, 13 787 878, -32 636 430, 32 822 091},
 {1, -74, 2362, -42 426, 468 388, -3 249 070, 13 799 174, -32 714 958, 33 022 107},
 {1, -74, 2362, -42 426, 468 388, -3 249 038, 13 798 182, -32 704 750, 32 987 259},
 {1, -74, 2362, -42 426, 468 388, -3 249 038, 13 798 246, -32 706 030, 32 993 595},
 {1, -74, 2362, -42 426, 468 388, -3 249 038, 13 798 310, -32 707 310, 32 999 931},
 {1, -74, 2362, -42 418, 467 932, -3 238 910, 13 688 342, -32 121 862, 31 774 419},
 {1, -74, 2362, -42 418, 467 948, -3 239 550, 13 697 782, -32 182 790, 31 919 715},
 {1, -74, 2362, -42 418, 467 948, -3 239 550, 13 697 846, -32 184 070, 31 926 051},
 {1, -74, 2362, -42 418, 467 948, -3 239 518, 13 696 854, -32 174 118, 31 893 507},
 {1, -74, 2362, -42 418, 467 948, -3 239 518, 13 696 918, -32 175 270, 31 898 691},
 {1, -74, 2362, -42 418, 467 964, -3 240 222, 13 708 342, -32 256 358, 32 111 379},
 {1, -74, 2362, -42 418, 467 964, -3 240 190, 13 707 222, -32 243 718, 32 065 011},
 {1, -74, 2362, -42 418, 467 964, -3 240 190, 13 707 286, -32 244 998, 32 071 347},
 {1, -74, 2362, -42 418, 467 964, -3 240 190, 13 707 350, -32 246 278, 32 077 683},
 {1, -74, 2362, -42 418, 467 964, -3 240 158, 13 706 358, -32 236 198, 32 043 987},
 {1, -74, 2362, -42 418, 467 964, -3 240 158, 13 706 358, -32 236 070, 32 042 835},
 {1, -74, 2362, -42 418, 467 964, -3 240 158, 13 706 422, -32 237 350, 32 049 171},
 {1, -74, 2362, -42 418, 467 964, -3 240 126, 13 705 494, -32 228 550, 32 021 811},
 {1, -74, 2362, -42 418, 467 980, -3 240 862, 13 717 782, -32 317 286, 32 256 675},
 {1, -74, 2362, -42 418, 467 980, -3 240 862, 13 717 846, -32 318 566, 32 263 011},
 {1, -74, 2362, -42 418, 467 980, -3 240 830, 13 716 854, -32 308 358, 32 228 163},
 {1, -74, 2362, -42 418, 467 980, -3 240 830, 13 716 918, -32 309 638, 32 234 499},
 {1, -74, 2362, -42 418, 467 980, -3 240 798, 13 715 862, -32 298 278, 32 194 467},
 {1, -74, 2362, -42 418, 467 980, -3 240 798, 13 715 862, -32 298 150, 32 193 315},
 {1, -74, 2362, -42 418, 467 980, -3 240 798, 13 715 926, -32 299 558, 32 200 803},
 {1, -74, 2362, -42 418, 467 980, -3 240 798, 13 715 926, -32 299 430, 32 199 651},
 {1, -74, 2362, -42 418, 467 980, -3 240 766, 13 714 934, -32 289 350, 32 165 955},
 {1, -74, 2362, -42 418, 467 980, -3 240 766, 13 714 998, -32 290 630, 32 172 291},
 {1, -74, 2362, -42 418, 467 996, -3 241 438, 13 725 430, -32 361 638, 32 351 283},
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 {1, -74, 2362, -42 418, 467 996, -3 241 438, 13 725 494, -32 362 918, 32 357 619},
 {1, -74, 2362, -42 418, 467 996, -3 241 406, 13 724 438, -32 351 430, 32 316 435},
 {1, -74, 2362, -42 410, 467 540, -3 231 310, 13 615 398, -31 775 038, 31 120 587},
 {1, -74, 2362, -42 410, 467 556, -3 231 950, 13 624 838, -31 835 966, 31 265 883},
 {1, -74, 2362, -42 410, 467 556, -3 231 950, 13 624 902, -31 837 246, 31 272 219},
 {1, -74, 2362, -42 410, 467 556, -3 231 918, 13 623 974, -31 828 318, 31 243 707},
 {1, -74, 2362, -42 410, 467 556, -3 231 918, 13 624 038, -31 829 470, 31 248 891},
 {1, -74, 2362, -42 410, 467 572, -3 232 622, 13 635 398, -31 909 534, 31 457 547},
 {1, -74, 2362, -42 410, 467 572, -3 232 590, 13 634 470, -31 900 606, 31 429 035},
 {1, -74, 2362, -42 410, 467 572, -3 232 558, 13 633 478, -31 890 398, 31 394 187},
 {1, -74, 2362, -42 410, 467 572, -3 232 558, 13 633 542, -31 891 678, 31 400 523},
 {1, -74, 2362, -42 410, 467 572, -3 232 526, 13 632 614, -31 882 750, 31 372 011},
 {1, -74, 2362, -42 410, 467 588, -3 233 230, 13 644 038, -31 963 966, 31 585 851},
 {1, -74, 2362, -42 410, 467 588, -3 233 198, 13 643 046, -31 953 758, 31 551 003},


```
{1, -74, 2362, -42 410, 467 588, -3 233 198, 13 643 110, -31 955 038, 31 557 339},
{1, -74, 2362, -42 410, 467 588, -3 233 166, 13 642 118, -31 944 958, 31 523 643},
{1, -74, 2362, -42 410, 467 588, -3 233 166, 13 642 118, -31 944 830, 31 522 491},
{1, -74, 2362, -42 410, 467 588, -3 233 134, 13 641 126, -31 934 750, 31 488 795},
{1, -74, 2362, -42 410, 467 604, -3 233 806, 13 651 686, -32 008 318, 31 680 459},
{1, -74, 2362, -42 402, 467 164, -3 224 318, 13 551 094, -31 482 646, 30 595 059},
{1, -74, 2362, -42 402, 467 180, -3 224 958, 13 560 662, -31 546 006, 30 751 875},
{1, -74, 2362, -42 402, 467 180, -3 224 926, 13 559 734, -31 537 078, 30 723 363},
{1, -74, 2362, -42 402, 467 196, -3 225 566, 13 569 302, -31 600 438, 30 880 179}};
```

```
A // MatrixForm
```

```
{ 1 -74 2362 -42 434 468 764 -3 255 998 13 861 622 -32 989 622 33 491 763 }
{ 1 -74 2362 -42 434 468 764 -3 255 998 13 861 686 -32 991 030 33 499 251 }
{ 1 -74 2362 -42 434 468 780 -3 256 670 13 871 990 -33 059 222 33 663 267 }
{ 1 -74 2362 -42 426 468 356 -3 247 790 13 780 166 -32 590 542 32 718 843 }
{ 1 -74 2362 -42 426 468 356 -3 247 790 13 780 230 -32 591 950 32 726 331 }
{ 1 -74 2362 -42 426 468 356 -3 247 758 13 779 238 -32 581 870 32 692 635 }
{ 1 -74 2362 -42 426 468 356 -3 247 758 13 779 302 -32 583 150 32 698 971 }
{ 1 -74 2362 -42 426 468 356 -3 247 726 13 778 310 -32 573 070 32 665 275 }
{ 1 -74 2362 -42 426 468 372 -3 248 430 13 789 606 -32 651 470 32 864 139 }
{ 1 -74 2362 -42 426 468 372 -3 248 430 13 789 670 -32 652 878 32 871 627 }
{ 1 -74 2362 -42 426 468 372 -3 248 430 13 789 670 -32 652 750 32 870 475 }
{ 1 -74 2362 -42 426 468 372 -3 248 430 13 789 734 -32 654 158 32 877 963 }
{ 1 -74 2362 -42 426 468 372 -3 248 430 13 789 734 -32 654 030 32 876 811 }
{ 1 -74 2362 -42 426 468 372 -3 248 398 13 788 742 -32 643 950 32 843 115 }
{ 1 -74 2362 -42 426 468 372 -3 248 398 13 788 742 -32 643 822 32 841 963 }
{ 1 -74 2362 -42 426 468 372 -3 248 398 13 788 806 -32 645 230 32 849 451 }
{ 1 -74 2362 -42 426 468 372 -3 248 366 13 787 878 -32 636 430 32 822 091 }
{ 1 -74 2362 -42 426 468 388 -3 249 070 13 799 174 -32 714 958 33 022 107 }
{ 1 -74 2362 -42 426 468 388 -3 249 038 13 798 182 -32 704 750 32 987 259 }
{ 1 -74 2362 -42 426 468 388 -3 249 038 13 798 246 -32 706 030 32 993 595 }
{ 1 -74 2362 -42 426 468 388 -3 249 038 13 798 310 -32 707 310 32 999 931 }
{ 1 -74 2362 -42 418 467 932 -3 238 910 13 688 342 -32 121 862 31 774 419 }
{ 1 -74 2362 -42 418 467 948 -3 239 550 13 697 782 -32 182 790 31 919 715 }
{ 1 -74 2362 -42 418 467 948 -3 239 550 13 697 846 -32 184 070 31 926 051 }
{ 1 -74 2362 -42 418 467 948 -3 239 518 13 696 854 -32 174 118 31 893 507 }
{ 1 -74 2362 -42 418 467 948 -3 239 518 13 696 918 -32 175 270 31 898 691 }
{ 1 -74 2362 -42 418 467 964 -3 240 222 13 708 342 -32 256 358 32 111 379 }
{ 1 -74 2362 -42 418 467 964 -3 240 190 13 707 222 -32 243 718 32 065 011 }
{ 1 -74 2362 -42 418 467 964 -3 240 190 13 707 286 -32 244 998 32 071 347 }
{ 1 -74 2362 -42 418 467 964 -3 240 190 13 707 350 -32 246 278 32 077 683 }
{ 1 -74 2362 -42 418 467 964 -3 240 158 13 706 358 -32 236 198 32 043 987 }
{ 1 -74 2362 -42 418 467 964 -3 240 158 13 706 358 -32 236 070 32 042 835 }
{ 1 -74 2362 -42 418 467 964 -3 240 158 13 706 422 -32 237 350 32 049 171 }
{ 1 -74 2362 -42 418 467 964 -3 240 126 13 705 494 -32 228 550 32 021 811 }
{ 1 -74 2362 -42 418 467 980 -3 240 862 13 717 782 -32 317 286 32 256 675 }
{ 1 -74 2362 -42 418 467 980 -3 240 862 13 717 846 -32 318 566 32 263 011 }
{ 1 -74 2362 -42 418 467 980 -3 240 830 13 716 854 -32 308 358 32 228 163 }
{ 1 -74 2362 -42 418 467 980 -3 240 830 13 716 918 -32 309 638 32 234 499 }
{ 1 -74 2362 -42 418 467 980 -3 240 798 13 715 862 -32 298 278 32 194 467 }
{ 1 -74 2362 -42 418 467 980 -3 240 798 13 715 862 -32 298 150 32 193 315 }
{ 1 -74 2362 -42 418 467 980 -3 240 798 13 715 926 -32 299 558 32 200 803 }
{ 1 -74 2362 -42 418 467 980 -3 240 798 13 715 926 -32 299 430 32 199 651 }
{ 1 -74 2362 -42 418 467 980 -3 240 766 13 714 924 -32 289 350 32 165 955 }
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1 -74 2362 -42418 467980 -3240766 13714998 -32290630 32172291
1 -74 2362 -42418 467996 -3241438 13725430 -32361638 32351283
1 -74 2362 -42418 467996 -3241438 13725430 -32361510 32350131
1 -74 2362 -42418 467996 -3241438 13725494 -32362918 32357619
1 -74 2362 -42418 467996 -3241406 13724438 -32351430 32316435
1 -74 2362 -42410 467540 -3231310 13615398 -31775038 31120587
1 -74 2362 -42410 467556 -3231950 13624838 -31835966 31265883
1 -74 2362 -42410 467556 -3231950 13624902 -31837246 31272219
1 -74 2362 -42410 467556 -3231918 13623974 -31828318 31243707
1 -74 2362 -42410 467556 -3231918 13624038 -31829470 31248891
1 -74 2362 -42410 467572 -3232622 13635398 -31909534 31457547
1 -74 2362 -42410 467572 -3232590 13634470 -31900606 31429035
1 -74 2362 -42410 467572 -3232558 13633478 -31890398 31394187
1 -74 2362 -42410 467572 -3232558 13633542 -31891678 31400523
1 -74 2362 -42410 467572 -3232526 13632614 -31882750 31372011
1 -74 2362 -42410 467588 -3233230 13644038 -31963966 31585851
1 -74 2362 -42410 467588 -3233198 13643046 -31953758 31551003
1 -74 2362 -42410 467588 -3233198 13643110 -31955038 31557339
1 -74 2362 -42410 467588 -3233166 13642118 -31944958 31523643
1 -74 2362 -42410 467588 -3233166 13642118 -31944830 31522491
1 -74 2362 -42410 467588 -3233134 13641126 -31934750 31488795
1 -74 2362 -42410 467604 -3233806 13651686 -32008318 31680459
1 -74 2362 -42402 467164 -3224318 13551094 -31482646 30595059
1 -74 2362 -42402 467180 -3224958 13560662 -31546006 30751875
1 -74 2362 -42402 467180 -3224926 13559734 -31537078 30723363
1 -74 2362 -42402 467196 -3225566 13569302 -31600438 30880179

```

Dimensions[A]

{69, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```

{49, -3626, 115738, -2079090, 22961772,
-159414270, 678158966, -1612318438, 1634838611}

```

Array[c, 9].Transpose[A]

```

{c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468764 c[5] -
 3255998 c[6] + 13861622 c[7] - 32989622 c[8] + 33491763 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468764 c[5] - 3255998 c[6] +
 13861686 c[7] - 32991030 c[8] + 33499251 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468780 c[5] - 3256670 c[6] +
 13871990 c[7] - 33059222 c[8] + 33663267 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468356 c[5] - 3247790 c[6] +
 13780166 c[7] - 32590542 c[8] + 32718843 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468356 c[5] - 3247790 c[6] +
 13780230 c[7] - 32591950 c[8] + 32726331 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468356 c[5] - 3247758 c[6] +
 13779238 c[7] - 32581870 c[8] + 32692635 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468356 c[5] - 3247758 c[6] + 13779302 c[7] -
 32583150 c[8] + 32698971 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +
 468356 c[5] - 3247726 c[6] + 13778310 c[7] - 32573070 c[8] + 32665275 c[9],

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$c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468372 c[5] - 3248430 c[6] + 13789606 c[7] -$
 $32651470 c[8] + 32864139 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +$
 $468372 c[5] - 3248430 c[6] + 13789670 c[7] - 32652878 c[8] + 32871627 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468372 c[5] - 3248430 c[6] + 13789670 c[7] -$
 $32652750 c[8] + 32870475 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +$
 $468372 c[5] - 3248430 c[6] + 13789734 c[7] - 32654158 c[8] + 32877963 c[9],$
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 $32654030 c[8] + 32876811 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +$
 $468372 c[5] - 3248398 c[6] + 13788742 c[7] - 32643950 c[8] + 32843115 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468372 c[5] - 3248398 c[6] + 13788742 c[7] -$
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 $468372 c[5] - 3248398 c[6] + 13788806 c[7] - 32645230 c[8] + 32849451 c[9],$
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 $468388 c[5] - 3249070 c[6] + 13799174 c[7] - 32714958 c[8] + 33022107 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468388 c[5] - 3249038 c[6] + 13798182 c[7] -$
 $32704750 c[8] + 32987259 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +$
 $468388 c[5] - 3249038 c[6] + 13798246 c[7] - 32706030 c[8] + 32993595 c[9],$
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 $32707310 c[8] + 32999931 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +$
 $467932 c[5] - 3238910 c[6] + 13688342 c[7] - 32121862 c[8] + 31774419 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467948 c[5] - 3239550 c[6] + 13697782 c[7] -$
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 $467948 c[5] - 3239518 c[6] + 13696918 c[7] - 32175270 c[8] + 31898691 c[9],$
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 $32256358 c[8] + 32111379 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +$
 $467964 c[5] - 3240190 c[6] + 13707222 c[7] - 32243718 c[8] + 32065011 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467964 c[5] - 3240190 c[6] + 13707286 c[7] -$
 $32244998 c[8] + 32071347 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +$
 $467964 c[5] - 3240190 c[6] + 13707350 c[7] - 32246278 c[8] + 32077683 c[9],$
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 $467964 c[5] - 3240126 c[6] + 13705494 c[7] - 32228550 c[8] + 32021811 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467980 c[5] - 3240862 c[6] + 13717782 c[7] -$
 $32317286 c[8] + 32256675 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +$
 $467980 c[5] - 3240862 c[6] + 13717846 c[7] - 32318566 c[8] + 32263011 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467980 c[5] - 3240830 c[6] + 13716854 c[7] -$
 $32308358 c[8] + 32228163 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +$
 $467980 c[5] - 3240830 c[6] + 13716918 c[7] - 32309638 c[8] + 32234499 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467980 c[5] - 3240798 c[6] + 13715862 c[7] -$
 $32298278 c[8] + 32194467 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +$

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467 980 c[5] - 3 240 798 c[6] + 13 715 862 c[7] - 32 298 150 c[8] + 32 193 315 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 798 c[6] + 13 715 926 c[7] -
32 299 558 c[8] + 32 200 803 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 980 c[5] - 3 240 798 c[6] + 13 715 926 c[7] - 32 299 430 c[8] + 32 199 651 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 766 c[6] + 13 714 934 c[7] -
32 289 350 c[8] + 32 165 955 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 980 c[5] - 3 240 766 c[6] + 13 714 998 c[7] - 32 290 630 c[8] + 32 172 291 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 996 c[5] - 3 241 438 c[6] + 13 725 430 c[7] -
32 361 638 c[8] + 32 351 283 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 996 c[5] - 3 241 438 c[6] + 13 725 430 c[7] - 32 361 510 c[8] + 32 350 131 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 996 c[5] - 3 241 438 c[6] + 13 725 494 c[7] -
32 362 918 c[8] + 32 357 619 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] +
467 996 c[5] - 3 241 406 c[6] + 13 724 438 c[7] - 32 351 430 c[8] + 32 316 435 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 540 c[5] - 3 231 310 c[6] + 13 615 398 c[7] -
31 775 038 c[8] + 31 120 587 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 556 c[5] - 3 231 950 c[6] + 13 624 838 c[7] - 31 835 966 c[8] + 31 265 883 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 556 c[5] - 3 231 950 c[6] + 13 624 902 c[7] -
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467 556 c[5] - 3 231 918 c[6] + 13 623 974 c[7] - 31 828 318 c[8] + 31 243 707 c[9],
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31 829 470 c[8] + 31 248 891 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 572 c[5] - 3 232 622 c[6] + 13 635 398 c[7] - 31 909 534 c[8] + 31 457 547 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 572 c[5] - 3 232 590 c[6] + 13 634 470 c[7] -
31 900 606 c[8] + 31 429 035 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 572 c[5] - 3 232 558 c[6] + 13 633 478 c[7] - 31 890 398 c[8] + 31 394 187 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 572 c[5] - 3 232 558 c[6] + 13 633 542 c[7] -
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c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] + 467 588 c[5] - 3 233 230 c[6] + 13 644 038 c[7] -
31 963 966 c[8] + 31 585 851 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 588 c[5] - 3 233 198 c[6] + 13 643 046 c[7] - 31 953 758 c[8] + 31 551 003 c[9],
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31 955 038 c[8] + 31 557 339 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 410 c[4] +
467 588 c[5] - 3 233 166 c[6] + 13 642 118 c[7] - 31 944 958 c[8] + 31 523 643 c[9],
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467 588 c[5] - 3 233 134 c[6] + 13 641 126 c[7] - 31 934 750 c[8] + 31 488 795 c[9],
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32 008 318 c[8] + 31 680 459 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] +
467 164 c[5] - 3 224 318 c[6] + 13 551 094 c[7] - 31 482 646 c[8] + 30 595 059 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 180 c[5] - 3 224 958 c[6] + 13 560 662 c[7] -
31 546 006 c[8] + 30 751 875 c[9], c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] +
467 180 c[5] - 3 224 926 c[6] + 13 559 734 c[7] - 31 537 078 c[8] + 30 723 363 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 196 c[5] - 3 225 566 c[6] +
13 569 302 c[7] - 31 600 438 c[8] + 30 880 179 c[9] }

```

Array[c, 9].g

$49 c[1] - 3626 c[2] + 115\,738 c[3] - 2\,079\,090 c[4] + 22\,961\,772 c[5] -$
 $159\,414\,270 c[6] + 678\,158\,966 c[7] - 1\,612\,318\,438 c[8] + 1\,634\,838\,611 c[9]$

cert = Flatten[Array[c, 9] /.

FindInstance[$49 c[1] - 3626 c[2] + 115\,738 c[3] - 2\,079\,090 c[4] + 22\,961\,772 c[5] -$
 $159\,414\,270 c[6] + 678\,158\,966 c[7] - 1\,612\,318\,438 c[8] + 1\,634\,838\,611 c[9] < 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,764 c[5] - 3\,255\,998 c[6] +$
 $13\,861\,622 c[7] - 32\,989\,622 c[8] + 33\,491\,763 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,764 c[5] - 3\,255\,998 c[6] +$
 $13\,861\,686 c[7] - 32\,991\,030 c[8] + 33\,499\,251 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,780 c[5] - 3\,256\,670 c[6] +$
 $13\,871\,990 c[7] - 33\,059\,222 c[8] + 33\,663\,267 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,790 c[6] +$
 $13\,780\,166 c[7] - 32\,590\,542 c[8] + 32\,718\,843 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,790 c[6] +$
 $13\,780\,230 c[7] - 32\,591\,950 c[8] + 32\,726\,331 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,758 c[6] +$
 $13\,779\,238 c[7] - 32\,581\,870 c[8] + 32\,692\,635 c[9] \geq 0 \&\&$
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 $13\,779\,302 c[7] - 32\,583\,150 c[8] + 32\,698\,971 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,726 c[6] +$
 $13\,778\,310 c[7] - 32\,573\,070 c[8] + 32\,665\,275 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,430 c[6] +$
 $13\,789\,606 c[7] - 32\,651\,470 c[8] + 32\,864\,139 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,430 c[6] +$
 $13\,789\,670 c[7] - 32\,652\,878 c[8] + 32\,871\,627 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,430 c[6] +$
 $13\,789\,670 c[7] - 32\,652\,750 c[8] + 32\,870\,475 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,430 c[6] +$
 $13\,789\,734 c[7] - 32\,654\,158 c[8] + 32\,877\,963 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,430 c[6] +$
 $13\,789\,734 c[7] - 32\,654\,030 c[8] + 32\,876\,811 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,398 c[6] +$
 $13\,788\,742 c[7] - 32\,643\,950 c[8] + 32\,843\,115 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,398 c[6] +$
 $13\,788\,742 c[7] - 32\,643\,822 c[8] + 32\,841\,963 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,398 c[6] +$
 $13\,788\,806 c[7] - 32\,645\,230 c[8] + 32\,849\,451 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,366 c[6] +$
 $13\,787\,878 c[7] - 32\,636\,430 c[8] + 32\,822\,091 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,388 c[5] - 3\,249\,070 c[6] +$
 $13\,799\,174 c[7] - 32\,714\,958 c[8] + 33\,022\,107 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,388 c[5] - 3\,249\,038 c[6] +$
 $13\,798\,182 c[7] - 32\,704\,750 c[8] + 32\,987\,259 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,388 c[5] - 3\,249\,038 c[6] +$
 $13\,798\,246 c[7] - 32\,706\,030 c[8] + 32\,993\,595 c[9] \geq 0 \&\&$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,388 c[5] - 3\,249\,038 c[6] +$

$$\begin{aligned}
& 13\,798\,310\,c[7] - 32\,707\,310\,c[8] + 32\,999\,931\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,910\,c[6] + \\
& 13\,688\,342\,c[7] - 32\,121\,862\,c[8] + 31\,774\,419\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,550\,c[6] + \\
& 13\,697\,782\,c[7] - 32\,182\,790\,c[8] + 31\,919\,715\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,550\,c[6] + \\
& 13\,697\,846\,c[7] - 32\,184\,070\,c[8] + 31\,926\,051\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,518\,c[6] + \\
& 13\,696\,854\,c[7] - 32\,174\,118\,c[8] + 31\,893\,507\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,518\,c[6] + \\
& 13\,696\,918\,c[7] - 32\,175\,270\,c[8] + 31\,898\,691\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,222\,c[6] + \\
& 13\,708\,342\,c[7] - 32\,256\,358\,c[8] + 32\,111\,379\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,190\,c[6] + \\
& 13\,707\,222\,c[7] - 32\,243\,718\,c[8] + 32\,065\,011\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,190\,c[6] + \\
& 13\,707\,286\,c[7] - 32\,244\,998\,c[8] + 32\,071\,347\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,190\,c[6] + \\
& 13\,707\,350\,c[7] - 32\,246\,278\,c[8] + 32\,077\,683\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,158\,c[6] + \\
& 13\,706\,358\,c[7] - 32\,236\,198\,c[8] + 32\,043\,987\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,158\,c[6] + \\
& 13\,706\,358\,c[7] - 32\,236\,070\,c[8] + 32\,042\,835\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,158\,c[6] + \\
& 13\,706\,422\,c[7] - 32\,237\,350\,c[8] + 32\,049\,171\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,126\,c[6] + \\
& 13\,705\,494\,c[7] - 32\,228\,550\,c[8] + 32\,021\,811\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,862\,c[6] + \\
& 13\,717\,782\,c[7] - 32\,317\,286\,c[8] + 32\,256\,675\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,862\,c[6] + \\
& 13\,717\,846\,c[7] - 32\,318\,566\,c[8] + 32\,263\,011\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,830\,c[6] + \\
& 13\,716\,854\,c[7] - 32\,308\,358\,c[8] + 32\,228\,163\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,830\,c[6] + \\
& 13\,716\,918\,c[7] - 32\,309\,638\,c[8] + 32\,234\,499\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,798\,c[6] + \\
& 13\,715\,862\,c[7] - 32\,298\,278\,c[8] + 32\,194\,467\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,798\,c[6] + \\
& 13\,715\,862\,c[7] - 32\,298\,150\,c[8] + 32\,193\,315\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,798\,c[6] + \\
& 13\,715\,926\,c[7] - 32\,299\,558\,c[8] + 32\,200\,803\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,798\,c[6] + \\
& 13\,715\,926\,c[7] - 32\,299\,430\,c[8] + 32\,199\,651\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,766\,c[6] + \\
& 13\,714\,934\,c[7] - 32\,289\,350\,c[8] + 32\,165\,955\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,980\,c[5] - 3\,240\,766\,c[6] + \\
& 13\,714\,998\,c[7] - 32\,290\,630\,c[8] + 32\,172\,291\,c[9] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,996 c[5] - 3\,241\,438 c[6] + \\
& \quad 13\,725\,430 c[7] - 32\,361\,638 c[8] + 32\,351\,283 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,996 c[5] - 3\,241\,438 c[6] + \\
& \quad 13\,725\,430 c[7] - 32\,361\,510 c[8] + 32\,350\,131 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,996 c[5] - 3\,241\,438 c[6] + \\
& \quad 13\,725\,494 c[7] - 32\,362\,918 c[8] + 32\,357\,619 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,996 c[5] - 3\,241\,406 c[6] + \\
& \quad 13\,724\,438 c[7] - 32\,351\,430 c[8] + 32\,316\,435 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,310 c[6] + \\
& \quad 13\,615\,398 c[7] - 31\,775\,038 c[8] + 31\,120\,587 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,950 c[6] + \\
& \quad 13\,624\,838 c[7] - 31\,835\,966 c[8] + 31\,265\,883 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,950 c[6] + \\
& \quad 13\,624\,902 c[7] - 31\,837\,246 c[8] + 31\,272\,219 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,918 c[6] + \\
& \quad 13\,623\,974 c[7] - 31\,828\,318 c[8] + 31\,243\,707 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,918 c[6] + \\
& \quad 13\,624\,038 c[7] - 31\,829\,470 c[8] + 31\,248\,891 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,622 c[6] + \\
& \quad 13\,635\,398 c[7] - 31\,909\,534 c[8] + 31\,457\,547 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,590 c[6] + \\
& \quad 13\,634\,470 c[7] - 31\,900\,606 c[8] + 31\,429\,035 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,558 c[6] + \\
& \quad 13\,633\,478 c[7] - 31\,890\,398 c[8] + 31\,394\,187 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,558 c[6] + \\
& \quad 13\,633\,542 c[7] - 31\,891\,678 c[8] + 31\,400\,523 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,526 c[6] + \\
& \quad 13\,632\,614 c[7] - 31\,882\,750 c[8] + 31\,372\,011 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,230 c[6] + \\
& \quad 13\,644\,038 c[7] - 31\,963\,966 c[8] + 31\,585\,851 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,198 c[6] + \\
& \quad 13\,643\,046 c[7] - 31\,953\,758 c[8] + 31\,551\,003 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,198 c[6] + \\
& \quad 13\,643\,110 c[7] - 31\,955\,038 c[8] + 31\,557\,339 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,166 c[6] + \\
& \quad 13\,642\,118 c[7] - 31\,944\,958 c[8] + 31\,523\,643 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,166 c[6] + \\
& \quad 13\,642\,118 c[7] - 31\,944\,830 c[8] + 31\,522\,491 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,134 c[6] + \\
& \quad 13\,641\,126 c[7] - 31\,934\,750 c[8] + 31\,488\,795 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,604 c[5] - 3\,233\,806 c[6] + \\
& \quad 13\,651\,686 c[7] - 32\,008\,318 c[8] + 31\,680\,459 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,164 c[5] - 3\,224\,318 c[6] + \\
& \quad 13\,551\,094 c[7] - 31\,482\,646 c[8] + 30\,595\,059 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,180 c[5] - 3\,224\,958 c[6] + \\
& \quad 13\,560\,662 c[7] - 31\,546\,006 c[8] + 30\,751\,875 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,180 c[5] - 3\,224\,926 c[6] +
\end{aligned}$$

```

13 559 734 c[7] - 31 537 078 c[8] + 30 723 363 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 196 c[5] - 3 225 566 c[6] +
13 569 302 c[7] - 31 600 438 c[8] + 30 880 179 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 2 337 512, 1 158 887, 330 521, 73 173}

GCD[0, 0, 0, 0, 0, 2 337 512, 1 158 887, 330 521, 73 173]
1

cert.g
-2 216 228 893

{0, 0, 0, 0, 0, 2 337 512, 1 158 887, 330 521, 73 173}.Reverse[gpart[listdim17[[84]]]]
-2 216 228 893

cert.Transpose[A]
{49 058 675, 205 773 299, 38 791 619, 184 503 219, 341 217 843, 132 416 595, 247 142 611,
38 341 363, 122 149 539, 278 864 163, 236 875 555, 393 590 179, 351 601 571, 142 800 323,
100 811 715, 257 526 339, 163 451 107, 289 247 891, 38 458 035, 153 184 051, 267 910 067,
330 214 819, 267 861 139, 382 587 155, 215 774 515, 288 511 923, 643 760 739,
205 507 459, 320 233 475, 434 959 491, 226 158 243, 184 169 635, 298 895 651,
204 820 419, 581 407 059, 696 133 075, 445 343 219, 560 069 235, 236 541 971,
194 553 363, 351 267 987, 309 279 379, 100 478 131, 215 204 147, 361 651 715,
319 663 107, 476 377 731, 110 861 859, 351 219 059, 288 865 379, 403 591 395,
267 527 555, 340 264 963, 664 764 979, 528 701 139, 277 911 283, 392 637 299,
256 573 459, 653 810 883, 403 021 027, 517 747 043, 308 945 795, 266 957 187,
58 155 939, 434 055 539, 361 269 203, 486 378 947, 350 315 107, 475 424 851}

chi = listdim17[[85]]
(-13 + x)2 (-11 + x)2 (-9 + x)10 (-8 + x) (-7 + x)2 (5 + x)32

CoefficientList[feasibleinterlacingpolylist[chi], x]
{{-33 579, 22 577, -5802, 718, -43, 1},
{-33 547, 22 577, -5802, 718, -43, 1}, {-33 691, 22 593, -5802, 718, -43, 1},
{-33 803, 22 609, -5802, 718, -43, 1}, {-32 787, 22 417, -5794, 718, -43, 1},
{-32 931, 22 433, -5794, 718, -43, 1}, {-33 075, 22 449, -5794, 718, -43, 1},
{-33 043, 22 449, -5794, 718, -43, 1}, {-33 187, 22 465, -5794, 718, -43, 1},
{-32 139, 22 273, -5786, 718, -43, 1}, {-32 283, 22 289, -5786, 718, -43, 1},
{-32 427, 22 305, -5786, 718, -43, 1}, {-32 395, 22 305, -5786, 718, -43, 1},
{-32 571, 22 321, -5786, 718, -43, 1}, {-31 635, 22 145, -5778, 718, -43, 1},
{-31 779, 22 161, -5778, 718, -43, 1}, {-30 987, 22 001, -5770, 718, -43, 1}}

```



```
A = {{-33 579, 22 577, -5802, 718, -43, 1},
      {-33 547, 22 577, -5802, 718, -43, 1}, {-33 691, 22 593, -5802, 718, -43, 1},
      {-33 803, 22 609, -5802, 718, -43, 1}, {-32 787, 22 417, -5794, 718, -43, 1},
      {-32 931, 22 433, -5794, 718, -43, 1}, {-33 075, 22 449, -5794, 718, -43, 1},
      {-33 043, 22 449, -5794, 718, -43, 1}, {-33 187, 22 465, -5794, 718, -43, 1},
      {-32 139, 22 273, -5786, 718, -43, 1}, {-32 283, 22 289, -5786, 718, -43, 1},
      {-32 427, 22 305, -5786, 718, -43, 1}, {-32 395, 22 305, -5786, 718, -43, 1},
      {-32 571, 22 321, -5786, 718, -43, 1}, {-31 635, 22 145, -5778, 718, -43, 1},
      {-31 779, 22 161, -5778, 718, -43, 1}, {-30 987, 22 001, -5770, 718, -43, 1}};
```

```
A // MatrixForm
```

$$\begin{pmatrix} -33\,579 & 22\,577 & -5802 & 718 & -43 & 1 \\ -33\,547 & 22\,577 & -5802 & 718 & -43 & 1 \\ -33\,691 & 22\,593 & -5802 & 718 & -43 & 1 \\ -33\,803 & 22\,609 & -5802 & 718 & -43 & 1 \\ -32\,787 & 22\,417 & -5794 & 718 & -43 & 1 \\ -32\,931 & 22\,433 & -5794 & 718 & -43 & 1 \\ -33\,075 & 22\,449 & -5794 & 718 & -43 & 1 \\ -33\,043 & 22\,449 & -5794 & 718 & -43 & 1 \\ -33\,187 & 22\,465 & -5794 & 718 & -43 & 1 \\ -32\,139 & 22\,273 & -5786 & 718 & -43 & 1 \\ -32\,283 & 22\,289 & -5786 & 718 & -43 & 1 \\ -32\,427 & 22\,305 & -5786 & 718 & -43 & 1 \\ -32\,395 & 22\,305 & -5786 & 718 & -43 & 1 \\ -32\,571 & 22\,321 & -5786 & 718 & -43 & 1 \\ -31\,635 & 22\,145 & -5778 & 718 & -43 & 1 \\ -31\,779 & 22\,161 & -5778 & 718 & -43 & 1 \\ -30\,987 & 22\,001 & -5770 & 718 & -43 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1 636 939, 1 104 001, -284 122, 35 182, -2107, 49}
```

Array[c, 6].Transpose[A]

```
{ -33 579 c[1] + 22 577 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -33 547 c[1] + 22 577 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -33 691 c[1] + 22 593 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -33 803 c[1] + 22 609 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -32 787 c[1] + 22 417 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -32 931 c[1] + 22 433 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -33 075 c[1] + 22 449 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -33 043 c[1] + 22 449 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -33 187 c[1] + 22 465 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -32 139 c[1] + 22 273 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -32 283 c[1] + 22 289 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -32 427 c[1] + 22 305 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -32 395 c[1] + 22 305 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -32 571 c[1] + 22 321 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -31 635 c[1] + 22 145 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -31 779 c[1] + 22 161 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -30 987 c[1] + 22 001 c[2] - 5770 c[3] + 718 c[4] - 43 c[5] + c[6] }
```

Array[c, 6].g

```
-1 636 939 c[1] + 1 104 001 c[2] - 284 122 c[3] + 35 182 c[4] - 2107 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```
-1 636 939 c[1] + 1 104 001 c[2] - 284 122 c[3] + 35 182 c[4] - 2107 c[5] + 49 c[6] < 0 &&
  -33 579 c[1] + 22 577 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -33 547 c[1] + 22 577 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -33 691 c[1] + 22 593 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -33 803 c[1] + 22 609 c[2] - 5802 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32 787 c[1] + 22 417 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32 931 c[1] + 22 433 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -33 075 c[1] + 22 449 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -33 043 c[1] + 22 449 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -33 187 c[1] + 22 465 c[2] - 5794 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32 139 c[1] + 22 273 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32 283 c[1] + 22 289 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32 427 c[1] + 22 305 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32 395 c[1] + 22 305 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32 571 c[1] + 22 321 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31 635 c[1] + 22 145 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31 779 c[1] + 22 161 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30 987 c[1] + 22 001 c[2] - 5770 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0,
```

Array[c, 6], Integers]]

```
{c[1], c[2], c[3], c[4], c[5], c[6]}
```

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

chi = listdim17[[86]]

$(-9 + x)^8 (-8 + x) (5 + x)^{32} (95 - 20x + x^2)^4$

CoefficientList[feasibleinterlacingpolylist[chi], x]

{}

A =;

A // MatrixForm

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

Array[c,].Transpose[A]

Array[c,].g

cert = Flatten[Array[c,] /. FindInstance[< 0 &&, Array[c,], Integers]]

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

chi = listdim17[[87]]

$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-65284 + 37249x - 8292x^2 + 902x^3 - 48x^4 + x^5)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

A = {{1, -63, 1669, -24075, 203891, -1011597, 2714759, -3028905},
 {1, -63, 1669, -24075, 203891, -1011565, 2714119, -3025737},
 {1, -63, 1669, -24075, 203907, -1012061, 2719223, -3043161},
 {1, -63, 1669, -24075, 203907, -1012029, 2718583, -3039993},
 {1, -63, 1669, -24067, 203555, -1006381, 2679191, -2938833},
 {1, -63, 1669, -24067, 203555, -1006349, 2678615, -2936241},
 {1, -63, 1669, -24067, 203571, -1006877, 2684295, -2956257},
 {1, -63, 1669, -24067, 203571, -1006845, 2683719, -2953665},
 {1, -63, 1669, -24067, 203571, -1006813, 2683079, -2950497},

```

{1, -63, 1669, -24 067, 203 587, -1 007 309, 2 688 183, -2 967 921},
{1, -63, 1669, -24 067, 203 587, -1 007 277, 2 687 543, -2 964 753},
{1, -63, 1669, -24 067, 203 587, -1 007 245, 2 686 903, -2 961 585},
{1, -63, 1669, -24 067, 203 603, -1 007 837, 2 693 863, -2 987 937},
{1, -63, 1669, -24 067, 203 603, -1 007 773, 2 692 647, -2 982 177},
{1, -63, 1669, -24 067, 203 603, -1 007 741, 2 692 007, -2 979 009},
{1, -63, 1669, -24 067, 203 603, -1 007 709, 2 691 367, -2 975 841},
{1, -63, 1669, -24 067, 203 619, -1 008 237, 2 697 111, -2 996 433},
{1, -63, 1669, -24 067, 203 619, -1 008 205, 2 696 471, -2 993 265},
{1, -63, 1669, -24 059, 203 235, -1 001 629, 2 648 151, -2 863 593},
{1, -63, 1669, -24 059, 203 235, -1 001 597, 2 647 511, -2 860 425},
{1, -63, 1669, -24 059, 203 251, -1 002 093, 2 652 615, -2 877 849},
{1, -63, 1669, -24 059, 203 251, -1 002 029, 2 651 399, -2 872 089},
{1, -63, 1669, -24 059, 203 267, -1 002 525, 2 656 503, -2 889 513},
{1, -63, 1669, -24 059, 203 267, -1 002 493, 2 655 863, -2 886 345},
{1, -63, 1669, -24 059, 203 283, -1 003 053, 2 662 183, -2 909 529},
{1, -63, 1669, -24 059, 203 283, -1 002 989, 2 660 967, -2 903 769},
{1, -63, 1669, -24 059, 203 283, -1 002 957, 2 660 327, -2 900 601},
{1, -63, 1669, -24 059, 203 283, -1 002 925, 2 659 687, -2 897 433},
{1, -63, 1669, -24 059, 203 299, -1 003 453, 2 665 431, -2 918 025},
{1, -63, 1669, -24 059, 203 299, -1 003 421, 2 664 791, -2 914 857},
{1, -63, 1669, -24 059, 203 315, -1 003 949, 2 670 535, -2 935 449},
{1, -63, 1669, -24 059, 203 315, -1 003 917, 2 669 895, -2 932 281},
{1, -63, 1669, -24 059, 203 331, -1 004 413, 2 674 999, -2 949 705},
{1, -63, 1669, -24 059, 203 331, -1 004 381, 2 674 359, -2 946 537},
{1, -63, 1669, -24 051, 202 931, -997 309, 2 620 935, -2 799 441},
{1, -63, 1669, -24 051, 202 947, -997 773, 2 625 399, -2 813 697},
{1, -63, 1669, -24 051, 202 947, -997 709, 2 624 183, -2 807 937},
{1, -63, 1669, -24 051, 202 963, -998 205, 2 629 287, -2 825 361},
{1, -63, 1669, -24 051, 202 963, -998 173, 2 628 647, -2 822 193},
{1, -63, 1669, -24 051, 202 979, -998 669, 2 633 751, -2 839 617},
{1, -63, 1669, -24 051, 202 979, -998 637, 2 633 111, -2 836 449},
{1, -63, 1669, -24 051, 202 995, -999 133, 2 638 215, -2 853 873},
{1, -63, 1669, -24 051, 203 011, -999 629, 2 643 319, -2 871 297},
{1, -63, 1669, -24 051, 203 011, -999 597, 2 642 679, -2 868 129},
{1, -63, 1669, -24 051, 203 027, -1 000 093, 2 647 783, -2 885 553},
{1, -63, 1669, -24 043, 202 627, -992 989, 2 593 719, -2 735 289},
{1, -63, 1669, -24 043, 202 643, -993 421, 2 597 607, -2 746 953},
{1, -63, 1669, -24 043, 202 659, -993 885, 2 602 071, -2 761 209},
{1, -63, 1669, -24 043, 202 659, -993 853, 2 601 431, -2 758 041},
{1, -63, 1669, -24 043, 202 675, -994 349, 2 606 535, -2 775 465},
{1, -63, 1669, -24 043, 202 675, -994 317, 2 605 895, -2 772 297},
{1, -63, 1669, -24 043, 202 691, -994 845, 2 611 639, -2 792 889},
{1, -63, 1669, -24 043, 202 691, -994 813, 2 610 999, -2 789 721},
{1, -63, 1669, -24 043, 202 707, -995 309, 2 616 103, -2 807 145},
{1, -63, 1669, -24 043, 202 739, -996 269, 2 625 671, -2 838 825},
{1, -63, 1669, -24 035, 202 307, -988 205, 2 562 039, -2 656 881},

```

```
{1, -63, 1669, -24 035, 202 339, -989 101, 2 570 391, -2 682 801},
{1, -63, 1669, -24 035, 202 355, -989 565, 2 574 855, -2 697 057},
{1, -63, 1669, -24 035, 202 355, -989 533, 2 574 215, -2 693 889},
{1, -63, 1669, -24 035, 202 371, -990 029, 2 579 319, -2 711 313},
{1, -63, 1669, -24 035, 202 387, -990 525, 2 584 423, -2 728 737},
{1, -63, 1669, -24 035, 202 403, -990 989, 2 588 887, -2 742 993},
{1, -63, 1669, -24 027, 202 035, -984 781, 2 543 175, -2 618 649},
{1, -63, 1669, -24 027, 202 051, -985 245, 2 547 639, -2 632 905},
{1, -63, 1669, -24 027, 202 083, -986 205, 2 557 207, -2 664 585},
{1, -63, 1669, -24 019, 201 731, -980 461, 2 515 959, -2 554 497},
{1, -63, 1669, -24 019, 201 747, -980 925, 2 520 423, -2 568 753},
{1, -63, 1669, -24 019, 201 763, -981 421, 2 525 527, -2 586 177}};
```

```
A // MatrixForm
```

```
( 1 -63 1669 -24 075 203 891 -1 011 597 2 714 759 -3 028 905
1 -63 1669 -24 075 203 891 -1 011 565 2 714 119 -3 025 737
1 -63 1669 -24 075 203 907 -1 012 061 2 719 223 -3 043 161
1 -63 1669 -24 075 203 907 -1 012 029 2 718 583 -3 039 993
1 -63 1669 -24 067 203 555 -1 006 381 2 679 191 -2 938 833
1 -63 1669 -24 067 203 555 -1 006 349 2 678 615 -2 936 241
1 -63 1669 -24 067 203 571 -1 006 877 2 684 295 -2 956 257
1 -63 1669 -24 067 203 571 -1 006 845 2 683 719 -2 953 665
1 -63 1669 -24 067 203 571 -1 006 813 2 683 079 -2 950 497
1 -63 1669 -24 067 203 587 -1 007 309 2 688 183 -2 967 921
1 -63 1669 -24 067 203 587 -1 007 277 2 687 543 -2 964 753
1 -63 1669 -24 067 203 587 -1 007 245 2 686 903 -2 961 585
1 -63 1669 -24 067 203 603 -1 007 837 2 693 863 -2 987 937
1 -63 1669 -24 067 203 603 -1 007 773 2 692 647 -2 982 177
1 -63 1669 -24 067 203 603 -1 007 741 2 692 007 -2 979 009
1 -63 1669 -24 067 203 603 -1 007 709 2 691 367 -2 975 841
1 -63 1669 -24 067 203 619 -1 008 237 2 697 111 -2 996 433
1 -63 1669 -24 067 203 619 -1 008 205 2 696 471 -2 993 265
1 -63 1669 -24 059 203 235 -1 001 629 2 648 151 -2 863 593
1 -63 1669 -24 059 203 235 -1 001 597 2 647 511 -2 860 425
1 -63 1669 -24 059 203 251 -1 002 093 2 652 615 -2 877 849
1 -63 1669 -24 059 203 251 -1 002 029 2 651 399 -2 872 089
1 -63 1669 -24 059 203 267 -1 002 525 2 656 503 -2 889 513
1 -63 1669 -24 059 203 267 -1 002 493 2 655 863 -2 886 345
1 -63 1669 -24 059 203 283 -1 003 053 2 662 183 -2 909 529
1 -63 1669 -24 059 203 283 -1 002 989 2 660 967 -2 903 769
1 -63 1669 -24 059 203 283 -1 002 957 2 660 327 -2 900 601
1 -63 1669 -24 059 203 283 -1 002 925 2 659 687 -2 897 433
1 -63 1669 -24 059 203 299 -1 003 453 2 665 431 -2 918 025
1 -63 1669 -24 059 203 299 -1 003 421 2 664 791 -2 914 857
1 -63 1669 -24 059 203 315 -1 003 949 2 670 535 -2 935 449
1 -63 1669 -24 059 203 315 -1 003 917 2 669 895 -2 932 281
1 -63 1669 -24 059 203 331 -1 004 413 2 674 999 -2 949 705
1 -63 1669 -24 059 203 331 -1 004 381 2 674 359 -2 946 537
1 -63 1669 -24 051 202 931 -997 309 2 620 935 -2 799 441
1 -63 1669 -24 051 202 947 -997 773 2 625 399 -2 813 697
1 -63 1669 -24 051 202 947 -997 709 2 624 183 -2 807 937
1 -63 1669 -24 051 202 963 -998 205 2 629 287 -2 825 361
1 -63 1669 -24 051 202 963 -998 173 2 628 647 -2 822 193)
```

```

1 -63 1669 -24051 202979 -998669 2633751 -2839617
1 -63 1669 -24051 202979 -998637 2633111 -2836449
1 -63 1669 -24051 202995 -999133 2638215 -2853873
1 -63 1669 -24051 203011 -999629 2643319 -2871297
1 -63 1669 -24051 203011 -999597 2642679 -2868129
1 -63 1669 -24051 203027 -1000093 2647783 -2885553
1 -63 1669 -24043 202627 -992989 2593719 -2735289
1 -63 1669 -24043 202643 -993421 2597607 -2746953
1 -63 1669 -24043 202659 -993885 2602071 -2761209
1 -63 1669 -24043 202659 -993853 2601431 -2758041
1 -63 1669 -24043 202675 -994349 2606535 -2775465
1 -63 1669 -24043 202675 -994317 2605895 -2772297
1 -63 1669 -24043 202691 -994845 2611639 -2792889
1 -63 1669 -24043 202691 -994813 2610999 -2789721
1 -63 1669 -24043 202707 -995309 2616103 -2807145
1 -63 1669 -24043 202739 -996269 2625671 -2838825
1 -63 1669 -24035 202307 -988205 2562039 -2656881
1 -63 1669 -24035 202339 -989101 2570391 -2682801
1 -63 1669 -24035 202355 -989565 2574855 -2697057
1 -63 1669 -24035 202355 -989533 2574215 -2693889
1 -63 1669 -24035 202371 -990029 2579319 -2711313
1 -63 1669 -24035 202387 -990525 2584423 -2728737
1 -63 1669 -24035 202403 -990989 2588887 -2742993
1 -63 1669 -24027 202035 -984781 2543175 -2618649
1 -63 1669 -24027 202051 -985245 2547639 -2632905
1 -63 1669 -24027 202083 -986205 2557207 -2664585
1 -63 1669 -24019 201731 -980461 2515959 -2554497
1 -63 1669 -24019 201747 -980925 2520423 -2568753
1 -63 1669 -24019 201763 -981421 2525527 -2586177

```

Dimensions[A]

{68, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1179315, 9978211, -49409645, 132140215, -146599697}

Array[c, 8].Transpose[A]

```

{c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] + 203891 c[5] -
  1011597 c[6] + 2714759 c[7] - 3028905 c[8], c[1] - 63 c[2] + 1669 c[3] -
  24075 c[4] + 203891 c[5] - 1011565 c[6] + 2714119 c[7] - 3025737 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] + 203907 c[5] - 1012061 c[6] +
  2719223 c[7] - 3043161 c[8], c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] +
  203907 c[5] - 1012029 c[6] + 2718583 c[7] - 3039993 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203555 c[5] - 1006381 c[6] +
  2679191 c[7] - 2938833 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
  203555 c[5] - 1006349 c[6] + 2678615 c[7] - 2936241 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203571 c[5] - 1006877 c[6] +
  2684295 c[7] - 2956257 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
  203571 c[5] - 1006845 c[6] + 2683719 c[7] - 2953665 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203571 c[5] - 1006813 c[6] +
  2683079 c[7] - 2950497 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +

```

$$\begin{aligned}
& 203\,587\,c[5] - 1\,007\,309\,c[6] + 2\,688\,183\,c[7] - 2\,967\,921\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,587\,c[5] - 1\,007\,277\,c[6] + \\
& 2\,687\,543\,c[7] - 2\,964\,753\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,587\,c[5] - 1\,007\,245\,c[6] + 2\,686\,903\,c[7] - 2\,961\,585\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,603\,c[5] - 1\,007\,837\,c[6] + \\
& 2\,693\,863\,c[7] - 2\,987\,937\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,603\,c[5] - 1\,007\,773\,c[6] + 2\,692\,647\,c[7] - 2\,982\,177\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,603\,c[5] - 1\,007\,741\,c[6] + \\
& 2\,692\,007\,c[7] - 2\,979\,009\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,603\,c[5] - 1\,007\,709\,c[6] + 2\,691\,367\,c[7] - 2\,975\,841\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,619\,c[5] - 1\,008\,237\,c[6] + \\
& 2\,697\,111\,c[7] - 2\,996\,433\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,619\,c[5] - 1\,008\,205\,c[6] + 2\,696\,471\,c[7] - 2\,993\,265\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,235\,c[5] - 1\,001\,629\,c[6] + \\
& 2\,648\,151\,c[7] - 2\,863\,593\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,235\,c[5] - 1\,001\,597\,c[6] + 2\,647\,511\,c[7] - 2\,860\,425\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,251\,c[5] - 1\,002\,093\,c[6] + \\
& 2\,652\,615\,c[7] - 2\,877\,849\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,251\,c[5] - 1\,002\,029\,c[6] + 2\,651\,399\,c[7] - 2\,872\,089\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,267\,c[5] - 1\,002\,525\,c[6] + \\
& 2\,656\,503\,c[7] - 2\,889\,513\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,267\,c[5] - 1\,002\,493\,c[6] + 2\,655\,863\,c[7] - 2\,886\,345\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,003\,053\,c[6] + \\
& 2\,662\,183\,c[7] - 2\,909\,529\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,989\,c[6] + 2\,660\,967\,c[7] - 2\,903\,769\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,957\,c[6] + \\
& 2\,660\,327\,c[7] - 2\,900\,601\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,925\,c[6] + 2\,659\,687\,c[7] - 2\,897\,433\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,453\,c[6] + \\
& 2\,665\,431\,c[7] - 2\,918\,025\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,421\,c[6] + 2\,664\,791\,c[7] - 2\,914\,857\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,949\,c[6] + \\
& 2\,670\,535\,c[7] - 2\,935\,449\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,917\,c[6] + 2\,669\,895\,c[7] - 2\,932\,281\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,413\,c[6] + \\
& 2\,674\,999\,c[7] - 2\,949\,705\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,381\,c[6] + 2\,674\,359\,c[7] - 2\,946\,537\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,931\,c[5] - 997\,309\,c[6] + \\
& 2\,620\,935\,c[7] - 2\,799\,441\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,947\,c[5] - 997\,773\,c[6] + 2\,625\,399\,c[7] - 2\,813\,697\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,947\,c[5] - 997\,709\,c[6] + \\
& 2\,624\,183\,c[7] - 2\,807\,937\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,963\,c[5] - 998\,205\,c[6] + 2\,629\,287\,c[7] - 2\,825\,361\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,963\,c[5] - 998\,173\,c[6] + \\
& 2\,628\,647\,c[7] - 2\,822\,193\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,669\,c[6] + 2\,633\,751\,c[7] - 2\,839\,617\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,637\,c[6] +
\end{aligned}$$

```

2 633 111 c[7] - 2 836 449 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 995 c[5] - 999 133 c[6] + 2 638 215 c[7] - 2 853 873 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 011 c[5] - 999 629 c[6] +
2 643 319 c[7] - 2 871 297 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
203 011 c[5] - 999 597 c[6] + 2 642 679 c[7] - 2 868 129 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 027 c[5] - 1 000 093 c[6] +
2 647 783 c[7] - 2 885 553 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 627 c[5] - 992 989 c[6] + 2 593 719 c[7] - 2 735 289 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 643 c[5] - 993 421 c[6] +
2 597 607 c[7] - 2 746 953 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 659 c[5] - 993 885 c[6] + 2 602 071 c[7] - 2 761 209 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 659 c[5] - 993 853 c[6] +
2 601 431 c[7] - 2 758 041 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 675 c[5] - 994 349 c[6] + 2 606 535 c[7] - 2 775 465 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 675 c[5] - 994 317 c[6] +
2 605 895 c[7] - 2 772 297 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 691 c[5] - 994 845 c[6] + 2 611 639 c[7] - 2 792 889 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 691 c[5] - 994 813 c[6] +
2 610 999 c[7] - 2 789 721 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 707 c[5] - 995 309 c[6] + 2 616 103 c[7] - 2 807 145 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 269 c[6] +
2 625 671 c[7] - 2 838 825 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 307 c[5] - 988 205 c[6] + 2 562 039 c[7] - 2 656 881 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 339 c[5] - 989 101 c[6] +
2 570 391 c[7] - 2 682 801 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 355 c[5] - 989 565 c[6] + 2 574 855 c[7] - 2 697 057 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 355 c[5] - 989 533 c[6] +
2 574 215 c[7] - 2 693 889 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 371 c[5] - 990 029 c[6] + 2 579 319 c[7] - 2 711 313 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 387 c[5] - 990 525 c[6] +
2 584 423 c[7] - 2 728 737 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 403 c[5] - 990 989 c[6] + 2 588 887 c[7] - 2 742 993 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 035 c[5] - 984 781 c[6] +
2 543 175 c[7] - 2 618 649 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 051 c[5] - 985 245 c[6] + 2 547 639 c[7] - 2 632 905 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 205 c[6] +
2 557 207 c[7] - 2 664 585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 731 c[5] - 980 461 c[6] + 2 515 959 c[7] - 2 554 497 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 747 c[5] - 980 925 c[6] +
2 520 423 c[7] - 2 568 753 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 763 c[5] - 981 421 c[6] + 2 525 527 c[7] - 2 586 177 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 315 c[4] +
9 978 211 c[5] - 49 409 645 c[6] + 132 140 215 c[7] - 146 599 697 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 315 c[4] +

```


$$\begin{aligned}
& 9\,978\,211\,c[5] - 49\,409\,645\,c[6] + 132\,140\,215\,c[7] - 146\,599\,697\,c[8] < 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,891\,c[5] - 1\,011\,597\,c[6] + \\
& \quad 2\,714\,759\,c[7] - 3\,028\,905\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& \quad 203\,891\,c[5] - 1\,011\,565\,c[6] + 2\,714\,119\,c[7] - 3\,025\,737\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,907\,c[5] - 1\,012\,061\,c[6] + \\
& \quad 2\,719\,223\,c[7] - 3\,043\,161\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + \\
& \quad 203\,907\,c[5] - 1\,012\,029\,c[6] + 2\,718\,583\,c[7] - 3\,039\,993\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,555\,c[5] - 1\,006\,381\,c[6] + \\
& \quad 2\,679\,191\,c[7] - 2\,938\,833\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,555\,c[5] - 1\,006\,349\,c[6] + 2\,678\,615\,c[7] - 2\,936\,241\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,571\,c[5] - 1\,006\,877\,c[6] + \\
& \quad 2\,684\,295\,c[7] - 2\,956\,257\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,571\,c[5] - 1\,006\,845\,c[6] + 2\,683\,719\,c[7] - 2\,953\,665\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,571\,c[5] - 1\,006\,813\,c[6] + \\
& \quad 2\,683\,079\,c[7] - 2\,950\,497\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,587\,c[5] - 1\,007\,309\,c[6] + 2\,688\,183\,c[7] - 2\,967\,921\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,587\,c[5] - 1\,007\,277\,c[6] + \\
& \quad 2\,687\,543\,c[7] - 2\,964\,753\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,587\,c[5] - 1\,007\,245\,c[6] + 2\,686\,903\,c[7] - 2\,961\,585\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,603\,c[5] - 1\,007\,837\,c[6] + \\
& \quad 2\,693\,863\,c[7] - 2\,987\,937\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,603\,c[5] - 1\,007\,773\,c[6] + 2\,692\,647\,c[7] - 2\,982\,177\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,603\,c[5] - 1\,007\,741\,c[6] + \\
& \quad 2\,692\,007\,c[7] - 2\,979\,009\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,603\,c[5] - 1\,007\,709\,c[6] + 2\,691\,367\,c[7] - 2\,975\,841\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,619\,c[5] - 1\,008\,237\,c[6] + \\
& \quad 2\,697\,111\,c[7] - 2\,996\,433\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,619\,c[5] - 1\,008\,205\,c[6] + 2\,696\,471\,c[7] - 2\,993\,265\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,235\,c[5] - 1\,001\,629\,c[6] + \\
& \quad 2\,648\,151\,c[7] - 2\,863\,593\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,235\,c[5] - 1\,001\,597\,c[6] + 2\,647\,511\,c[7] - 2\,860\,425\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,251\,c[5] - \\
& \quad 1\,002\,093\,c[6] + 2\,652\,615\,c[7] - 2\,877\,849\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,251\,c[5] - 1\,002\,029\,c[6] + \\
& \quad 2\,651\,399\,c[7] - 2\,872\,089\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,267\,c[5] - 1\,002\,525\,c[6] + 2\,656\,503\,c[7] - 2\,889\,513\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,267\,c[5] - 1\,002\,493\,c[6] + \\
& \quad 2\,655\,863\,c[7] - 2\,886\,345\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,283\,c[5] - 1\,003\,053\,c[6] + 2\,662\,183\,c[7] - 2\,909\,529\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,989\,c[6] + \\
& \quad 2\,660\,967\,c[7] - 2\,903\,769\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,283\,c[5] - 1\,002\,957\,c[6] + 2\,660\,327\,c[7] - 2\,900\,601\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,925\,c[6] + \\
& \quad 2\,659\,687\,c[7] - 2\,897\,433\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,299\,c[5] - 1\,003\,453\,c[6] + 2\,665\,431\,c[7] - 2\,918\,025\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,421\,c[6] + \\
& \quad 2\,664\,791\,c[7] - 2\,914\,857\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 203\,315\,c[5] - 1\,003\,949\,c[6] + 2\,670\,535\,c[7] - 2\,935\,449\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,917\,c[6] + \\
& \quad 2\,669\,895\,c[7] - 2\,932\,281\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,331\,c[5] - 1\,004\,413\,c[6] + 2\,674\,999\,c[7] - 2\,949\,705\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,381\,c[6] + \\
& \quad 2\,674\,359\,c[7] - 2\,946\,537\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 202\,931\,c[5] - 997\,309\,c[6] + 2\,620\,935\,c[7] - 2\,799\,441\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,947\,c[5] - 997\,773\,c[6] + \\
& \quad 2\,625\,399\,c[7] - 2\,813\,697\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 202\,947\,c[5] - 997\,709\,c[6] + 2\,624\,183\,c[7] - 2\,807\,937\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,963\,c[5] - 998\,205\,c[6] + \\
& \quad 2\,629\,287\,c[7] - 2\,825\,361\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 202\,963\,c[5] - 998\,173\,c[6] + 2\,628\,647\,c[7] - 2\,822\,193\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,669\,c[6] + \\
& \quad 2\,633\,751\,c[7] - 2\,839\,617\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 202\,979\,c[5] - 998\,637\,c[6] + 2\,633\,111\,c[7] - 2\,836\,449\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,133\,c[6] + \\
& \quad 2\,638\,215\,c[7] - 2\,853\,873\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,011\,c[5] - 999\,629\,c[6] + 2\,643\,319\,c[7] - 2\,871\,297\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,597\,c[6] + \\
& \quad 2\,642\,679\,c[7] - 2\,868\,129\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,027\,c[5] - 1\,000\,093\,c[6] + 2\,647\,783\,c[7] - 2\,885\,553\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,627\,c[5] - 992\,989\,c[6] + \\
& \quad 2\,593\,719\,c[7] - 2\,735\,289\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,643\,c[5] - 993\,421\,c[6] + 2\,597\,607\,c[7] - 2\,746\,953\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,659\,c[5] - 993\,885\,c[6] + \\
& \quad 2\,602\,071\,c[7] - 2\,761\,209\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,659\,c[5] - 993\,853\,c[6] + 2\,601\,431\,c[7] - 2\,758\,041\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,675\,c[5] - 994\,349\,c[6] + \\
& \quad 2\,606\,535\,c[7] - 2\,775\,465\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,675\,c[5] - 994\,317\,c[6] + 2\,605\,895\,c[7] - 2\,772\,297\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,845\,c[6] + \\
& \quad 2\,611\,639\,c[7] - 2\,792\,889\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,691\,c[5] - 994\,813\,c[6] + 2\,610\,999\,c[7] - 2\,789\,721\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,309\,c[6] + \\
& \quad 2\,616\,103\,c[7] - 2\,807\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,269\,c[6] + 2\,625\,671\,c[7] - 2\,838\,825\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,307\,c[5] - 988\,205\,c[6] + \\
& \quad 2\,562\,039\,c[7] - 2\,656\,881\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,339\,c[5] - 989\,101\,c[6] + 2\,570\,391\,c[7] - 2\,682\,801\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,355\,c[5] - 989\,565\,c[6] + \\
& \quad 2\,574\,855\,c[7] - 2\,697\,057\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,355\,c[5] - 989\,533\,c[6] + 2\,574\,215\,c[7] - 2\,693\,889\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 990\,029\,c[6] + \\
& \quad 2\,579\,319\,c[7] - 2\,711\,313\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,387\,c[5] - 990\,525\,c[6] + 2\,584\,423\,c[7] - 2\,728\,737\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,989\,c[6] +
\end{aligned}$$

```

2 588 887 c[7] - 2 742 993 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 035 c[5] - 984 781 c[6] + 2 543 175 c[7] - 2 618 649 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 051 c[5] - 985 245 c[6] +
2 547 639 c[7] - 2 632 905 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 083 c[5] - 986 205 c[6] + 2 557 207 c[7] - 2 664 585 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 731 c[5] - 980 461 c[6] +
2 515 959 c[7] - 2 554 497 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 747 c[5] - 980 925 c[6] + 2 520 423 c[7] - 2 568 753 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 763 c[5] - 981 421 c[6] +
2 525 527 c[7] - 2 586 177 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -3 063 174, -1 179 074, -259 928, -45 390}

GCD[0, 0, 0, 0, -3 063 174, -1 179 074, -259 928, -45 390]
2

cert = cert / 2
{0, 0, 0, 0, -1 531 587, -589 537, -129 964, -22 695}

cert.g
-75 145 337

{0, 0, 0, 0, -1 531 587, -589 537, -129 964, -22 695}.Reverse[gpart[listdim17[[87]]]]
-75 145 337

cert.Transpose[A]
{17 115 871, 9 529 887, 9 536 271, 1 950 287, 35 079 623, 32 248 263, 35 086 007,
32 254 647, 24 668 663, 24 675 047, 17 089 063, 9 503 079, 27 512 791, 17 095 447,
9 509 463, 1 923 479, 9 515 847, 1 929 863, 50 218 399, 42 632 415, 42 638 799,
32 221 455, 32 227 839, 24 641 855, 35 065 583, 24 648 239, 17 062 255, 9 476 271,
17 068 639, 9 482 655, 17 075 023, 9 489 039, 9 495 423, 1 909 439, 50 191 591,
42 611 991, 32 194 647, 32 201 031, 24 615 047, 24 621 431, 17 035 447,
17 041 831, 17 048 215, 9 462 231, 9 468 615, 50 164 783, 39 753 823, 32 174 223,
24 588 239, 24 594 623, 17 008 639, 24 601 007, 17 015 023, 17 021 407,
9 448 191, 57 717 575, 39 727 015, 32 147 415, 24 561 431, 24 567 815, 24 574 199,
16 994 599, 39 700 207, 32 120 607, 24 547 391, 39 673 399, 32 093 799, 32 100 183}

chi = listdim17[[88]]
(-9 + x)12 (5 + x)32 (-97 620 + 51 721 x - 10 616 x2 + 1062 x3 - 52 x4 + x5)

```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {413 299, -315 168, 95 923, -14 984, 1273, -56, 1},
  {415 235, -315 520, 95 939, -14 984, 1273, -56, 1},
  {401 131, -311 944, 95 643, -14 976, 1273, -56, 1},
  {403 355, -312 328, 95 659, -14 976, 1273, -56, 1},
  {403 003, -312 296, 95 659, -14 976, 1273, -56, 1},
  {402 651, -312 264, 95 659, -14 976, 1273, -56, 1},
  {404 939, -312 648, 95 675, -14 976, 1273, -56, 1},
  {388 899, -308 720, 95 363, -14 968, 1273, -56, 1},
  {390 771, -309 072, 95 379, -14 968, 1273, -56, 1},
  {390 835, -309 072, 95 379, -14 968, 1273, -56, 1},
  {390 483, -309 040, 95 379, -14 968, 1273, -56, 1},
  {392 707, -309 424, 95 395, -14 968, 1273, -56, 1},
  {392 355, -309 392, 95 395, -14 968, 1273, -56, 1},
  {378 603, -305 848, 95 099, -14 960, 1273, -56, 1},
  {380 475, -306 200, 95 115, -14 960, 1273, -56, 1},
  {380 187, -306 168, 95 115, -14 960, 1273, -56, 1},
  {382 699, -306 584, 95 131, -14 960, 1273, -56, 1},
  {382 411, -306 552, 95 131, -14 960, 1273, -56, 1},
  {382 059, -306 520, 95 131, -14 960, 1273, -56, 1},
  {383 995, -306 872, 95 147, -14 960, 1273, -56, 1},
  {370 467, -303 360, 94 851, -14 952, 1273, -56, 1},
  {370 179, -303 328, 94 851, -14 952, 1273, -56, 1},
  {369 891, -303 296, 94 851, -14 952, 1273, -56, 1},
  {372 403, -303 712, 94 867, -14 952, 1273, -56, 1},
  {372 051, -303 680, 94 867, -14 952, 1273, -56, 1},
  {371 763, -303 648, 94 867, -14 952, 1273, -56, 1},
  {373 987, -304 032, 94 883, -14 952, 1273, -56, 1},
  {373 699, -304 000, 94 883, -14 952, 1273, -56, 1},
  {360 171, -300 488, 94 587, -14 944, 1273, -56, 1},
  {359 883, -300 456, 94 587, -14 944, 1273, -56, 1},
  {361 755, -300 808, 94 603, -14 944, 1273, -56, 1},
  {361 467, -300 776, 94 603, -14 944, 1273, -56, 1},
  {363 339, -301 128, 94 619, -14 944, 1273, -56, 1},
  {365 275, -301 480, 94 635, -14 944, 1273, -56, 1},
  {351 459, -297 936, 94 339, -14 936, 1273, -56, 1},
  {353 043, -298 256, 94 355, -14 936, 1273, -56, 1},
  {352 755, -298 224, 94 355, -14 936, 1273, -56, 1},
  {354 627, -298 576, 94 371, -14 936, 1273, -56, 1},
  {344 331, -295 704, 94 107, -14 928, 1273, -56, 1} }
```

```

A = {{413 299, -315 168, 95 923, -14 984, 1273, -56, 1},
      {415 235, -315 520, 95 939, -14 984, 1273, -56, 1},
      {401 131, -311 944, 95 643, -14 976, 1273, -56, 1},
      {403 355, -312 328, 95 659, -14 976, 1273, -56, 1},
      {403 003, -312 296, 95 659, -14 976, 1273, -56, 1},
      {402 651, -312 264, 95 659, -14 976, 1273, -56, 1},
      {404 939, -312 648, 95 675, -14 976, 1273, -56, 1},
      {388 899, -308 720, 95 363, -14 968, 1273, -56, 1},
      {390 771, -309 072, 95 379, -14 968, 1273, -56, 1},
      {390 835, -309 072, 95 379, -14 968, 1273, -56, 1},
      {390 483, -309 040, 95 379, -14 968, 1273, -56, 1},
      {392 707, -309 424, 95 395, -14 968, 1273, -56, 1},
      {392 355, -309 392, 95 395, -14 968, 1273, -56, 1},
      {378 603, -305 848, 95 099, -14 960, 1273, -56, 1},
      {380 475, -306 200, 95 115, -14 960, 1273, -56, 1},
      {380 187, -306 168, 95 115, -14 960, 1273, -56, 1},
      {382 699, -306 584, 95 131, -14 960, 1273, -56, 1},
      {382 411, -306 552, 95 131, -14 960, 1273, -56, 1},
      {382 059, -306 520, 95 131, -14 960, 1273, -56, 1},
      {383 995, -306 872, 95 147, -14 960, 1273, -56, 1},
      {370 467, -303 360, 94 851, -14 952, 1273, -56, 1},
      {370 179, -303 328, 94 851, -14 952, 1273, -56, 1},
      {369 891, -303 296, 94 851, -14 952, 1273, -56, 1},
      {372 403, -303 712, 94 867, -14 952, 1273, -56, 1},
      {372 051, -303 680, 94 867, -14 952, 1273, -56, 1},
      {371 763, -303 648, 94 867, -14 952, 1273, -56, 1},
      {373 987, -304 032, 94 883, -14 952, 1273, -56, 1},
      {373 699, -304 000, 94 883, -14 952, 1273, -56, 1},
      {360 171, -300 488, 94 587, -14 944, 1273, -56, 1},
      {359 883, -300 456, 94 587, -14 944, 1273, -56, 1},
      {361 755, -300 808, 94 603, -14 944, 1273, -56, 1},
      {361 467, -300 776, 94 603, -14 944, 1273, -56, 1},
      {363 339, -301 128, 94 619, -14 944, 1273, -56, 1},
      {365 275, -301 480, 94 635, -14 944, 1273, -56, 1},
      {351 459, -297 936, 94 339, -14 936, 1273, -56, 1},
      {353 043, -298 256, 94 355, -14 936, 1273, -56, 1},
      {352 755, -298 224, 94 355, -14 936, 1273, -56, 1},
      {354 627, -298 576, 94 371, -14 936, 1273, -56, 1},
      {344 331, -295 704, 94 107, -14 928, 1273, -56, 1}};

```

A // MatrixForm

```
( 413 299 -315 168 95 923 -14 984 1273 -56 1 )
( 415 235 -315 520 95 939 -14 984 1273 -56 1 )
( 401 131 -311 944 95 643 -14 976 1273 -56 1 )
( 403 355 -312 328 95 659 -14 976 1273 -56 1 )
( 403 003 -312 296 95 659 -14 976 1273 -56 1 )
( 402 651 -312 264 95 659 -14 976 1273 -56 1 )
( 404 939 -312 648 95 675 -14 976 1273 -56 1 )
( 388 899 -308 720 95 363 -14 968 1273 -56 1 )
( 390 771 -309 072 95 379 -14 968 1273 -56 1 )
( 390 835 -309 072 95 379 -14 968 1273 -56 1 )
( 390 483 -309 040 95 379 -14 968 1273 -56 1 )
( 392 707 -309 424 95 395 -14 968 1273 -56 1 )
( 392 355 -309 392 95 395 -14 968 1273 -56 1 )
( 378 603 -305 848 95 099 -14 960 1273 -56 1 )
( 380 475 -306 200 95 115 -14 960 1273 -56 1 )
( 380 187 -306 168 95 115 -14 960 1273 -56 1 )
( 382 699 -306 584 95 131 -14 960 1273 -56 1 )
( 382 411 -306 552 95 131 -14 960 1273 -56 1 )
( 382 059 -306 520 95 131 -14 960 1273 -56 1 )
( 383 995 -306 872 95 147 -14 960 1273 -56 1 )
( 370 467 -303 360 94 851 -14 952 1273 -56 1 )
( 370 179 -303 328 94 851 -14 952 1273 -56 1 )
( 369 891 -303 296 94 851 -14 952 1273 -56 1 )
( 372 403 -303 712 94 867 -14 952 1273 -56 1 )
( 372 051 -303 680 94 867 -14 952 1273 -56 1 )
( 371 763 -303 648 94 867 -14 952 1273 -56 1 )
( 373 987 -304 032 94 883 -14 952 1273 -56 1 )
( 373 699 -304 000 94 883 -14 952 1273 -56 1 )
( 360 171 -300 488 94 587 -14 944 1273 -56 1 )
( 359 883 -300 456 94 587 -14 944 1273 -56 1 )
( 361 755 -300 808 94 603 -14 944 1273 -56 1 )
( 361 467 -300 776 94 603 -14 944 1273 -56 1 )
( 363 339 -301 128 94 619 -14 944 1273 -56 1 )
( 365 275 -301 480 94 635 -14 944 1273 -56 1 )
( 351 459 -297 936 94 339 -14 936 1273 -56 1 )
( 353 043 -298 256 94 355 -14 936 1273 -56 1 )
( 352 755 -298 224 94 355 -14 936 1273 -56 1 )
( 354 627 -298 576 94 371 -14 936 1273 -56 1 )
( 344 331 -295 704 94 107 -14 928 1273 -56 1 )
```

Dimensions[A]

```
{39, 7}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{19 929 915, -15 339 112, 4 689 451, -733 856, 62 377, -2744, 49}
```

Array[c, 7].Transpose[A]

```
{413 299 c[1] - 315 168 c[2] + 95 923 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 415 235 c[1] - 315 520 c[2] + 95 939 c[3] - 14 984 c[4] + 1273 c[5] - 56 c[6] + c[7],
 401 131 c[1] - 311 944 c[2] + 95 643 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 355 c[1] - 312 328 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 403 003 c[1] - 312 296 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 402 651 c[1] - 312 264 c[2] + 95 659 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 404 939 c[1] - 312 648 c[2] + 95 675 c[3] - 14 976 c[4] + 1273 c[5] - 56 c[6] + c[7],
 388 899 c[1] - 308 720 c[2] + 95 363 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 390 771 c[1] - 309 072 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 390 835 c[1] - 309 072 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 390 483 c[1] - 309 040 c[2] + 95 379 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 392 707 c[1] - 309 424 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 392 355 c[1] - 309 392 c[2] + 95 395 c[3] - 14 968 c[4] + 1273 c[5] - 56 c[6] + c[7],
 378 603 c[1] - 305 848 c[2] + 95 099 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 380 475 c[1] - 306 200 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 380 187 c[1] - 306 168 c[2] + 95 115 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 382 699 c[1] - 306 584 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 382 411 c[1] - 306 552 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 382 059 c[1] - 306 520 c[2] + 95 131 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 383 995 c[1] - 306 872 c[2] + 95 147 c[3] - 14 960 c[4] + 1273 c[5] - 56 c[6] + c[7],
 370 467 c[1] - 303 360 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 370 179 c[1] - 303 328 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 369 891 c[1] - 303 296 c[2] + 94 851 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 372 403 c[1] - 303 712 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 372 051 c[1] - 303 680 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 371 763 c[1] - 303 648 c[2] + 94 867 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 373 987 c[1] - 304 032 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 373 699 c[1] - 304 000 c[2] + 94 883 c[3] - 14 952 c[4] + 1273 c[5] - 56 c[6] + c[7],
 360 171 c[1] - 300 488 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
 359 883 c[1] - 300 456 c[2] + 94 587 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
 361 755 c[1] - 300 808 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
 361 467 c[1] - 300 776 c[2] + 94 603 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
 363 339 c[1] - 301 128 c[2] + 94 619 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
 365 275 c[1] - 301 480 c[2] + 94 635 c[3] - 14 944 c[4] + 1273 c[5] - 56 c[6] + c[7],
 351 459 c[1] - 297 936 c[2] + 94 339 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7],
 353 043 c[1] - 298 256 c[2] + 94 355 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7],
 352 755 c[1] - 298 224 c[2] + 94 355 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7],
 354 627 c[1] - 298 576 c[2] + 94 371 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7],
 344 331 c[1] - 295 704 c[2] + 94 107 c[3] - 14 928 c[4] + 1273 c[5] - 56 c[6] + c[7]}
```

Array[c, 7].g

```
19 929 915 c[1] - 15 339 112 c[2] + 4 689 451 c[3] -
 733 856 c[4] + 62 377 c[5] - 2744 c[6] + 49 c[7]
```

cert =

```
Flatten[Array[c, 7] /. FindInstance[19 929 915 c[1] - 15 339 112 c[2] + 4 689 451 c[3] -
```

$$\begin{aligned}
& 733\,856\,c[4] + 62\,377\,c[5] - 2744\,c[6] + 49\,c[7] < 0 \&\& 413\,299\,c[1] - \\
& 315\,168\,c[2] + 95\,923\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 415\,235\,c[1] - 315\,520\,c[2] + 95\,939\,c[3] - 14\,984\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 401\,131\,c[1] - 311\,944\,c[2] + 95\,643\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 403\,355\,c[1] - 312\,328\,c[2] + \\
& 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 403\,003\,c[1] - 312\,296\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 402\,651\,c[1] - 312\,264\,c[2] + 95\,659\,c[3] - 14\,976\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 404\,939\,c[1] - 312\,648\,c[2] + \\
& 95\,675\,c[3] - 14\,976\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 388\,899\,c[1] - 308\,720\,c[2] + 95\,363\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 390\,771\,c[1] - 309\,072\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 390\,835\,c[1] - 309\,072\,c[2] + \\
& 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 390\,483\,c[1] - 309\,040\,c[2] + 95\,379\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 392\,707\,c[1] - 309\,424\,c[2] + 95\,395\,c[3] - 14\,968\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 392\,355\,c[1] - 309\,392\,c[2] + \\
& 95\,395\,c[3] - 14\,968\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 378\,603\,c[1] - 305\,848\,c[2] + 95\,099\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 380\,475\,c[1] - 306\,200\,c[2] + 95\,115\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 380\,187\,c[1] - 306\,168\,c[2] + \\
& 95\,115\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 382\,699\,c[1] - 306\,584\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 382\,411\,c[1] - 306\,552\,c[2] + 95\,131\,c[3] - 14\,960\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 382\,059\,c[1] - 306\,520\,c[2] + \\
& 95\,131\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 383\,995\,c[1] - 306\,872\,c[2] + 95\,147\,c[3] - 14\,960\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 370\,467\,c[1] - 303\,360\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 370\,179\,c[1] - 303\,328\,c[2] + \\
& 94\,851\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 369\,891\,c[1] - 303\,296\,c[2] + 94\,851\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 372\,403\,c[1] - 303\,712\,c[2] + 94\,867\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 372\,051\,c[1] - 303\,680\,c[2] + \\
& 94\,867\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 371\,763\,c[1] - 303\,648\,c[2] + 94\,867\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 373\,987\,c[1] - 304\,032\,c[2] + 94\,883\,c[3] - 14\,952\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 373\,699\,c[1] - 304\,000\,c[2] + \\
& 94\,883\,c[3] - 14\,952\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 360\,171\,c[1] - 300\,488\,c[2] + 94\,587\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 359\,883\,c[1] - 300\,456\,c[2] + 94\,587\,c[3] - 14\,944\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 361\,755\,c[1] - 300\,808\,c[2] + \\
& 94\,603\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 361\,467\,c[1] - 300\,776\,c[2] + 94\,603\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq \\
& 0 \&\& 363\,339\,c[1] - 301\,128\,c[2] + 94\,619\,c[3] - 14\,944\,c[4] + \\
& 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& 365\,275\,c[1] - 301\,480\,c[2] + \\
& 94\,635\,c[3] - 14\,944\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq 0 \&\& \\
& 351\,459\,c[1] - 297\,936\,c[2] + 94\,339\,c[3] - 14\,936\,c[4] + 1273\,c[5] - 56\,c[6] + c[7] \geq
\end{aligned}$$


```

0 && 353 043 c[1] - 298 256 c[2] + 94 355 c[3] - 14 936 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0 && 352 755 c[1] - 298 224 c[2] +
94 355 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥ 0 &&
354 627 c[1] - 298 576 c[2] + 94 371 c[3] - 14 936 c[4] + 1273 c[5] - 56 c[6] + c[7] ≥
0 && 344 331 c[1] - 295 704 c[2] + 94 107 c[3] - 14 928 c[4] +
1273 c[5] - 56 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-3334, -15 155, -35 406, 0, 0, 0, 0}

```

```
GCD[-3334, -15 155, -35 406, 0, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 0, -35 406, -15 155, -3334}
```

```
cert.g
```

```
-16 796 356
```

```
{-3334, -15 155, -35 406, 0, 0, 0, 0}.gpart[listdim17[[88]]]
```

```
-16 796 356
```

```
cert.Transpose[A]
```

```

{2 182 436, 495 876, 3 804 508, 1 642 716, 2 331 324, 3 019 932, 644 764, 5 639 956,
4 166 772, 3 953 396, 4 642 004, 2 480 212, 3 168 820, 5 788 844, 4 315 660, 4 790 892,
2 153 868, 2 629 100, 3 317 708, 1 631 148, 3 989 316, 4 464 548, 4 939 780, 2 302 756,
2 991 364, 3 466 596, 1 304 804, 1 780 036, 4 138 204, 4 613 436, 3 140 252,
3 615 484, 2 142 300, 455 740, 3 289 140, 2 291 188, 2 766 420, 1 293 236, 1 442 124}

```

```
chi = listdim17[[89]]
```

```
 $(-11 + x)^3 (-9 + x)^{10} (-7 + x) (5 + x)^{32} (-852 + 285 x - 30 x^2 + x^3)$ 
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255 563	-214 820	70 987	-11 976	1097	-52	1
257 435	-215 172	71 003	-11 976	1097	-52	1
257 499	-215 172	71 003	-11 976	1097	-52	1
257 147	-215 140	71 003	-11 976	1097	-52	1
248 067	-212 396	70 739	-11 968	1097	-52	1
247 779	-212 364	70 739	-11 968	1097	-52	1
249 363	-212 684	70 755	-11 968	1097	-52	1
249 075	-212 652	70 755	-11 968	1097	-52	1
248 787	-212 620	70 755	-11 968	1097	-52	1
250 947	-213 004	70 771	-11 968	1097	-52	1
250 659	-212 972	70 771	-11 968	1097	-52	1
250 371	-212 940	70 771	-11 968	1097	-52	1
250 019	-212 908	70 771	-11 968	1097	-52	1
252 243	-213 292	70 787	-11 968	1097	-52	1
251 955	-213 260	70 787	-11 968	1097	-52	1
251 603	-213 228	70 787	-11 968	1097	-52	1
242 235	-210 452	70 523	-11 960	1097	-52	1
243 531	-210 740	70 539	-11 960	1097	-52	1
243 243	-210 708	70 539	-11 960	1097	-52	1
245 115	-211 060	70 555	-11 960	1097	-52	1
244 827	-211 028	70 555	-11 960	1097	-52	1
244 475	-210 996	70 555	-11 960	1097	-52	1
246 411	-211 348	70 571	-11 960	1097	-52	1
247 995	-211 668	70 587	-11 960	1097	-52	1
237 987	-208 828	70 323	-11 952	1097	-52	1
237 699	-208 796	70 323	-11 952	1097	-52	1
239 283	-209 116	70 339	-11 952	1097	-52	1
232 155	-206 884	70 107	-11 944	1097	-52	1

Dimensions[A]

{111, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{13 399 347, -10 822 572, 3 511 299, -588 032, 53 753, -2548, 49}

Array[c, 7].Transpose[A]

{276 731 c[1] - 222 212 c[2] + 71 835 c[3] - 12 008 c[4] + 1097 c[5] - 52 c[6] + c[7],
 276 795 c[1] - 222 212 c[2] + 71 835 c[3] - 12 008 c[4] + 1097 c[5] - 52 c[6] + c[7],
 276 507 c[1] - 222 180 c[2] + 71 835 c[3] - 12 008 c[4] + 1097 c[5] - 52 c[6] + c[7],
 277 963 c[1] - 222 500 c[2] + 71 851 c[3] - 12 008 c[4] + 1097 c[5] - 52 c[6] + c[7],
 277 739 c[1] - 222 468 c[2] + 71 851 c[3] - 12 008 c[4] + 1097 c[5] - 52 c[6] + c[7],
 278 971 c[1] - 222 756 c[2] + 71 867 c[3] - 12 008 c[4] + 1097 c[5] - 52 c[6] + c[7],
 270 467 c[1] - 220 076 c[2] + 71 603 c[3] - 12 000 c[4] + 1097 c[5] - 52 c[6] + c[7],
 270 531 c[1] - 220 076 c[2] + 71 603 c[3] - 12 000 c[4] + 1097 c[5] - 52 c[6] + c[7],
 270 179 c[1] - 220 044 c[2] + 71 603 c[3] - 12 000 c[4] + 1097 c[5] - 52 c[6] + c[7],
 270 243 c[1] - 220 044 c[2] + 71 603 c[3] - 12 000 c[4] + 1097 c[5] - 52 c[6] + c[7],
 269 955 c[1] - 220 012 c[2] + 71 603 c[3] - 12 000 c[4] + 1097 c[5] - 52 c[6] + c[7],
 271 763 c[1] - 220 364 c[2] + 71 619 c[3] - 12 000 c[4] + 1097 c[5] - 52 c[6] + c[7],
 271 475 c[1] - 220 332 c[2] + 71 619 c[3] - 12 000 c[4] + 1097 c[5] - 52 c[6] + c[7],

[illegible]

$262\,035\,c[1] - 216\,828\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $261\,683\,c[1] - 216\,796\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $261\,747\,c[1] - 216\,796\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $261\,395\,c[1] - 216\,764\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $261\,459\,c[1] - 216\,764\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $261\,107\,c[1] - 216\,732\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $262\,979\,c[1] - 217\,084\,c[2] + 71\,219\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $262\,691\,c[1] - 217\,052\,c[2] + 71\,219\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $262\,339\,c[1] - 217\,020\,c[2] + 71\,219\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $263\,923\,c[1] - 217\,340\,c[2] + 71\,235\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $252\,315\,c[1] - 214\,020\,c[2] + 70\,939\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $253\,899\,c[1] - 214\,340\,c[2] + 70\,955\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $253\,611\,c[1] - 214\,308\,c[2] + 70\,955\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $253\,323\,c[1] - 214\,276\,c[2] + 70\,955\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $255\,195\,c[1] - 214\,628\,c[2] + 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $254\,907\,c[1] - 214\,596\,c[2] + 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $254\,555\,c[1] - 214\,564\,c[2] + 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $254\,619\,c[1] - 214\,564\,c[2] + 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $254\,331\,c[1] - 214\,532\,c[2] + 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $256\,491\,c[1] - 214\,916\,c[2] + 70\,987\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $256\,203\,c[1] - 214\,884\,c[2] + 70\,987\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $255\,851\,c[1] - 214\,852\,c[2] + 70\,987\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $255\,915\,c[1] - 214\,852\,c[2] + 70\,987\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $255\,563\,c[1] - 214\,820\,c[2] + 70\,987\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $257\,435\,c[1] - 215\,172\,c[2] + 71\,003\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $257\,499\,c[1] - 215\,172\,c[2] + 71\,003\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $257\,147\,c[1] - 215\,140\,c[2] + 71\,003\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $248\,067\,c[1] - 212\,396\,c[2] + 70\,739\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $247\,779\,c[1] - 212\,364\,c[2] + 70\,739\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $249\,363\,c[1] - 212\,684\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $249\,075\,c[1] - 212\,652\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $248\,787\,c[1] - 212\,620\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $250\,947\,c[1] - 213\,004\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $250\,659\,c[1] - 212\,972\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $250\,371\,c[1] - 212\,940\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $250\,019\,c[1] - 212\,908\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $252\,243\,c[1] - 213\,292\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $251\,955\,c[1] - 213\,260\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $251\,603\,c[1] - 213\,228\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $242\,235\,c[1] - 210\,452\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $243\,531\,c[1] - 210\,740\,c[2] + 70\,539\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $243\,243\,c[1] - 210\,708\,c[2] + 70\,539\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $245\,115\,c[1] - 211\,060\,c[2] + 70\,555\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $244\,827\,c[1] - 211\,028\,c[2] + 70\,555\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $244\,475\,c[1] - 210\,996\,c[2] + 70\,555\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $246\,411\,c[1] - 211\,348\,c[2] + 70\,571\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $247\,995\,c[1] - 211\,668\,c[2] + 70\,587\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$

$237\,987\,c[1] - 208\,828\,c[2] + 70\,323\,c[3] - 11\,952\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $237\,699\,c[1] - 208\,796\,c[2] + 70\,323\,c[3] - 11\,952\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $239\,283\,c[1] - 209\,116\,c[2] + 70\,339\,c[3] - 11\,952\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $232\,155\,c[1] - 206\,884\,c[2] + 70\,107\,c[3] - 11\,944\,c[4] + 1097\,c[5] - 52\,c[6] + c[7]\}$

Array[c, 7].g

$13\,399\,347\,c[1] - 10\,822\,572\,c[2] + 3\,511\,299\,c[3] -$
 $588\,032\,c[4] + 53\,753\,c[5] - 2548\,c[6] + 49\,c[7]$

cert =

Flatten[Array[c, 7] /. FindInstance[$13\,399\,347\,c[1] - 10\,822\,572\,c[2] + 3\,511\,299\,c[3] -$
 $588\,032\,c[4] + 53\,753\,c[5] - 2548\,c[6] + 49\,c[7] < 0 \&\&$
 $276\,731\,c[1] - 222\,212\,c[2] + 71\,835\,c[3] - 12\,008\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq$
 $0 \&\& 276\,795\,c[1] - 222\,212\,c[2] + 71\,835\,c[3] - 12\,008\,c[4] +$
 $1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 276\,507\,c[1] - 222\,180\,c[2] +$
 $71\,835\,c[3] - 12\,008\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\&$
 $277\,963\,c[1] - 222\,500\,c[2] + 71\,851\,c[3] - 12\,008\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq$
 $0 \&\& 277\,739\,c[1] - 222\,468\,c[2] + 71\,851\,c[3] - 12\,008\,c[4] +$
 $1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 278\,971\,c[1] - 222\,756\,c[2] +$
 $71\,867\,c[3] - 12\,008\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\&$
 $270\,467\,c[1] - 220\,076\,c[2] + 71\,603\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq$
 $0 \&\& 270\,531\,c[1] - 220\,076\,c[2] + 71\,603\,c[3] - 12\,000\,c[4] +$
 $1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 270\,179\,c[1] - 220\,044\,c[2] +$
 $71\,603\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\&$
 $270\,243\,c[1] - 220\,044\,c[2] + 71\,603\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq$
 $0 \&\& 269\,955\,c[1] - 220\,012\,c[2] + 71\,603\,c[3] - 12\,000\,c[4] +$
 $1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 271\,763\,c[1] - 220\,364\,c[2] +$
 $71\,619\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\&$
 $271\,475\,c[1] - 220\,332\,c[2] + 71\,619\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq$
 $0 \&\& 271\,539\,c[1] - 220\,332\,c[2] + 71\,619\,c[3] - 12\,000\,c[4] +$
 $1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 271\,187\,c[1] - 220\,300\,c[2] +$
 $71\,619\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\&$
 $271\,251\,c[1] - 220\,300\,c[2] + 71\,619\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq$
 $0 \&\& 270\,963\,c[1] - 220\,268\,c[2] + 71\,619\,c[3] - 12\,000\,c[4] +$
 $1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 272\,419\,c[1] - 220\,588\,c[2] +$
 $71\,635\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\&$
 $272\,483\,c[1] - 220\,588\,c[2] + 71\,635\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq$
 $0 \&\& 272\,547\,c[1] - 220\,588\,c[2] + 71\,635\,c[3] - 12\,000\,c[4] +$
 $1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 272\,195\,c[1] - 220\,556\,c[2] +$
 $71\,635\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\&$
 $273\,715\,c[1] - 220\,876\,c[2] + 71\,651\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq$
 $0 \&\& 273\,427\,c[1] - 220\,844\,c[2] + 71\,651\,c[3] - 12\,000\,c[4] +$
 $1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 274\,659\,c[1] - 221\,132\,c[2] +$
 $71\,667\,c[3] - 12\,000\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\&$
 $262\,395\,c[1] - 217\,588\,c[2] + 71\,355\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq$
 $0 \&\& 263\,979\,c[1] - 217\,908\,c[2] + 71\,371\,c[3] - 11\,992\,c[4] +$
 $1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 263\,691\,c[1] - 217\,876\,c[2] +$

$$\begin{aligned}
& 71\,371\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 263\,403\,c[1] - 217\,844\,c[2] + 71\,371\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 265\,275\,c[1] - 218\,196\,c[2] + 71\,387\,c[3] - 11\,992\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 264\,987\,c[1] - 218\,164\,c[2] + \\
& 71\,387\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 264\,635\,c[1] - 218\,132\,c[2] + 71\,387\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 264\,699\,c[1] - 218\,132\,c[2] + 71\,387\,c[3] - 11\,992\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 264\,411\,c[1] - 218\,100\,c[2] + \\
& 71\,387\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 266\,283\,c[1] - 218\,452\,c[2] + 71\,403\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 265\,931\,c[1] - 218\,420\,c[2] + 71\,403\,c[3] - 11\,992\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 265\,995\,c[1] - 218\,420\,c[2] + \\
& 71\,403\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 265\,643\,c[1] - 218\,388\,c[2] + 71\,403\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 265\,707\,c[1] - 218\,388\,c[2] + 71\,403\,c[3] - 11\,992\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 265\,419\,c[1] - 218\,356\,c[2] + \\
& 71\,403\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 267\,227\,c[1] - 218\,708\,c[2] + 71\,419\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 267\,291\,c[1] - 218\,708\,c[2] + 71\,419\,c[3] - 11\,992\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 266\,939\,c[1] - 218\,676\,c[2] + \\
& 71\,419\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 267\,003\,c[1] - 218\,676\,c[2] + 71\,419\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 266\,651\,c[1] - 218\,644\,c[2] + 71\,419\,c[3] - 11\,992\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 268\,171\,c[1] - 218\,964\,c[2] + \\
& 71\,435\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 268\,235\,c[1] - 218\,964\,c[2] + 71\,435\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 267\,883\,c[1] - 218\,932\,c[2] + 71\,435\,c[3] - 11\,992\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 256\,851\,c[1] - 215\,676\,c[2] + \\
& 71\,139\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 258\,147\,c[1] - 215\,964\,c[2] + 71\,155\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 257\,859\,c[1] - 215\,932\,c[2] + 71\,155\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 259\,443\,c[1] - 216\,252\,c[2] + \\
& 71\,171\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 259\,155\,c[1] - 216\,220\,c[2] + 71\,171\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 258\,867\,c[1] - 216\,188\,c[2] + 71\,171\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 261\,027\,c[1] - 216\,572\,c[2] + \\
& 71\,187\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 260\,739\,c[1] - 216\,540\,c[2] + 71\,187\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 260\,387\,c[1] - 216\,508\,c[2] + 71\,187\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 260\,451\,c[1] - 216\,508\,c[2] + \\
& 71\,187\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 260\,099\,c[1] - 216\,476\,c[2] + 71\,187\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 260\,163\,c[1] - 216\,476\,c[2] + 71\,187\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 259\,875\,c[1] - 216\,444\,c[2] + \\
& 71\,187\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 262\,035\,c[1] - 216\,828\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 261\,683\,c[1] - 216\,796\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 261\,747 c[1] - 216\,796 c[2] + \\
& 71\,203 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 261\,395 c[1] - 216\,764 c[2] + 71\,203 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 261\,459 c[1] - 216\,764 c[2] + 71\,203 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 261\,107 c[1] - 216\,732 c[2] + \\
& 71\,203 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 262\,979 c[1] - 217\,084 c[2] + 71\,219 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 262\,691 c[1] - 217\,052 c[2] + 71\,219 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 262\,339 c[1] - 217\,020 c[2] + \\
& 71\,219 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 263\,923 c[1] - 217\,340 c[2] + 71\,235 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 252\,315 c[1] - 214\,020 c[2] + 70\,939 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 253\,899 c[1] - 214\,340 c[2] + \\
& 70\,955 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 253\,611 c[1] - 214\,308 c[2] + 70\,955 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 253\,323 c[1] - 214\,276 c[2] + 70\,955 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 255\,195 c[1] - 214\,628 c[2] + \\
& 70\,971 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 254\,907 c[1] - 214\,596 c[2] + 70\,971 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 254\,555 c[1] - 214\,564 c[2] + 70\,971 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 254\,619 c[1] - 214\,564 c[2] + \\
& 70\,971 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 254\,331 c[1] - 214\,532 c[2] + 70\,971 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 256\,491 c[1] - 214\,916 c[2] + 70\,987 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 256\,203 c[1] - 214\,884 c[2] + \\
& 70\,987 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 255\,851 c[1] - 214\,852 c[2] + 70\,987 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 255\,915 c[1] - 214\,852 c[2] + 70\,987 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 255\,563 c[1] - 214\,820 c[2] + \\
& 70\,987 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 257\,435 c[1] - 215\,172 c[2] + 71\,003 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 257\,499 c[1] - 215\,172 c[2] + 71\,003 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 257\,147 c[1] - 215\,140 c[2] + \\
& 71\,003 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 248\,067 c[1] - 212\,396 c[2] + 70\,739 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 247\,779 c[1] - 212\,364 c[2] + 70\,739 c[3] - 11\,968 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 249\,363 c[1] - 212\,684 c[2] + \\
& 70\,755 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 249\,075 c[1] - 212\,652 c[2] + 70\,755 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 248\,787 c[1] - 212\,620 c[2] + 70\,755 c[3] - 11\,968 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 250\,947 c[1] - 213\,004 c[2] + \\
& 70\,771 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 250\,659 c[1] - 212\,972 c[2] + 70\,771 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 250\,371 c[1] - 212\,940 c[2] + 70\,771 c[3] - 11\,968 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 250\,019 c[1] - 212\,908 c[2] + \\
& 70\,771 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 252\,243 c[1] - 213\,292 c[2] + 70\,787 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq
\end{aligned}$$

```

0 && 251 955 c[1] - 213 260 c[2] + 70 787 c[3] - 11 968 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 251 603 c[1] - 213 228 c[2] +
70 787 c[3] - 11 968 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
242 235 c[1] - 210 452 c[2] + 70 523 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 243 531 c[1] - 210 740 c[2] + 70 539 c[3] - 11 960 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 243 243 c[1] - 210 708 c[2] +
70 539 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
245 115 c[1] - 211 060 c[2] + 70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 244 827 c[1] - 211 028 c[2] + 70 555 c[3] - 11 960 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 244 475 c[1] - 210 996 c[2] +
70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
246 411 c[1] - 211 348 c[2] + 70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 247 995 c[1] - 211 668 c[2] + 70 587 c[3] -
11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
237 987 c[1] - 208 828 c[2] + 70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 237 699 c[1] - 208 796 c[2] + 70 323 c[3] -
11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
239 283 c[1] - 209 116 c[2] + 70 339 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 232 155 c[1] - 206 884 c[2] + 70 107 c[3] - 11 944 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6], c[7]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```

chi = listdim17[[90]]
(-11 + x)2 (-9 + x)10 (5 + x)32 (-65 572 + 37 281 x - 8292 x2 + 902 x3 - 48 x4 + x5)

CoefficientList[feasibleinterlacingpolylist[chi], x]

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```
A // MatrixForm
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1 -63 1669 -24 067 203 603 -1 007 677 2 690 791 -2 973 249
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1 -63 1669 -24 051 202 947 -997 741 2 624 823 -2 811 105)
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1	-63	1669	-24019	201795	-982317	2533815	-2611521
1	-63	1669	-24019	201811	-982813	2538919	-2628945

Dimensions[A]

{113, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1179315, 9979651, -49445453, 132424983, -147311921}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] + 203939 c[5] -
 1012829 c[6] + 2724951 c[7] - 3055833 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24075 c[4] + 203955 c[5] - 1013261 c[6] + 2728775 c[7] - 3066921 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203603 c[5] - 1007677 c[6] +
 2690791 c[7] - 2973249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
 203603 c[5] - 1007645 c[6] + 2690087 c[7] - 2969505 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203603 c[5] - 1007645 c[6] +
 2690151 c[7] - 2970081 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
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 2699655 c[7] - 3001185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
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 203651 c[5] - 1009005 c[6] + 2702839 c[7] - 3009105 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203651 c[5] - 1008973 c[6] +
 2702199 c[7] - 3005937 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203267 c[5] - 1002461 c[6] + 2655287 c[7] - 2883753 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203283 c[5] - 1002989 c[6] +
 2660967 c[7] - 2903769 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +

$$\begin{aligned}
& 203\,283\,c[5] - 1\,002\,957\,c[6] + 2\,660\,327\,c[7] - 2\,900\,601\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,957\,c[6] + \\
& 2\,660\,391\,c[7] - 2\,901\,177\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,925\,c[6] + 2\,659\,687\,c[7] - 2\,897\,433\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,925\,c[6] + \\
& 2\,659\,751\,c[7] - 2\,898\,009\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,893\,c[6] + 2\,659\,111\,c[7] - 2\,894\,841\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,453\,c[6] + \\
& 2\,665\,431\,c[7] - 2\,918\,025\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,421\,c[6] + 2\,664\,791\,c[7] - 2\,914\,857\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,421\,c[6] + \\
& 2\,664\,855\,c[7] - 2\,915\,433\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,389\,c[6] + 2\,664\,151\,c[7] - 2\,911\,689\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,389\,c[6] + \\
& 2\,664\,215\,c[7] - 2\,912\,265\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,357\,c[6] + 2\,663\,511\,c[7] - 2\,908\,521\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,917\,c[6] + \\
& 2\,669\,895\,c[7] - 2\,932\,281\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,885\,c[6] + 2\,669\,255\,c[7] - 2\,929\,113\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,885\,c[6] + \\
& 2\,669\,319\,c[7] - 2\,929\,689\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,853\,c[6] + 2\,668\,615\,c[7] - 2\,925\,945\,c[8], \\
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& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,349\,c[6] + \\
& 2\,673\,719\,c[7] - 2\,943\,369\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,317\,c[6] + 2\,673\,079\,c[7] - 2\,940\,201\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,285\,c[6] + \\
& 2\,672\,439\,c[7] - 2\,937\,033\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,253\,c[6] + 2\,671\,799\,c[7] - 2\,933\,865\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,221\,c[6] + \\
& 2\,671\,159\,c[7] - 2\,930\,697\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,749\,c[6] + 2\,676\,903\,c[7] - 2\,951\,289\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,717\,c[6] + \\
& 2\,676\,263\,c[7] - 2\,948\,121\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,947\,c[5] - 997\,741\,c[6] + 2\,624\,823\,c[7] - 2\,811\,105\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,947\,c[5] - 997\,709\,c[6] + 2\,624\,247\,c[7] - \\
& 2\,808\,513\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,963\,c[5] - \\
& 998\,205\,c[6] + 2\,629\,287\,c[7] - 2\,825\,361\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - \\
& 24\,051\,c[4] + 202\,963\,c[5] - 998\,173\,c[6] + 2\,628\,647\,c[7] - 2\,822\,193\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,963\,c[5] - 998\,173\,c[6] + \\
& 2\,628\,711\,c[7] - 2\,822\,769\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,669\,c[6] + 2\,633\,751\,c[7] - 2\,839\,617\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,637\,c[6] + \\
& 2\,633\,111\,c[7] - 2\,836\,449\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,637\,c[6] + 2\,633\,175\,c[7] - 2\,837\,025\,c[8],
\end{aligned}$$

$c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,979 c[5] - 998\,605 c[6] +$
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 $202\,995 c[5] - 999\,101 c[6] + 2\,637\,575 c[7] - 2\,850\,705 c[8],$
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 $2\,641\,399 c[7] - 2\,861\,793 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
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 $203\,027 c[5] - 1\,000\,029 c[6] + 2\,646\,503 c[7] - 2\,879\,217 c[8],$
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 $203\,027 c[5] - 999\,965 c[6] + 2\,645\,223 c[7] - 2\,872\,881 c[8],$
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 $2\,644\,583 c[7] - 2\,869\,713 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,043 c[5] - 1\,000\,525 c[6] + 2\,651\,607 c[7] - 2\,896\,641 c[8],$
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 $2\,650\,967 c[7] - 2\,893\,473 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,327 c[7] - 2\,890\,305 c[8],$
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 $2\,649\,687 c[7] - 2\,887\,137 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,059 c[5] - 1\,000\,925 c[6] + 2\,654\,791 c[7] - 2\,904\,561 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,643 c[5] - 993\,421 c[6] +$
 $2\,597\,607 c[7] - 2\,746\,953 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,659 c[5] - 993\,885 c[6] + 2\,602\,071 c[7] - 2\,761\,209 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,659 c[5] - 993\,853 c[6] +$
 $2\,601\,495 c[7] - 2\,758\,617 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,675 c[5] - 994\,349 c[6] + 2\,606\,535 c[7] - 2\,775\,465 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,675 c[5] - 994\,317 c[6] +$
 $2\,605\,895 c[7] - 2\,772\,297 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,675 c[5] - 994\,317 c[6] + 2\,605\,959 c[7] - 2\,772\,873 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,813 c[6] +$
 $2\,610\,999 c[7] - 2\,789\,721 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,691 c[5] - 994\,781 c[6] + 2\,610\,359 c[7] - 2\,786\,553 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,749 c[6] +$
 $2\,609\,719 c[7] - 2\,783\,385 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,707 c[5] - 995\,277 c[6] + 2\,615\,463 c[7] - 2\,803\,977 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,245 c[6] +$
 $2\,614\,823 c[7] - 2\,800\,809 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$

$$\begin{aligned}
& 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,183\,c[7] - 2\,797\,641\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& 2\,613\,543\,c[7] - 2\,794\,473\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,741\,c[6] + 2\,619\,927\,c[7] - 2\,818\,233\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] + \\
& 2\,619\,287\,c[7] - 2\,815\,065\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,647\,c[7] - 2\,811\,897\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] + \\
& 2\,618\,007\,c[7] - 2\,808\,729\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,237\,c[6] + 2\,625\,031\,c[7] - 2\,835\,657\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,205\,c[6] + \\
& 2\,624\,391\,c[7] - 2\,832\,489\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,751\,c[7] - 2\,829\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& 2\,623\,111\,c[7] - 2\,826\,153\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,669\,c[6] + 2\,628\,855\,c[7] - 2\,846\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,355\,c[5] - 989\,565\,c[6] + \\
& 2\,574\,855\,c[7] - 2\,697\,057\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 990\,029\,c[6] + 2\,579\,319\,c[7] - 2\,711\,313\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,493\,c[6] + \\
& 2\,583\,783\,c[7] - 2\,725\,569\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,143\,c[7] - 2\,722\,401\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,957\,c[6] + \\
& 2\,588\,247\,c[7] - 2\,739\,825\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,925\,c[6] + 2\,587\,607\,c[7] - 2\,736\,657\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,893\,c[6] + \\
& 2\,586\,967\,c[7] - 2\,733\,489\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,421\,c[6] + 2\,592\,711\,c[7] - 2\,754\,081\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,071\,c[7] - 2\,750\,913\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,815\,c[7] - 2\,771\,505\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,175\,c[7] - 2\,768\,337\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,279\,c[7] - 2\,785\,761\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,067\,c[5] - 985\,709\,c[6] + \\
& 2\,552\,103\,c[7] - 2\,647\,161\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,083\,c[5] - 986\,173\,c[6] + 2\,556\,567\,c[7] - 2\,661\,417\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,083\,c[5] - 986\,141\,c[6] + \\
& 2\,555\,927\,c[7] - 2\,658\,249\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,637\,c[6] + 2\,561\,031\,c[7] - 2\,675\,673\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,605\,c[6] + \\
& 2\,560\,391\,c[7] - 2\,672\,505\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,495\,c[7] - 2\,689\,929\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,597\,c[6] + \\
& 2\,570\,599\,c[7] - 2\,707\,353\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,779\,c[5] - 981\,853\,c[6] + 2\,529\,351\,c[7] - 2\,597\,265\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,317\,c[6] +
\end{aligned}$$

$2\,533\,815\,c[7] - 2\,611\,521\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] +$
 $201\,811\,c[5] - 982\,813\,c[6] + 2\,538\,919\,c[7] - 2\,628\,945\,c[8]\}$

`Array[c, 8].g`

$49\,c[1] - 3087\,c[2] + 81\,781\,c[3] - 1\,179\,315\,c[4] +$
 $9\,979\,651\,c[5] - 49\,445\,453\,c[6] + 132\,424\,983\,c[7] - 147\,311\,921\,c[8]$

`cert =`

`Flatten[Array[c, 8] /. FindInstance[$49\,c[1] - 3087\,c[2] + 81\,781\,c[3] - 1\,179\,315\,c[4] +$
 $9\,979\,651\,c[5] - 49\,445\,453\,c[6] + 132\,424\,983\,c[7] - 147\,311\,921\,c[8] < 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] + 203\,939\,c[5] - 1\,012\,829\,c[6] +$
 $2\,724\,951\,c[7] - 3\,055\,833\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,075\,c[4] +$
 $203\,955\,c[5] - 1\,013\,261\,c[6] + 2\,728\,775\,c[7] - 3\,066\,921\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,603\,c[5] - 1\,007\,677\,c[6] +$
 $2\,690\,791\,c[7] - 2\,973\,249\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] +$
 $203\,603\,c[5] - 1\,007\,645\,c[6] + 2\,690\,087\,c[7] - 2\,969\,505\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,603\,c[5] - 1\,007\,645\,c[6] +$
 $2\,690\,151\,c[7] - 2\,970\,081\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] +$
 $203\,619\,c[5] - 1\,008\,173\,c[6] + 2\,695\,831\,c[7] - 2\,990\,097\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,619\,c[5] - 1\,008\,173\,c[6] +$
 $2\,695\,895\,c[7] - 2\,990\,673\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] +$
 $203\,619\,c[5] - 1\,008\,141\,c[6] + 2\,695\,191\,c[7] - 2\,986\,929\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,619\,c[5] - 1\,008\,141\,c[6] +$
 $2\,695\,255\,c[7] - 2\,987\,505\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] +$
 $203\,619\,c[5] - 1\,008\,109\,c[6] + 2\,694\,551\,c[7] - 2\,983\,761\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,635\,c[5] - 1\,008\,605\,c[6] +$
 $2\,699\,655\,c[7] - 3\,001\,185\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] +$
 $203\,635\,c[5] - 1\,008\,573\,c[6] + 2\,699\,015\,c[7] - 2\,998\,017\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,635\,c[5] - 1\,008\,541\,c[6] +$
 $2\,698\,375\,c[7] - 2\,994\,849\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] +$
 $203\,651\,c[5] - 1\,009\,005\,c[6] + 2\,702\,839\,c[7] - 3\,009\,105\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,651\,c[5] - 1\,008\,973\,c[6] +$
 $2\,702\,199\,c[7] - 3\,005\,937\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,267\,c[5] - 1\,002\,461\,c[6] + 2\,655\,287\,c[7] - 2\,883\,753\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,989\,c[6] +$
 $2\,660\,967\,c[7] - 2\,903\,769\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,283\,c[5] - 1\,002\,957\,c[6] + 2\,660\,327\,c[7] - 2\,900\,601\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,957\,c[6] +$
 $2\,660\,391\,c[7] - 2\,901\,177\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,283\,c[5] - 1\,002\,925\,c[6] + 2\,659\,687\,c[7] - 2\,897\,433\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,925\,c[6] +$
 $2\,659\,751\,c[7] - 2\,898\,009\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,283\,c[5] - 1\,002\,893\,c[6] + 2\,659\,111\,c[7] - 2\,894\,841\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,453\,c[6] +$
 $2\,665\,431\,c[7] - 2\,918\,025\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] +$
 $203\,299\,c[5] - 1\,003\,421\,c[6] + 2\,664\,791\,c[7] - 2\,914\,857\,c[8] \geq 0 \&\&$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,421\,c[6] +$`

$$\begin{aligned}
& 2\,664\,855\,c[7] - 2\,915\,433\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,389\,c[6] + 2\,664\,151\,c[7] - 2\,911\,689\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,389\,c[6] + \\
& 2\,664\,215\,c[7] - 2\,912\,265\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,357\,c[6] + 2\,663\,511\,c[7] - 2\,908\,521\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,917\,c[6] + \\
& 2\,669\,895\,c[7] - 2\,932\,281\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,885\,c[6] + 2\,669\,255\,c[7] - 2\,929\,113\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,885\,c[6] + \\
& 2\,669\,319\,c[7] - 2\,929\,689\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,853\,c[6] + 2\,668\,615\,c[7] - 2\,925\,945\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,821\,c[6] + \\
& 2\,667\,975\,c[7] - 2\,922\,777\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,789\,c[6] + 2\,667\,335\,c[7] - 2\,919\,609\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,349\,c[6] + \\
& 2\,673\,719\,c[7] - 2\,943\,369\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,317\,c[6] + 2\,673\,079\,c[7] - 2\,940\,201\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,285\,c[6] + \\
& 2\,672\,439\,c[7] - 2\,937\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,253\,c[6] + 2\,671\,799\,c[7] - 2\,933\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,221\,c[6] + \\
& 2\,671\,159\,c[7] - 2\,930\,697\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,749\,c[6] + 2\,676\,903\,c[7] - 2\,951\,289\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,717\,c[6] + \\
& 2\,676\,263\,c[7] - 2\,948\,121\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,947\,c[5] - 997\,741\,c[6] + 2\,624\,823\,c[7] - 2\,811\,105\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,947\,c[5] - 997\,709\,c[6] + \\
& 2\,624\,247\,c[7] - 2\,808\,513\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,963\,c[5] - 998\,205\,c[6] + 2\,629\,287\,c[7] - 2\,825\,361\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,963\,c[5] - 998\,173\,c[6] + \\
& 2\,628\,647\,c[7] - 2\,822\,193\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,963\,c[5] - 998\,173\,c[6] + 2\,628\,711\,c[7] - 2\,822\,769\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,669\,c[6] + \\
& 2\,633\,751\,c[7] - 2\,839\,617\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,637\,c[6] + 2\,633\,111\,c[7] - 2\,836\,449\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,637\,c[6] + \\
& 2\,633\,175\,c[7] - 2\,837\,025\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,605\,c[6] + 2\,632\,471\,c[7] - 2\,833\,281\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,605\,c[6] + \\
& 2\,632\,535\,c[7] - 2\,833\,857\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,133\,c[6] + 2\,638\,215\,c[7] - 2\,853\,873\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,101\,c[6] + \\
& 2\,637\,575\,c[7] - 2\,850\,705\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,101\,c[6] + 2\,637\,639\,c[7] - 2\,851\,281\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,069\,c[6] + \\
& 2\,636\,935\,c[7] - 2\,847\,537\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,597\,c[6] + 2\,642\,679\,c[7] - 2\,868\,129\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,565 c[6] + \\
& \quad 2\,642\,039 c[7] - 2\,864\,961 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,533 c[6] + 2\,641\,399 c[7] - 2\,861\,793 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,501 c[6] + \\
& \quad 2\,640\,759 c[7] - 2\,858\,625 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 1\,000\,061 c[6] + 2\,647\,143 c[7] - 2\,882\,385 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 1\,000\,029 c[6] + \\
& \quad 2\,646\,503 c[7] - 2\,879\,217 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,997 c[6] + 2\,645\,863 c[7] - 2\,876\,049 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,965 c[6] + \\
& \quad 2\,645\,223 c[7] - 2\,872\,881 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,933 c[6] + 2\,644\,583 c[7] - 2\,869\,713 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,525 c[6] + \\
& \quad 2\,651\,607 c[7] - 2\,896\,641 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,493 c[6] + 2\,650\,967 c[7] - 2\,893\,473 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,461 c[6] + \\
& \quad 2\,650\,327 c[7] - 2\,890\,305 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,687 c[7] - 2\,887\,137 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,925 c[6] + \\
& \quad 2\,654\,791 c[7] - 2\,904\,561 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,643 c[5] - 993\,421 c[6] + 2\,597\,607 c[7] - 2\,746\,953 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,659 c[5] - 993\,885 c[6] + \\
& \quad 2\,602\,071 c[7] - 2\,761\,209 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,659 c[5] - 993\,853 c[6] + 2\,601\,495 c[7] - 2\,758\,617 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,675 c[5] - 994\,349 c[6] + \\
& \quad 2\,606\,535 c[7] - 2\,775\,465 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,675 c[5] - 994\,317 c[6] + 2\,605\,895 c[7] - 2\,772\,297 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,675 c[5] - 994\,317 c[6] + \\
& \quad 2\,605\,959 c[7] - 2\,772\,873 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,691 c[5] - 994\,813 c[6] + 2\,610\,999 c[7] - 2\,789\,721 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,781 c[6] + \\
& \quad 2\,610\,359 c[7] - 2\,786\,553 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,691 c[5] - 994\,749 c[6] + 2\,609\,719 c[7] - 2\,783\,385 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,277 c[6] + \\
& \quad 2\,615\,463 c[7] - 2\,803\,977 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,245 c[6] + 2\,614\,823 c[7] - 2\,800\,809 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,213 c[6] + \\
& \quad 2\,614\,183 c[7] - 2\,797\,641 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,181 c[6] + 2\,613\,543 c[7] - 2\,794\,473 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,741 c[6] + \\
& \quad 2\,619\,927 c[7] - 2\,818\,233 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,709 c[6] + 2\,619\,287 c[7] - 2\,815\,065 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,677 c[6] + \\
& \quad 2\,618\,647 c[7] - 2\,811\,897 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,645 c[6] + 2\,618\,007 c[7] - 2\,808\,729 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,237 c[6] + \\
& \quad 2\,625\,031 c[7] - 2\,835\,657 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +
\end{aligned}$$

```

202 739 c[5] - 996 205 c[6] + 2 624 391 c[7] - 2 832 489 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 173 c[6] +
2 623 751 c[7] - 2 829 321 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 739 c[5] - 996 141 c[6] + 2 623 111 c[7] - 2 826 153 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 755 c[5] - 996 669 c[6] +
2 628 855 c[7] - 2 846 745 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 355 c[5] - 989 565 c[6] + 2 574 855 c[7] - 2 697 057 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 371 c[5] - 990 029 c[6] +
2 579 319 c[7] - 2 711 313 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 387 c[5] - 990 493 c[6] + 2 583 783 c[7] - 2 725 569 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 387 c[5] - 990 461 c[6] +
2 583 143 c[7] - 2 722 401 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 403 c[5] - 990 957 c[6] + 2 588 247 c[7] - 2 739 825 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 403 c[5] - 990 925 c[6] +
2 587 607 c[7] - 2 736 657 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 403 c[5] - 990 893 c[6] + 2 586 967 c[7] - 2 733 489 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 419 c[5] - 991 421 c[6] +
2 592 711 c[7] - 2 754 081 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 419 c[5] - 991 389 c[6] + 2 592 071 c[7] - 2 750 913 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 435 c[5] - 991 917 c[6] +
2 597 815 c[7] - 2 771 505 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 435 c[5] - 991 885 c[6] + 2 597 175 c[7] - 2 768 337 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 381 c[6] +
2 602 279 c[7] - 2 785 761 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 067 c[5] - 985 709 c[6] + 2 552 103 c[7] - 2 647 161 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 173 c[6] +
2 556 567 c[7] - 2 661 417 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 083 c[5] - 986 141 c[6] + 2 555 927 c[7] - 2 658 249 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 637 c[6] +
2 561 031 c[7] - 2 675 673 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 099 c[5] - 986 605 c[6] + 2 560 391 c[7] - 2 672 505 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 101 c[6] +
2 565 495 c[7] - 2 689 929 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 131 c[5] - 987 597 c[6] + 2 570 599 c[7] - 2 707 353 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 779 c[5] - 981 853 c[6] +
2 529 351 c[7] - 2 597 265 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 795 c[5] - 982 317 c[6] + 2 533 815 c[7] - 2 611 521 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 813 c[6] +
2 538 919 c[7] - 2 628 945 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -71 612 334, -18 804 223, -3 075 477, -431 366, -56 080}
GCD[0, 0, 0, -71 612 334, -18 804 223, -3 075 477, -431 366, -56 080]
1
cert.g
-112 425 980

```

```
{0, 0, 0, -71 612 334, -18 804 223, -3 075 477, -431 366, -56 080}.
```

```
Reverse[gpart[listdim17[[90]]]]
```

```
-112 425 980
```

```
cert.Transpose[A]
```

```
{4 702 660, 4 712 612, 9 317 252, 4 620 132, 9 314 788, 4 637 476, 9 332 132, 4 635 012,
 9 329 668, 4 632 548, 4 647 428, 4 644 964, 4 642 500, 4 654 916, 4 652 452, 9 232 260,
 4 554 948, 4 552 484, 9 247 140, 4 550 020, 9 244 676, 9 242 212, 4 567 364, 4 564 900,
 9 259 556, 4 562 436, 9 257 092, 4 559 972, 4 579 780, 4 577 316, 9 271 972, 4 574 852,
 4 572 388, 4 569 924, 4 589 732, 4 587 268, 4 584 804, 4 582 340, 4 579 876, 4 597 220,
 4 594 756, 4 467 492, 9 159 684, 4 479 908, 4 477 444, 9 172 100, 4 492 324, 4 489 860,
 9 184 516, 4 487 396, 9 182 052, 4 504 740, 4 502 276, 9 196 932, 4 499 812, 4 517 156,
 4 514 692, 4 512 228, 4 509 764, 4 529 572, 4 527 108, 4 524 644, 4 522 180, 4 519 716,
 4 541 988, 4 539 524, 4 537 060, 4 534 596, 4 549 476, 4 404 868, 4 417 284,
 9 109 476, 4 429 700, 4 427 236, 9 121 892, 4 442 116, 4 439 652, 4 437 188,
 4 454 532, 4 452 068, 4 449 604, 4 447 140, 4 466 948, 4 464 484, 4 462 020,
 4 459 556, 4 481 828, 4 479 364, 4 476 900, 4 474 436, 4 491 780, 4 354 660,
 4 367 076, 4 379 492, 4 377 028, 4 391 908, 4 389 444, 4 386 980, 4 404 324,
 4 401 860, 4 419 204, 4 416 740, 4 431 620, 4 304 452, 4 316 868, 4 314 404,
 4 329 284, 4 326 820, 4 341 700, 4 356 580, 4 254 244, 4 266 660, 4 281 540}
```

```
chi = listdim17[[91]]
```

$$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (113 - 22x + x^2) (-580 + 217x - 26x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -63, 1669, -24 067, 203 603, -1 007 645, 2 690 215, -2 970 657},
      {1, -63, 1669, -24 067, 203 619, -1 008 141, 2 695 191, -2 986 929},
      {1, -63, 1669, -24 067, 203 619, -1 008 141, 2 695 255, -2 987 505},
      {1, -63, 1669, -24 067, 203 619, -1 008 109, 2 694 679, -2 984 913},
      {1, -63, 1669, -24 067, 203 635, -1 008 605, 2 699 655, -3 001 185},
      {1, -63, 1669, -24 067, 203 635, -1 008 605, 2 699 719, -3 001 761},
      {1, -63, 1669, -24 067, 203 635, -1 008 573, 2 699 079, -2 998 593},
      {1, -63, 1669, -24 059, 203 267, -1 002 429, 2 654 711, -2 881 161},
      {1, -63, 1669, -24 059, 203 283, -1 002 925, 2 659 687, -2 897 433},
      {1, -63, 1669, -24 059, 203 283, -1 002 925, 2 659 751, -2 898 009},
      {1, -63, 1669, -24 059, 203 283, -1 002 893, 2 659 175, -2 895 417},
      {1, -63, 1669, -24 059, 203 299, -1 003 389, 2 664 151, -2 911 689},
      {1, -63, 1669, -24 059, 203 299, -1 003 357, 2 663 575, -2 909 097},
      {1, -63, 1669, -24 059, 203 315, -1 003 853, 2 668 615, -2 925 945},
      {1, -63, 1669, -24 059, 203 315, -1 003 821, 2 668 039, -2 923 353},
      {1, -63, 1669, -24 059, 203 331, -1 004 317, 2 673 079, -2 940 201},
```

```

{1, -63, 1669, -24 059, 203 331, -1 004 285, 2 672 439, -2 937 033},
{1, -63, 1669, -24 059, 203 331, -1 004 285, 2 672 503, -2 937 609},
{1, -63, 1669, -24 059, 203 347, -1 004 749, 2 676 903, -2 951 289},
{1, -63, 1669, -24 059, 203 347, -1 004 749, 2 676 967, -2 951 865},
{1, -63, 1669, -24 059, 203 363, -1 005 213, 2 681 367, -2 965 545},
{1, -63, 1669, -24 059, 203 363, -1 005 181, 2 680 727, -2 962 377},
{1, -63, 1669, -24 051, 202 931, -997 213, 2 619 207, -2 791 665},
{1, -63, 1669, -24 051, 202 947, -997 709, 2 624 183, -2 807 937},
{1, -63, 1669, -24 051, 202 963, -998 173, 2 628 647, -2 822 193},
{1, -63, 1669, -24 051, 202 963, -998 141, 2 628 071, -2 819 601},
{1, -63, 1669, -24 051, 202 979, -998 605, 2 632 535, -2 833 857},
{1, -63, 1669, -24 051, 202 979, -998 573, 2 631 959, -2 831 265},
{1, -63, 1669, -24 051, 202 995, -999 069, 2 636 935, -2 847 537},
{1, -63, 1669, -24 051, 203 011, -999 533, 2 641 399, -2 861 793},
{1, -63, 1669, -24 051, 203 011, -999 501, 2 640 823, -2 859 201},
{1, -63, 1669, -24 051, 203 027, -999 997, 2 645 863, -2 876 049},
{1, -63, 1669, -24 051, 203 027, -999 965, 2 645 223, -2 872 881},
{1, -63, 1669, -24 051, 203 027, -999 965, 2 645 287, -2 873 457},
{1, -63, 1669, -24 051, 203 043, -1 000 429, 2 649 687, -2 887 137},
{1, -63, 1669, -24 051, 203 059, -1 000 893, 2 654 151, -2 901 393},
{1, -63, 1669, -24 043, 202 659, -993 853, 2 601 431, -2 758 041},
{1, -63, 1669, -24 043, 202 675, -994 285, 2 605 319, -2 769 705},
{1, -63, 1669, -24 043, 202 691, -994 749, 2 609 719, -2 783 385},
{1, -63, 1669, -24 043, 202 707, -995 213, 2 614 183, -2 797 641},
{1, -63, 1669, -24 043, 202 707, -995 181, 2 613 607, -2 795 049},
{1, -63, 1669, -24 043, 202 723, -995 677, 2 618 647, -2 811 897},
{1, -63, 1669, -24 043, 202 739, -996 109, 2 622 471, -2 822 985},
{1, -63, 1669, -24 035, 202 355, -989 533, 2 574 215, -2 693 889},
{1, -63, 1669, -24 035, 202 371, -989 997, 2 578 679, -2 708 145},
{1, -63, 1669, -24 035, 202 371, -989 965, 2 578 103, -2 705 553},
{1, -63, 1669, -24 035, 202 403, -990 893, 2 586 967, -2 733 489},
{1, -63, 1669, -24 035, 202 419, -991 357, 2 591 431, -2 747 745},
{1, -63, 1669, -24 027, 202 067, -985 677, 2 551 463, -2 643 993},
{1, -63, 1669, -24 027, 202 067, -985 645, 2 550 887, -2 641 401},
{1, -63, 1669, -24 027, 202 099, -986 573, 2 559 751, -2 669 337},
{1, -63, 1669, -24 019, 201 763, -981 357, 2 524 247, -2 579 841}};

```

```
A // MatrixForm
```

1	-63	1669	-24 067	203 603	-1 007 645	2 690 215	-2 970 657
1	-63	1669	-24 067	203 619	-1 008 141	2 695 191	-2 986 929
1	-63	1669	-24 067	203 619	-1 008 141	2 695 255	-2 987 505
1	-63	1669	-24 067	203 619	-1 008 109	2 694 679	-2 984 913
1	-63	1669	-24 067	203 635	-1 008 605	2 699 655	-3 001 185
1	-63	1669	-24 067	203 635	-1 008 605	2 699 719	-3 001 761
1	-63	1669	-24 067	203 635	-1 008 573	2 699 079	-2 998 593
1	-63	1669	-24 059	203 267	-1 002 429	2 654 711	-2 881 161
1	-63	1669	-24 059	203 283	-1 002 925	2 659 687	-2 897 433
1	-63	1669	-24 059	203 283	-1 002 925	2 659 751	-2 898 009
1	-63	1669	-24 059	203 283	-1 002 893	2 659 175	-2 895 417
1	-63	1669	-24 059	203 299	-1 003 389	2 664 151	-2 911 689
1	-63	1669	-24 059	203 299	-1 003 357	2 663 575	-2 909 097
1	-63	1669	-24 059	203 315	-1 003 853	2 668 615	-2 925 945
1	-63	1669	-24 059	203 315	-1 003 821	2 668 039	-2 923 353
1	-63	1669	-24 059	203 331	-1 004 317	2 673 079	-2 940 201
1	-63	1669	-24 059	203 331	-1 004 285	2 672 439	-2 937 033
1	-63	1669	-24 059	203 331	-1 004 285	2 672 503	-2 937 609
1	-63	1669	-24 059	203 347	-1 004 749	2 676 903	-2 951 289
1	-63	1669	-24 059	203 347	-1 004 749	2 676 967	-2 951 865
1	-63	1669	-24 059	203 363	-1 005 213	2 681 367	-2 965 545
1	-63	1669	-24 059	203 363	-1 005 181	2 680 727	-2 962 377
1	-63	1669	-24 051	202 931	-997 213	2 619 207	-2 791 665
1	-63	1669	-24 051	202 947	-997 709	2 624 183	-2 807 937
1	-63	1669	-24 051	202 963	-998 173	2 628 647	-2 822 193
1	-63	1669	-24 051	202 963	-998 141	2 628 071	-2 819 601
1	-63	1669	-24 051	202 979	-998 605	2 632 535	-2 833 857
1	-63	1669	-24 051	202 979	-998 573	2 631 959	-2 831 265
1	-63	1669	-24 051	202 995	-999 069	2 636 935	-2 847 537
1	-63	1669	-24 051	203 011	-999 533	2 641 399	-2 861 793
1	-63	1669	-24 051	203 011	-999 501	2 640 823	-2 859 201
1	-63	1669	-24 051	203 027	-999 997	2 645 863	-2 876 049
1	-63	1669	-24 051	203 027	-999 965	2 645 223	-2 872 881
1	-63	1669	-24 051	203 027	-999 965	2 645 287	-2 873 457
1	-63	1669	-24 051	203 043	-1 000 429	2 649 687	-2 887 137
1	-63	1669	-24 051	203 059	-1 000 893	2 654 151	-2 901 393
1	-63	1669	-24 043	202 659	-993 853	2 601 431	-2 758 041
1	-63	1669	-24 043	202 675	-994 285	2 605 319	-2 769 705
1	-63	1669	-24 043	202 691	-994 749	2 609 719	-2 783 385
1	-63	1669	-24 043	202 707	-995 213	2 614 183	-2 797 641
1	-63	1669	-24 043	202 707	-995 181	2 613 607	-2 795 049
1	-63	1669	-24 043	202 723	-995 677	2 618 647	-2 811 897
1	-63	1669	-24 043	202 739	-996 109	2 622 471	-2 822 985
1	-63	1669	-24 035	202 355	-989 533	2 574 215	-2 693 889
1	-63	1669	-24 035	202 371	-989 997	2 578 679	-2 708 145
1	-63	1669	-24 035	202 371	-989 965	2 578 103	-2 705 553
1	-63	1669	-24 035	202 403	-990 893	2 586 967	-2 733 489
1	-63	1669	-24 035	202 419	-991 357	2 591 431	-2 747 745
1	-63	1669	-24 027	202 067	-985 677	2 551 463	-2 643 993
1	-63	1669	-24 027	202 067	-985 645	2 550 887	-2 641 401
1	-63	1669	-24 027	202 099	-986 573	2 559 751	-2 669 337
1	-63	1669	-24 019	201 763	-981 357	2 524 247	-2 579 841

Dimensions[A]

{52, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1179315, 9979651, -49444045, 132402327, -147231025}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203603 c[5] -
 1007645 c[6] + 2690215 c[7] - 2970657 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24067 c[4] + 203619 c[5] - 1008141 c[6] + 2695191 c[7] - 2986929 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203619 c[5] - 1008141 c[6] +
 2695255 c[7] - 2987505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
 203619 c[5] - 1008109 c[6] + 2694679 c[7] - 2984913 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203635 c[5] - 1008605 c[6] +
 2699655 c[7] - 3001185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
 203635 c[5] - 1008605 c[6] + 2699719 c[7] - 3001761 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203635 c[5] - 1008573 c[6] +
 2699079 c[7] - 2998593 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203267 c[5] - 1002429 c[6] + 2654711 c[7] - 2881161 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203283 c[5] - 1002925 c[6] +
 2659687 c[7] - 2897433 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203283 c[5] - 1002925 c[6] + 2659751 c[7] - 2898009 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203283 c[5] - 1002893 c[6] +
 2659175 c[7] - 2895417 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203299 c[5] - 1003389 c[6] + 2664151 c[7] - 2911689 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203299 c[5] - 1003357 c[6] +
 2663575 c[7] - 2909097 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203315 c[5] - 1003853 c[6] + 2668615 c[7] - 2925945 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203315 c[5] - 1003821 c[6] +
 2668039 c[7] - 2923353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203331 c[5] - 1004317 c[6] + 2673079 c[7] - 2940201 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203331 c[5] - 1004285 c[6] +
 2672439 c[7] - 2937033 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203331 c[5] - 1004285 c[6] + 2672503 c[7] - 2937609 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203347 c[5] - 1004749 c[6] +
 2676903 c[7] - 2951289 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203347 c[5] - 1004749 c[6] + 2676967 c[7] - 2951865 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203363 c[5] - 1005213 c[6] +
 2681367 c[7] - 2965545 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203363 c[5] - 1005181 c[6] + 2680727 c[7] - 2962377 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 202931 c[5] - 997213 c[6] +
 2619207 c[7] - 2791665 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 202947 c[5] - 997709 c[6] + 2624183 c[7] - 2807937 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 202963 c[5] - 998173 c[6] +
 2628647 c[7] - 2822193 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 202963 c[5] - 998141 c[6] + 2628071 c[7] - 2819601 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 202979 c[5] - 998605 c[6] +

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2 632 535 c[7] - 2 833 857 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
202 979 c[5] - 998 573 c[6] + 2 631 959 c[7] - 2 831 265 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 202 995 c[5] - 999 069 c[6] +
2 636 935 c[7] - 2 847 537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
203 011 c[5] - 999 533 c[6] + 2 641 399 c[7] - 2 861 793 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 011 c[5] - 999 501 c[6] +
2 640 823 c[7] - 2 859 201 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
203 027 c[5] - 999 997 c[6] + 2 645 863 c[7] - 2 876 049 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 027 c[5] - 999 965 c[6] +
2 645 223 c[7] - 2 872 881 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
203 027 c[5] - 999 965 c[6] + 2 645 287 c[7] - 2 873 457 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 043 c[5] - 1 000 429 c[6] +
2 649 687 c[7] - 2 887 137 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
203 059 c[5] - 1 000 893 c[6] + 2 654 151 c[7] - 2 901 393 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 659 c[5] - 993 853 c[6] +
2 601 431 c[7] - 2 758 041 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 675 c[5] - 994 285 c[6] + 2 605 319 c[7] - 2 769 705 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 691 c[5] - 994 749 c[6] +
2 609 719 c[7] - 2 783 385 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 707 c[5] - 995 213 c[6] + 2 614 183 c[7] - 2 797 641 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 707 c[5] - 995 181 c[6] +
2 613 607 c[7] - 2 795 049 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 723 c[5] - 995 677 c[6] + 2 618 647 c[7] - 2 811 897 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 109 c[6] +
2 622 471 c[7] - 2 822 985 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 355 c[5] - 989 533 c[6] + 2 574 215 c[7] - 2 693 889 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 371 c[5] - 989 997 c[6] +
2 578 679 c[7] - 2 708 145 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 371 c[5] - 989 965 c[6] + 2 578 103 c[7] - 2 705 553 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 403 c[5] - 990 893 c[6] +
2 586 967 c[7] - 2 733 489 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 419 c[5] - 991 357 c[6] + 2 591 431 c[7] - 2 747 745 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 067 c[5] - 985 677 c[6] +
2 551 463 c[7] - 2 643 993 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 067 c[5] - 985 645 c[6] + 2 550 887 c[7] - 2 641 401 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 573 c[6] +
2 559 751 c[7] - 2 669 337 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 763 c[5] - 981 357 c[6] + 2 524 247 c[7] - 2 579 841 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 315 c[4] +
9 979 651 c[5] - 49 444 045 c[6] + 132 402 327 c[7] - 147 231 025 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 315 c[4] +
9 979 651 c[5] - 49 444 045 c[6] + 132 402 327 c[7] - 147 231 025 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 603 c[5] - 1 007 645 c[6] +

```

$$\begin{aligned}
& 2\,690\,215\,c[7] - 2\,970\,657\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,619\,c[5] - 1\,008\,141\,c[6] + 2\,695\,191\,c[7] - 2\,986\,929\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,619\,c[5] - 1\,008\,141\,c[6] + \\
& 2\,695\,255\,c[7] - 2\,987\,505\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,619\,c[5] - 1\,008\,109\,c[6] + 2\,694\,679\,c[7] - 2\,984\,913\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,635\,c[5] - 1\,008\,605\,c[6] + \\
& 2\,699\,655\,c[7] - 3\,001\,185\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,635\,c[5] - 1\,008\,605\,c[6] + 2\,699\,719\,c[7] - 3\,001\,761\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,635\,c[5] - 1\,008\,573\,c[6] + \\
& 2\,699\,079\,c[7] - 2\,998\,593\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,267\,c[5] - 1\,002\,429\,c[6] + 2\,654\,711\,c[7] - 2\,881\,161\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,925\,c[6] + \\
& 2\,659\,687\,c[7] - 2\,897\,433\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,925\,c[6] + 2\,659\,751\,c[7] - 2\,898\,009\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,893\,c[6] + \\
& 2\,659\,175\,c[7] - 2\,895\,417\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,389\,c[6] + 2\,664\,151\,c[7] - 2\,911\,689\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,357\,c[6] + \\
& 2\,663\,575\,c[7] - 2\,909\,097\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,853\,c[6] + 2\,668\,615\,c[7] - 2\,925\,945\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,821\,c[6] + \\
& 2\,668\,039\,c[7] - 2\,923\,353\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,317\,c[6] + 2\,673\,079\,c[7] - 2\,940\,201\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,285\,c[6] + \\
& 2\,672\,439\,c[7] - 2\,937\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,285\,c[6] + 2\,672\,503\,c[7] - 2\,937\,609\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,749\,c[6] + \\
& 2\,676\,903\,c[7] - 2\,951\,289\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,749\,c[6] + 2\,676\,967\,c[7] - 2\,951\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - \\
& 1\,005\,213\,c[6] + 2\,681\,367\,c[7] - 2\,965\,545\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,181\,c[6] + \\
& 2\,680\,727\,c[7] - 2\,962\,377\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,931\,c[5] - 997\,213\,c[6] + 2\,619\,207\,c[7] - 2\,791\,665\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,947\,c[5] - 997\,709\,c[6] + \\
& 2\,624\,183\,c[7] - 2\,807\,937\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,963\,c[5] - 998\,173\,c[6] + 2\,628\,647\,c[7] - 2\,822\,193\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,963\,c[5] - 998\,141\,c[6] + \\
& 2\,628\,071\,c[7] - 2\,819\,601\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,605\,c[6] + 2\,632\,535\,c[7] - 2\,833\,857\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,573\,c[6] + \\
& 2\,631\,959\,c[7] - 2\,831\,265\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,069\,c[6] + 2\,636\,935\,c[7] - 2\,847\,537\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,533\,c[6] + \\
& 2\,641\,399\,c[7] - 2\,861\,793\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,501\,c[6] + 2\,640\,823\,c[7] - 2\,859\,201\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,997\,c[6] +
\end{aligned}$$


```

2 645 863 c[7] - 2 876 049 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
203 027 c[5] - 999 965 c[6] + 2 645 223 c[7] - 2 872 881 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 027 c[5] - 999 965 c[6] +
2 645 287 c[7] - 2 873 457 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
203 043 c[5] - 1 000 429 c[6] + 2 649 687 c[7] - 2 887 137 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 059 c[5] - 1 000 893 c[6] +
2 654 151 c[7] - 2 901 393 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 659 c[5] - 993 853 c[6] + 2 601 431 c[7] - 2 758 041 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 675 c[5] - 994 285 c[6] +
2 605 319 c[7] - 2 769 705 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 691 c[5] - 994 749 c[6] + 2 609 719 c[7] - 2 783 385 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 707 c[5] - 995 213 c[6] +
2 614 183 c[7] - 2 797 641 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 707 c[5] - 995 181 c[6] + 2 613 607 c[7] - 2 795 049 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 723 c[5] - 995 677 c[6] +
2 618 647 c[7] - 2 811 897 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 739 c[5] - 996 109 c[6] + 2 622 471 c[7] - 2 822 985 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 355 c[5] - 989 533 c[6] +
2 574 215 c[7] - 2 693 889 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 371 c[5] - 989 997 c[6] + 2 578 679 c[7] - 2 708 145 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 371 c[5] - 989 965 c[6] +
2 578 103 c[7] - 2 705 553 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 403 c[5] - 990 893 c[6] + 2 586 967 c[7] - 2 733 489 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 419 c[5] - 991 357 c[6] +
2 591 431 c[7] - 2 747 745 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 067 c[5] - 985 677 c[6] + 2 551 463 c[7] - 2 643 993 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 067 c[5] - 985 645 c[6] +
2 550 887 c[7] - 2 641 401 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 099 c[5] - 986 573 c[6] + 2 559 751 c[7] - 2 669 337 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 763 c[5] - 981 357 c[6] +
2 524 247 c[7] - 2 579 841 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, 0, -12 974, 0, 4359}

GCD[0, 0, 0, 0, 0, -12 974, 0, 4359]
1

cert.g
-292 998 145

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cert.Transpose[A]

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CoefficientList[feasibleinterlacingpolylist[chi], x]

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1	-74	2362	-42 410	467 572	-3 232 654	13 636 390	-31 919 742	31 492 395
1	-74	2362	-42 410	467 572	-3 232 622	13 635 398	-31 909 534	31 457 547
1	-74	2362	-42 410	467 572	-3 232 622	13 635 462	-31 910 814	31 463 883
1	-74	2362	-42 410	467 572	-3 232 590	13 634 470	-31 900 606	31 429 035
1	-74	2362	-42 410	467 572	-3 232 558	13 633 478	-31 890 398	31 394 187
1	-74	2362	-42 410	467 588	-3 233 358	13 647 878	-32 002 238	31 712 571
1	-74	2362	-42 410	467 588	-3 233 294	13 645 958	-31 983 102	31 649 211
1	-74	2362	-42 410	467 588	-3 233 262	13 644 966	-31 972 894	31 614 363
1	-74	2362	-42 410	467 588	-3 233 262	13 645 030	-31 974 174	31 620 699
1	-74	2362	-42 410	467 604	-3 233 998	13 657 446	-32 065 598	31 869 387
1	-74	2362	-42 410	467 604	-3 233 934	13 655 526	-32 046 462	31 806 027
1	-74	2362	-42 410	467 620	-3 234 574	13 665 094	-32 109 822	31 962 843
1	-74	2362	-42 402	467 116	-3 222 494	13 525 238	-31 320 630	30 216 483
1	-74	2362	-42 402	467 132	-3 223 134	13 534 806	-31 383 990	30 373 299
1	-74	2362	-42 402	467 132	-3 223 102	13 533 878	-31 375 062	30 344 787
1	-74	2362	-42 402	467 148	-3 223 742	13 543 446	-31 438 422	30 501 603
1	-74	2362	-42 402	467 148	-3 223 710	13 542 454	-31 428 214	30 466 755
1	-74	2362	-42 402	467 148	-3 223 710	13 542 518	-31 429 494	30 473 091
1	-74	2362	-42 402	467 148	-3 223 678	13 541 526	-31 419 286	30 438 243
1	-74	2362	-42 402	467 164	-3 224 382	13 553 014	-31 501 782	30 658 419
1	-74	2362	-42 402	467 164	-3 224 350	13 552 086	-31 492 854	30 629 907
1	-74	2362	-42 402	467 164	-3 224 318	13 551 094	-31 482 646	30 595 059
1	-74	2362	-42 402	467 164	-3 224 318	13 551 158	-31 483 926	30 601 395
1	-74	2362	-42 402	467 164	-3 224 286	13 550 166	-31 473 718	30 566 547
1	-74	2362	-42 402	467 180	-3 225 022	13 562 582	-31 565 142	30 815 235
1	-74	2362	-42 402	467 180	-3 224 990	13 561 654	-31 556 214	30 786 723
1	-74	2362	-42 402	467 180	-3 224 958	13 560 662	-31 546 006	30 751 875
1	-74	2362	-42 402	467 180	-3 224 958	13 560 726	-31 547 286	30 758 211
1	-74	2362	-42 402	467 196	-3 225 694	13 573 142	-31 638 710	31 006 899
1	-74	2362	-42 402	467 196	-3 225 630	13 571 222	-31 619 574	30 943 539
1	-74	2362	-42 402	467 212	-3 226 302	13 581 782	-31 693 142	31 135 203
1	-74	2362	-42 402	467 212	-3 226 270	13 580 790	-31 682 934	31 100 355
1	-74	2362	-42 394	466 724	-3 214 830	13 450 502	-30 957 102	29 510 811
1	-74	2362	-42 394	466 740	-3 215 470	13 460 070	-31 020 462	29 667 627

1	-74	2362	-42394	466740	-3215438	13459142	-31011534	29639115
1	-74	2362	-42394	466756	-3216078	13468710	-31074894	29795931
1	-74	2362	-42394	466756	-3216046	13467782	-31065966	29767419
1	-74	2362	-42394	466772	-3216718	13478278	-31138254	29952747
1	-74	2362	-42394	466772	-3216686	13477350	-31129326	29924235
1	-74	2362	-42394	466772	-3216654	13476358	-31119118	29889387
1	-74	2362	-42394	466788	-3217326	13486918	-31192686	30081051
1	-74	2362	-42394	466804	-3218030	13498406	-31275182	30301227
1	-74	2362	-42386	466364	-3208414	13393974	-30711366	29090259
1	-74	2362	-42386	466364	-3208382	13393046	-30702438	29061747
1	-74	2362	-42378	465972	-3200750	13319238	-30347838	28384587
1	-74	2362	-42378	466004	-3202062	13339366	-30484766	28733067

Dimensions[A]

{120, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3626, 115738, -2078906, 22952116,
-159220206, 676289574, -1603701678, 1619705947}

Array[c, 9].Transpose[A]

{c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468748 c[5] -
3255486 c[6] + 13855830 c[7] - 32963126 c[8] + 33454179 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468764 c[5] - 3256158 c[6] +
13866262 c[7] - 33034134 c[8] + 33633171 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468764 c[5] - 3256126 c[6] +
13865334 c[7] - 33025206 c[8] + 33604659 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42434 c[4] + 468764 c[5] - 3256094 c[6] +
13864342 c[7] - 33014998 c[8] + 33569811 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468324 c[5] - 3246574 c[6] +
13762950 c[7] - 32483086 c[8] + 32469723 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468340 c[5] - 3247278 c[6] +
13774438 c[7] - 32565454 c[8] + 32688747 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468340 c[5] - 3247246 c[6] + 13773446 c[7] -
32555374 c[8] + 32655051 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +
468340 c[5] - 3247214 c[6] + 13772454 c[7] - 32545166 c[8] + 32620203 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468340 c[5] - 3247214 c[6] + 13772518 c[7] -
32546446 c[8] + 32626539 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +
468356 c[5] - 3247950 c[6] + 13784934 c[7] - 32637870 c[8] + 32875227 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468356 c[5] - 3247950 c[6] + 13784998 c[7] -
32639022 c[8] + 32880411 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +
468356 c[5] - 3247918 c[6] + 13783878 c[7] - 32626382 c[8] + 32834043 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468356 c[5] - 3247918 c[6] + 13783942 c[7] -
32627662 c[8] + 32840379 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +
468356 c[5] - 3247886 c[6] + 13782950 c[7] - 32617454 c[8] + 32805531 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468356 c[5] - 3247886 c[6] + 13783014 c[7] -
32618734 c[8] + 32811867 c[9], c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] +
468356 c[5] - 3247854 c[6] + 13781958 c[7] - 32607246 c[8] + 32770683 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468356 c[5] - 3247854 c[6] + 13782022 c[7] -

$$\begin{aligned}
& 32\,608\,526\,c[8] + 32\,777\,019\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,356\,c[5] - 3\,247\,854\,c[6] + 13\,782\,086\,c[7] - 32\,609\,806\,c[8] + 32\,783\,355\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,558\,c[6] + 13\,793\,510\,c[7] - \\
& 32\,691\,022\,c[8] + 32\,997\,195\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,372\,c[5] - 3\,248\,558\,c[6] + 13\,793\,574\,c[7] - 32\,692\,302\,c[8] + 33\,003\,531\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,526\,c[6] + 13\,792\,518\,c[7] - \\
& 32\,680\,814\,c[8] + 32\,962\,347\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,372\,c[5] - 3\,248\,526\,c[6] + 13\,792\,582\,c[7] - 32\,682\,094\,c[8] + 32\,968\,683\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + 468\,372\,c[5] - 3\,248\,494\,c[6] + 13\,791\,526\,c[7] - \\
& 32\,670\,606\,c[8] + 32\,927\,499\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,426\,c[4] + \\
& 468\,372\,c[5] - 3\,248\,494\,c[6] + 13\,791\,590\,c[7] - 32\,671\,886\,c[8] + 32\,933\,835\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,334\,c[6] + 13\,680\,566\,c[7] - \\
& 32\,075\,206\,c[8] + 31\,669\,443\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,932\,c[5] - 3\,239\,038\,c[6] + 13\,692\,054\,c[7] - 32\,157\,702\,c[8] + 31\,889\,619\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,239\,006\,c[6] + 13\,690\,998\,c[7] - \\
& 32\,146\,342\,c[8] + 31\,849\,587\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,932\,c[5] - 3\,239\,006\,c[6] + 13\,691\,126\,c[7] - 32\,148\,774\,c[8] + 31\,861\,107\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,974\,c[6] + 13\,690\,070\,c[7] - \\
& 32\,137\,414\,c[8] + 31\,821\,075\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,932\,c[5] - 3\,238\,974\,c[6] + 13\,690\,134\,c[7] - 32\,138\,566\,c[8] + 31\,826\,259\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,942\,c[6] + 13\,689\,142\,c[7] - \\
& 32\,128\,486\,c[8] + 31\,792\,563\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,948\,c[5] - 3\,239\,710\,c[6] + 13\,702\,486\,c[7] - 32\,228\,838\,c[8] + 32\,069\,763\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,678\,c[6] + 13\,701\,494\,c[7] - \\
& 32\,218\,630\,c[8] + 32\,034\,915\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,948\,c[5] - 3\,239\,678\,c[6] + 13\,701\,558\,c[7] - 32\,219\,910\,c[8] + 32\,041\,251\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,646\,c[6] + 13\,700\,566\,c[7] - \\
& 32\,209\,702\,c[8] + 32\,006\,403\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,948\,c[5] - 3\,239\,646\,c[6] + 13\,700\,694\,c[7] - 32\,212\,134\,c[8] + 32\,017\,923\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,614\,c[6] + 13\,699\,574\,c[7] - \\
& 32\,199\,494\,c[8] + 31\,971\,555\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,948\,c[5] - 3\,239\,614\,c[6] + 13\,699\,638\,c[7] - 32\,200\,774\,c[8] + 31\,977\,891\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,582\,c[6] + 13\,698\,646\,c[7] - \\
& 32\,190\,566\,c[8] + 31\,943\,043\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,948\,c[5] - 3\,239\,582\,c[6] + 13\,698\,710\,c[7] - 32\,191\,846\,c[8] + 31\,949\,379\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,350\,c[6] + 13\,712\,054\,c[7] - \\
& 32\,292\,198\,c[8] + 32\,226\,579\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,964\,c[5] - 3\,240\,318\,c[6] + 13\,711\,126\,c[7] - 32\,283\,270\,c[8] + 32\,198\,067\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,286\,c[6] + 13\,710\,134\,c[7] - \\
& 32\,273\,062\,c[8] + 32\,163\,219\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,964\,c[5] - 3\,240\,286\,c[6] + 13\,710\,198\,c[7] - 32\,274\,342\,c[8] + 32\,169\,555\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,254\,c[6] + 13\,709\,142\,c[7] - \\
& 32\,262\,854\,c[8] + 32\,128\,371\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,964\,c[5] - 3\,240\,254\,c[6] + 13\,709\,206\,c[7] - 32\,264\,134\,c[8] + 32\,134\,707\,c[9], \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,222\,c[6] + 13\,708\,214\,c[7] - \\
& 32\,253\,926\,c[8] + 32\,099\,859\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + \\
& 467\,964\,c[5] - 3\,240\,222\,c[6] + 13\,708\,278\,c[7] - 32\,255\,206\,c[8] + 32\,106\,195\,c[9],
\end{aligned}$$

$c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467980 c[5] - 3240990 c[6] + 13721622 c[7] -$
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 $467980 c[5] - 3240958 c[6] + 13720694 c[7] - 32346630 c[8] + 32354883 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467980 c[5] - 3240926 c[6] + 13719702 c[7] -$
 $32336422 c[8] + 32320035 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +$
 $467980 c[5] - 3240926 c[6] + 13719766 c[7] - 32337702 c[8] + 32326371 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467980 c[5] - 3240894 c[6] + 13718774 c[7] -$
 $32327494 c[8] + 32291523 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +$
 $467980 c[5] - 3240894 c[6] + 13718838 c[7] - 32328774 c[8] + 32297859 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467980 c[5] - 3240862 c[6] + 13717782 c[7] -$
 $32317286 c[8] + 32256675 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +$
 $467996 c[5] - 3241566 c[6] + 13729334 c[7] - 32401062 c[8] + 32483187 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467996 c[5] - 3241534 c[6] + 13728342 c[7] -$
 $32390854 c[8] + 32448339 c[9], c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] +$
 $467524 c[5] - 3230766 c[6] + 13608614 c[7] - 31738590 c[8] + 31050459 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467524 c[5] - 3230734 c[6] + 13607622 c[7] -$
 $31728382 c[8] + 31015611 c[9], c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] +$
 $467524 c[5] - 3230734 c[6] + 13607750 c[7] - 31730814 c[8] + 31027131 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467540 c[5] - 3231438 c[6] + 13619110 c[7] -$
 $31810878 c[8] + 31235787 c[9], c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] +$
 $467540 c[5] - 3231406 c[6] + 13618182 c[7] - 31801950 c[8] + 31207275 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467540 c[5] - 3231374 c[6] + 13617190 c[7] -$
 $31791742 c[8] + 31172427 c[9], c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] +$
 $467540 c[5] - 3231374 c[6] + 13617254 c[7] - 31793022 c[8] + 31178763 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467540 c[5] - 3231342 c[6] + 13616262 c[7] -$
 $31782814 c[8] + 31143915 c[9], c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] +$
 $467540 c[5] - 3231310 c[6] + 13615334 c[7] - 31773886 c[8] + 31115403 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467556 c[5] - 3232046 c[6] + 13627750 c[7] -$
 $31865310 c[8] + 31364091 c[9], c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] +$
 $467556 c[5] - 3232014 c[6] + 13626822 c[7] - 31856382 c[8] + 31335579 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467556 c[5] - 3231982 c[6] + 13625830 c[7] -$
 $31846174 c[8] + 31300731 c[9], c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] +$
 $467556 c[5] - 3231950 c[6] + 13624838 c[7] - 31835966 c[8] + 31265883 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467556 c[5] - 3231950 c[6] +$
 $13624902 c[7] - 31837246 c[8] + 31272219 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467556 c[5] - 3231918 c[6] +$
 $13623974 c[7] - 31828318 c[8] + 31243707 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467572 c[5] - 3232750 c[6] +$
 $13639238 c[7] - 31947806 c[8] + 31584267 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467572 c[5] - 3232686 c[6] +$
 $13637318 c[7] - 31928670 c[8] + 31520907 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467572 c[5] - 3232654 c[6] +$
 $13636390 c[7] - 31919742 c[8] + 31492395 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467572 c[5] - 3232622 c[6] +$
 $13635398 c[7] - 31909534 c[8] + 31457547 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467572 c[5] - 3232622 c[6] +$
 $13635462 c[7] - 31910814 c[8] + 31463883 c[9],$

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,590 c[6] + \\
& 13\,634\,470 c[7] - 31\,900\,606 c[8] + 31\,429\,035 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,558 c[6] + \\
& 13\,633\,478 c[7] - 31\,890\,398 c[8] + 31\,394\,187 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,358 c[6] + \\
& 13\,647\,878 c[7] - 32\,002\,238 c[8] + 31\,712\,571 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,294 c[6] + \\
& 13\,645\,958 c[7] - 31\,983\,102 c[8] + 31\,649\,211 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,262 c[6] + \\
& 13\,644\,966 c[7] - 31\,972\,894 c[8] + 31\,614\,363 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,262 c[6] + \\
& 13\,645\,030 c[7] - 31\,974\,174 c[8] + 31\,620\,699 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,604 c[5] - 3\,233\,998 c[6] + \\
& 13\,657\,446 c[7] - 32\,065\,598 c[8] + 31\,869\,387 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,604 c[5] - 3\,233\,934 c[6] + \\
& 13\,655\,526 c[7] - 32\,046\,462 c[8] + 31\,806\,027 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,620 c[5] - 3\,234\,574 c[6] + \\
& 13\,665\,094 c[7] - 32\,109\,822 c[8] + 31\,962\,843 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,116 c[5] - 3\,222\,494 c[6] + \\
& 13\,525\,238 c[7] - 31\,320\,630 c[8] + 30\,216\,483 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,132 c[5] - 3\,223\,134 c[6] + \\
& 13\,534\,806 c[7] - 31\,383\,990 c[8] + 30\,373\,299 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,132 c[5] - 3\,223\,102 c[6] + \\
& 13\,533\,878 c[7] - 31\,375\,062 c[8] + 30\,344\,787 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,148 c[5] - 3\,223\,742 c[6] + \\
& 13\,543\,446 c[7] - 31\,438\,422 c[8] + 30\,501\,603 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,148 c[5] - 3\,223\,710 c[6] + \\
& 13\,542\,454 c[7] - 31\,428\,214 c[8] + 30\,466\,755 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,148 c[5] - 3\,223\,710 c[6] + \\
& 13\,542\,518 c[7] - 31\,429\,494 c[8] + 30\,473\,091 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,148 c[5] - 3\,223\,678 c[6] + \\
& 13\,541\,526 c[7] - 31\,419\,286 c[8] + 30\,438\,243 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,164 c[5] - 3\,224\,382 c[6] + \\
& 13\,553\,014 c[7] - 31\,501\,782 c[8] + 30\,658\,419 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,164 c[5] - 3\,224\,350 c[6] + \\
& 13\,552\,086 c[7] - 31\,492\,854 c[8] + 30\,629\,907 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,164 c[5] - 3\,224\,318 c[6] + \\
& 13\,551\,094 c[7] - 31\,482\,646 c[8] + 30\,595\,059 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,164 c[5] - 3\,224\,318 c[6] + \\
& 13\,551\,158 c[7] - 31\,483\,926 c[8] + 30\,601\,395 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,164 c[5] - 3\,224\,286 c[6] + \\
& 13\,550\,166 c[7] - 31\,473\,718 c[8] + 30\,566\,547 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,180 c[5] - 3\,225\,022 c[6] + \\
& 13\,562\,582 c[7] - 31\,565\,142 c[8] + 30\,815\,235 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,180 c[5] - 3\,224\,990 c[6] + \\
& 13\,561\,654 c[7] - 31\,556\,214 c[8] + 30\,786\,723 c[9], \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,402 c[4] + 467\,180 c[5] - 3\,224\,958 c[6] +
\end{aligned}$$

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13 560 662 c[7] - 31 546 006 c[8] + 30 751 875 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 180 c[5] - 3 224 958 c[6] +
13 560 726 c[7] - 31 547 286 c[8] + 30 758 211 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 196 c[5] - 3 225 694 c[6] +
13 573 142 c[7] - 31 638 710 c[8] + 31 006 899 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 196 c[5] - 3 225 630 c[6] +
13 571 222 c[7] - 31 619 574 c[8] + 30 943 539 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 212 c[5] - 3 226 302 c[6] +
13 581 782 c[7] - 31 693 142 c[8] + 31 135 203 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 212 c[5] - 3 226 270 c[6] +
13 580 790 c[7] - 31 682 934 c[8] + 31 100 355 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 724 c[5] - 3 214 830 c[6] +
13 450 502 c[7] - 30 957 102 c[8] + 29 510 811 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 740 c[5] - 3 215 470 c[6] +
13 460 070 c[7] - 31 020 462 c[8] + 29 667 627 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 740 c[5] - 3 215 438 c[6] +
13 459 142 c[7] - 31 011 534 c[8] + 29 639 115 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 756 c[5] - 3 216 078 c[6] +
13 468 710 c[7] - 31 074 894 c[8] + 29 795 931 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 756 c[5] - 3 216 046 c[6] +
13 467 782 c[7] - 31 065 966 c[8] + 29 767 419 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 718 c[6] +
13 478 278 c[7] - 31 138 254 c[8] + 29 952 747 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 686 c[6] +
13 477 350 c[7] - 31 129 326 c[8] + 29 924 235 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 654 c[6] +
13 476 358 c[7] - 31 119 118 c[8] + 29 889 387 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 788 c[5] - 3 217 326 c[6] +
13 486 918 c[7] - 31 192 686 c[8] + 30 081 051 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 804 c[5] - 3 218 030 c[6] +
13 498 406 c[7] - 31 275 182 c[8] + 30 301 227 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 386 c[4] + 466 364 c[5] - 3 208 414 c[6] +
13 393 974 c[7] - 30 711 366 c[8] + 29 090 259 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 386 c[4] + 466 364 c[5] - 3 208 382 c[6] +
13 393 046 c[7] - 30 702 438 c[8] + 29 061 747 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 378 c[4] + 465 972 c[5] - 3 200 750 c[6] +
13 319 238 c[7] - 30 347 838 c[8] + 28 384 587 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 378 c[4] + 466 004 c[5] - 3 202 062 c[6] +
13 339 366 c[7] - 30 484 766 c[8] + 28 733 067 c[9] }

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Array[c, 9].g

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49 c[1] - 3626 c[2] + 115 738 c[3] - 2 078 906 c[4] + 22 952 116 c[5] -
159 220 206 c[6] + 676 289 574 c[7] - 1 603 701 678 c[8] + 1 619 705 947 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3626 c[2] + 115 738 c[3] - 2 078 906 c[4] + 22 952 116 c[5] -
159 220 206 c[6] + 676 289 574 c[7] - 1 603 701 678 c[8] + 1 619 705 947 c[9] < 0 &&

```

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,748 c[5] - 3\,255\,486 c[6] + \\
& \quad 13\,855\,830 c[7] - 32\,963\,126 c[8] + 33\,454\,179 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,764 c[5] - 3\,256\,158 c[6] + \\
& \quad 13\,866\,262 c[7] - 33\,034\,134 c[8] + 33\,633\,171 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,764 c[5] - 3\,256\,126 c[6] + \\
& \quad 13\,865\,334 c[7] - 33\,025\,206 c[8] + 33\,604\,659 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,434 c[4] + 468\,764 c[5] - 3\,256\,094 c[6] + \\
& \quad 13\,864\,342 c[7] - 33\,014\,998 c[8] + 33\,569\,811 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,324 c[5] - 3\,246\,574 c[6] + \\
& \quad 13\,762\,950 c[7] - 32\,483\,086 c[8] + 32\,469\,723 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,278 c[6] + \\
& \quad 13\,774\,438 c[7] - 32\,565\,454 c[8] + 32\,688\,747 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,246 c[6] + \\
& \quad 13\,773\,446 c[7] - 32\,555\,374 c[8] + 32\,655\,051 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,214 c[6] + \\
& \quad 13\,772\,454 c[7] - 32\,545\,166 c[8] + 32\,620\,203 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,340 c[5] - 3\,247\,214 c[6] + \\
& \quad 13\,772\,518 c[7] - 32\,546\,446 c[8] + 32\,626\,539 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,950 c[6] + \\
& \quad 13\,784\,934 c[7] - 32\,637\,870 c[8] + 32\,875\,227 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,950 c[6] + \\
& \quad 13\,784\,998 c[7] - 32\,639\,022 c[8] + 32\,880\,411 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,918 c[6] + \\
& \quad 13\,783\,878 c[7] - 32\,626\,382 c[8] + 32\,834\,043 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,918 c[6] + \\
& \quad 13\,783\,942 c[7] - 32\,627\,662 c[8] + 32\,840\,379 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,886 c[6] + \\
& \quad 13\,782\,950 c[7] - 32\,617\,454 c[8] + 32\,805\,531 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,886 c[6] + \\
& \quad 13\,783\,014 c[7] - 32\,618\,734 c[8] + 32\,811\,867 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,854 c[6] + \\
& \quad 13\,781\,958 c[7] - 32\,607\,246 c[8] + 32\,770\,683 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,854 c[6] + \\
& \quad 13\,782\,022 c[7] - 32\,608\,526 c[8] + 32\,777\,019 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,356 c[5] - 3\,247\,854 c[6] + \\
& \quad 13\,782\,086 c[7] - 32\,609\,806 c[8] + 32\,783\,355 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,558 c[6] + \\
& \quad 13\,793\,510 c[7] - 32\,691\,022 c[8] + 32\,997\,195 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,558 c[6] + \\
& \quad 13\,793\,574 c[7] - 32\,692\,302 c[8] + 33\,003\,531 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,526 c[6] + \\
& \quad 13\,792\,518 c[7] - 32\,680\,814 c[8] + 32\,962\,347 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,526 c[6] + \\
& \quad 13\,792\,582 c[7] - 32\,682\,094 c[8] + 32\,968\,683 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,494 c[6] + \\
& \quad 13\,791\,526 c[7] - 32\,670\,606 c[8] + 32\,927\,499 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,426 c[4] + 468\,372 c[5] - 3\,248\,494 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 13\,791\,590\,c[7] - 32\,671\,886\,c[8] + 32\,933\,835\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,916\,c[5] - 3\,238\,334\,c[6] + \\
& \quad 13\,680\,566\,c[7] - 32\,075\,206\,c[8] + 31\,669\,443\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,239\,038\,c[6] + \\
& \quad 13\,692\,054\,c[7] - 32\,157\,702\,c[8] + 31\,889\,619\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,239\,006\,c[6] + \\
& \quad 13\,690\,998\,c[7] - 32\,146\,342\,c[8] + 31\,849\,587\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,239\,006\,c[6] + \\
& \quad 13\,691\,126\,c[7] - 32\,148\,774\,c[8] + 31\,861\,107\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,974\,c[6] + \\
& \quad 13\,690\,070\,c[7] - 32\,137\,414\,c[8] + 31\,821\,075\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,974\,c[6] + \\
& \quad 13\,690\,134\,c[7] - 32\,138\,566\,c[8] + 31\,826\,259\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,932\,c[5] - 3\,238\,942\,c[6] + \\
& \quad 13\,689\,142\,c[7] - 32\,128\,486\,c[8] + 31\,792\,563\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,710\,c[6] + \\
& \quad 13\,702\,486\,c[7] - 32\,228\,838\,c[8] + 32\,069\,763\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,678\,c[6] + \\
& \quad 13\,701\,494\,c[7] - 32\,218\,630\,c[8] + 32\,034\,915\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,678\,c[6] + \\
& \quad 13\,701\,558\,c[7] - 32\,219\,910\,c[8] + 32\,041\,251\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,646\,c[6] + \\
& \quad 13\,700\,566\,c[7] - 32\,209\,702\,c[8] + 32\,006\,403\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,646\,c[6] + \\
& \quad 13\,700\,694\,c[7] - 32\,212\,134\,c[8] + 32\,017\,923\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,614\,c[6] + \\
& \quad 13\,699\,574\,c[7] - 32\,199\,494\,c[8] + 31\,971\,555\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,614\,c[6] + \\
& \quad 13\,699\,638\,c[7] - 32\,200\,774\,c[8] + 31\,977\,891\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,582\,c[6] + \\
& \quad 13\,698\,646\,c[7] - 32\,190\,566\,c[8] + 31\,943\,043\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,948\,c[5] - 3\,239\,582\,c[6] + \\
& \quad 13\,698\,710\,c[7] - 32\,191\,846\,c[8] + 31\,949\,379\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,350\,c[6] + \\
& \quad 13\,712\,054\,c[7] - 32\,292\,198\,c[8] + 32\,226\,579\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,318\,c[6] + \\
& \quad 13\,711\,126\,c[7] - 32\,283\,270\,c[8] + 32\,198\,067\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,286\,c[6] + \\
& \quad 13\,710\,134\,c[7] - 32\,273\,062\,c[8] + 32\,163\,219\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,286\,c[6] + \\
& \quad 13\,710\,198\,c[7] - 32\,274\,342\,c[8] + 32\,169\,555\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,254\,c[6] + \\
& \quad 13\,709\,142\,c[7] - 32\,262\,854\,c[8] + 32\,128\,371\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,254\,c[6] + \\
& \quad 13\,709\,206\,c[7] - 32\,264\,134\,c[8] + 32\,134\,707\,c[9] \geq 0 \ \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,964\,c[5] - 3\,240\,222\,c[6] + \\
& \quad 13\,708\,214\,c[7] - 32\,253\,926\,c[8] + 32\,099\,859\,c[9] \geq 0 \ \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,964 c[5] - 3\,240\,222 c[6] + \\
& \quad 13\,708\,278 c[7] - 32\,255\,206 c[8] + 32\,106\,195 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,990 c[6] + \\
& \quad 13\,721\,622 c[7] - 32\,355\,558 c[8] + 32\,383\,395 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,958 c[6] + \\
& \quad 13\,720\,694 c[7] - 32\,346\,630 c[8] + 32\,354\,883 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,926 c[6] + \\
& \quad 13\,719\,702 c[7] - 32\,336\,422 c[8] + 32\,320\,035 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,926 c[6] + \\
& \quad 13\,719\,766 c[7] - 32\,337\,702 c[8] + 32\,326\,371 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,894 c[6] + \\
& \quad 13\,718\,774 c[7] - 32\,327\,494 c[8] + 32\,291\,523 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,894 c[6] + \\
& \quad 13\,718\,838 c[7] - 32\,328\,774 c[8] + 32\,297\,859 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,980 c[5] - 3\,240\,862 c[6] + \\
& \quad 13\,717\,782 c[7] - 32\,317\,286 c[8] + 32\,256\,675 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,996 c[5] - 3\,241\,566 c[6] + \\
& \quad 13\,729\,334 c[7] - 32\,401\,062 c[8] + 32\,483\,187 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,996 c[5] - 3\,241\,534 c[6] + \\
& \quad 13\,728\,342 c[7] - 32\,390\,854 c[8] + 32\,448\,339 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,524 c[5] - 3\,230\,766 c[6] + \\
& \quad 13\,608\,614 c[7] - 31\,738\,590 c[8] + 31\,050\,459 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,524 c[5] - 3\,230\,734 c[6] + \\
& \quad 13\,607\,622 c[7] - 31\,728\,382 c[8] + 31\,015\,611 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,524 c[5] - 3\,230\,734 c[6] + \\
& \quad 13\,607\,750 c[7] - 31\,730\,814 c[8] + 31\,027\,131 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,438 c[6] + \\
& \quad 13\,619\,110 c[7] - 31\,810\,878 c[8] + 31\,235\,787 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,406 c[6] + \\
& \quad 13\,618\,182 c[7] - 31\,801\,950 c[8] + 31\,207\,275 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,374 c[6] + \\
& \quad 13\,617\,190 c[7] - 31\,791\,742 c[8] + 31\,172\,427 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,374 c[6] + \\
& \quad 13\,617\,254 c[7] - 31\,793\,022 c[8] + 31\,178\,763 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,342 c[6] + \\
& \quad 13\,616\,262 c[7] - 31\,782\,814 c[8] + 31\,143\,915 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,540 c[5] - 3\,231\,310 c[6] + \\
& \quad 13\,615\,334 c[7] - 31\,773\,886 c[8] + 31\,115\,403 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,232\,046 c[6] + \\
& \quad 13\,627\,750 c[7] - 31\,865\,310 c[8] + 31\,364\,091 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,232\,014 c[6] + \\
& \quad 13\,626\,822 c[7] - 31\,856\,382 c[8] + 31\,335\,579 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,982 c[6] + \\
& \quad 13\,625\,830 c[7] - 31\,846\,174 c[8] + 31\,300\,731 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,950 c[6] + \\
& \quad 13\,624\,838 c[7] - 31\,835\,966 c[8] + 31\,265\,883 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,556 c[5] - 3\,231\,950 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 13\,624\,902\,c[7] - 31\,837\,246\,c[8] + 31\,272\,219\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,556\,c[5] - 3\,231\,918\,c[6] + \\
& \quad 13\,623\,974\,c[7] - 31\,828\,318\,c[8] + 31\,243\,707\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,750\,c[6] + \\
& \quad 13\,639\,238\,c[7] - 31\,947\,806\,c[8] + 31\,584\,267\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,686\,c[6] + \\
& \quad 13\,637\,318\,c[7] - 31\,928\,670\,c[8] + 31\,520\,907\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,654\,c[6] + \\
& \quad 13\,636\,390\,c[7] - 31\,919\,742\,c[8] + 31\,492\,395\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,622\,c[6] + \\
& \quad 13\,635\,398\,c[7] - 31\,909\,534\,c[8] + 31\,457\,547\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,622\,c[6] + \\
& \quad 13\,635\,462\,c[7] - 31\,910\,814\,c[8] + 31\,463\,883\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,590\,c[6] + \\
& \quad 13\,634\,470\,c[7] - 31\,900\,606\,c[8] + 31\,429\,035\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,558\,c[6] + \\
& \quad 13\,633\,478\,c[7] - 31\,890\,398\,c[8] + 31\,394\,187\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,358\,c[6] + \\
& \quad 13\,647\,878\,c[7] - 32\,002\,238\,c[8] + 31\,712\,571\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,294\,c[6] + \\
& \quad 13\,645\,958\,c[7] - 31\,983\,102\,c[8] + 31\,649\,211\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,262\,c[6] + \\
& \quad 13\,644\,966\,c[7] - 31\,972\,894\,c[8] + 31\,614\,363\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,262\,c[6] + \\
& \quad 13\,645\,030\,c[7] - 31\,974\,174\,c[8] + 31\,620\,699\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,604\,c[5] - 3\,233\,998\,c[6] + \\
& \quad 13\,657\,446\,c[7] - 32\,065\,598\,c[8] + 31\,869\,387\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,604\,c[5] - 3\,233\,934\,c[6] + \\
& \quad 13\,655\,526\,c[7] - 32\,046\,462\,c[8] + 31\,806\,027\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,620\,c[5] - 3\,234\,574\,c[6] + \\
& \quad 13\,665\,094\,c[7] - 32\,109\,822\,c[8] + 31\,962\,843\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,116\,c[5] - 3\,222\,494\,c[6] + \\
& \quad 13\,525\,238\,c[7] - 31\,320\,630\,c[8] + 30\,216\,483\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,132\,c[5] - 3\,223\,134\,c[6] + \\
& \quad 13\,534\,806\,c[7] - 31\,383\,990\,c[8] + 30\,373\,299\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,132\,c[5] - 3\,223\,102\,c[6] + \\
& \quad 13\,533\,878\,c[7] - 31\,375\,062\,c[8] + 30\,344\,787\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,148\,c[5] - 3\,223\,742\,c[6] + \\
& \quad 13\,543\,446\,c[7] - 31\,438\,422\,c[8] + 30\,501\,603\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,148\,c[5] - 3\,223\,710\,c[6] + \\
& \quad 13\,542\,454\,c[7] - 31\,428\,214\,c[8] + 30\,466\,755\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,148\,c[5] - 3\,223\,710\,c[6] + \\
& \quad 13\,542\,518\,c[7] - 31\,429\,494\,c[8] + 30\,473\,091\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,148\,c[5] - 3\,223\,678\,c[6] + \\
& \quad 13\,541\,526\,c[7] - 31\,419\,286\,c[8] + 30\,438\,243\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,164\,c[5] - 3\,224\,382\,c[6] + \\
& \quad 13\,553\,014\,c[7] - 31\,501\,782\,c[8] + 30\,658\,419\,c[9] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467164 c[5] - 3224350 c[6] + \\
& \quad 13552086 c[7] - 31492854 c[8] + 30629907 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467164 c[5] - 3224318 c[6] + \\
& \quad 13551094 c[7] - 31482646 c[8] + 30595059 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467164 c[5] - 3224318 c[6] + \\
& \quad 13551158 c[7] - 31483926 c[8] + 30601395 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467164 c[5] - 3224286 c[6] + \\
& \quad 13550166 c[7] - 31473718 c[8] + 30566547 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3225022 c[6] + \\
& \quad 13562582 c[7] - 31565142 c[8] + 30815235 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3224990 c[6] + \\
& \quad 13561654 c[7] - 31556214 c[8] + 30786723 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3224958 c[6] + \\
& \quad 13560662 c[7] - 31546006 c[8] + 30751875 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3224958 c[6] + \\
& \quad 13560726 c[7] - 31547286 c[8] + 30758211 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467196 c[5] - 3225694 c[6] + \\
& \quad 13573142 c[7] - 31638710 c[8] + 31006899 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467196 c[5] - 3225630 c[6] + \\
& \quad 13571222 c[7] - 31619574 c[8] + 30943539 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467212 c[5] - 3226302 c[6] + \\
& \quad 13581782 c[7] - 31693142 c[8] + 31135203 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467212 c[5] - 3226270 c[6] + \\
& \quad 13580790 c[7] - 31682934 c[8] + 31100355 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466724 c[5] - 3214830 c[6] + \\
& \quad 13450502 c[7] - 30957102 c[8] + 29510811 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466740 c[5] - 3215470 c[6] + \\
& \quad 13460070 c[7] - 31020462 c[8] + 29667627 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466740 c[5] - 3215438 c[6] + \\
& \quad 13459142 c[7] - 31011534 c[8] + 29639115 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466756 c[5] - 3216078 c[6] + \\
& \quad 13468710 c[7] - 31074894 c[8] + 29795931 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466756 c[5] - 3216046 c[6] + \\
& \quad 13467782 c[7] - 31065966 c[8] + 29767419 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466772 c[5] - 3216718 c[6] + \\
& \quad 13478278 c[7] - 31138254 c[8] + 29952747 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466772 c[5] - 3216686 c[6] + \\
& \quad 13477350 c[7] - 31129326 c[8] + 29924235 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466772 c[5] - 3216654 c[6] + \\
& \quad 13476358 c[7] - 31119118 c[8] + 29889387 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466788 c[5] - 3217326 c[6] + \\
& \quad 13486918 c[7] - 31192686 c[8] + 30081051 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42394 c[4] + 466804 c[5] - 3218030 c[6] + \\
& \quad 13498406 c[7] - 31275182 c[8] + 30301227 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42386 c[4] + 466364 c[5] - 3208414 c[6] + \\
& \quad 13393974 c[7] - 30711366 c[8] + 29090259 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42386 c[4] + 466364 c[5] - 3208382 c[6] +
\end{aligned}$$


```

13 393 046 c[7] - 30 702 438 c[8] + 29 061 747 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 378 c[4] + 465 972 c[5] - 3 200 750 c[6] +
13 319 238 c[7] - 30 347 838 c[8] + 28 384 587 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 378 c[4] + 466 004 c[5] - 3 202 062 c[6] +
13 339 366 c[7] - 30 484 766 c[8] + 28 733 067 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 4 677 012, 2 215 622, 593 361, 122 148}

```

```
GCD[0, 0, 0, 0, 0, 4 677 012, 2 215 622, 593 361, 122 148]
```

```
1
```

```
cert.g
```

```
-2 944 925 046
```

```
{0, 0, 0, 0, 0, 4 677 012, 2 215 622, 593 361, 122 148}.Reverse[gpart[listdim17[[92]]]]
-2 944 925 046
```

```
cert.Transpose[A]
```

```

{662 338 434, 362 892 002, 271 302 402, 23 485 346, 1 144 580 970, 1 184 414 762,
1 001 361 994, 753 544 938, 909 772 394, 1 105 960 074, 1 197 423 242, 701 915 562,
858 143 018, 610 325 962, 766 553 418, 362 508 906, 518 736 362, 674 963 818,
623 334 442, 779 561 898, 375 517 386, 531 744 842, 127 700 330, 283 927 786,
1 418 840 242, 1 523 438 322, 1 184 158 098, 1 431 848 722, 1 092 568 498, 1 184 031 666,
1 000 978 898, 1 288 756 178, 1 040 939 122, 1 197 166 578, 949 349 522, 1 197 040 146,
701 532 466, 857 759 922, 609 942 866, 766 170 322, 1 053 947 602, 962 358 002,
714 540 946, 870 768 402, 466 723 890, 622 951 346, 375 134 290, 531 361 746,
819 139 026, 727 549 426, 479 732 370, 635 959 826, 388 142 770, 544 370 226,
140 325 714, 401 151 250, 153 334 194, 1 523 181 658, 1 275 364 602, 1 523 055 226,
1 379 962 682, 1 288 373 082, 1 040 556 026, 1 196 783 482, 948 966 426, 857 376 826,
1 053 564 506, 961 974 906, 714 157 850, 466 340 794, 622 568 250, 530 978 650,
1 158 162 586, 818 755 930, 727 166 330, 479 349 274, 635 576 730, 387 759 674,
139 942 618, 831 764 410, 492 357 754, 244 540 698, 400 768 154, 596 955 834,
257 549 178, 22 740 602, 1 614 388 162, 1 379 579 586, 1 287 989 986, 1 053 181 410,
805 364 354, 961 591 810, 713 774 754, 818 372 834, 726 783 234, 478 966 178,
635 193 634, 387 376 578, 583 564 258, 491 974 658, 244 157 602, 400 385 058,
596 572 738, 257 166 082, 270 174 562, 22 357 506, 1 379 196 490, 1 144 387 914,
1 052 798 314, 817 989 738, 726 400 138, 583 181 162, 491 591 562, 243 774 506,
256 782 986, 361 381 066, 582 798 066, 491 208 466, 347 606 394, 125 806 298}

```

```
chi = listdim17[[93]]
```

```
(-9 + x)11 (5 + x)32 (95 - 20 x + x2) (9292 - 3979 x + 615 x2 - 41 x3 + x4)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -65, 1777, -26 441, 230 795, -1 178 843, 3 252 035, -3 721 435},
{1, -65, 1777, -26 441, 230 811, -1 179 371, 3 257 715, -3 741 195},

```

```

{1, -65, 1777, -26441, 230811, -1179371, 3257779, -3742027},
{1, -65, 1777, -26441, 230811, -1179339, 3257075, -3738155},
{1, -65, 1777, -26433, 230459, -1173659, 3217299, -3636387},
{1, -65, 1777, -26433, 230459, -1173627, 3216595, -3632515},
{1, -65, 1777, -26433, 230459, -1173595, 3215955, -3629475},
{1, -65, 1777, -26433, 230475, -1174219, 3223747, -3660723},
{1, -65, 1777, -26433, 230475, -1174187, 3222979, -3656147},
{1, -65, 1777, -26433, 230475, -1174187, 3223043, -3656979},
{1, -65, 1777, -26433, 230475, -1174155, 3222275, -3652403},
{1, -65, 1777, -26433, 230475, -1174155, 3222339, -3653107},
{1, -65, 1777, -26433, 230475, -1174123, 3221635, -3649235},
{1, -65, 1777, -26433, 230475, -1174091, 3220995, -3646195},
{1, -65, 1777, -26433, 230491, -1174683, 3228019, -3672995},
{1, -65, 1777, -26433, 230491, -1174683, 3228083, -3673699},
{1, -65, 1777, -26433, 230491, -1174683, 3228147, -3674403},
{1, -65, 1777, -26433, 230491, -1174651, 3227315, -3669123},
{1, -65, 1777, -26433, 230491, -1174651, 3227379, -3669827},
{1, -65, 1777, -26433, 230491, -1174619, 3226675, -3665955},
{1, -65, 1777, -26433, 230507, -1175147, 3232419, -3686547},
{1, -65, 1777, -26425, 230107, -1167915, 3176115, -3526875},
{1, -65, 1777, -26425, 230123, -1168443, 3181859, -3547467},
{1, -65, 1777, -26425, 230123, -1168411, 3181155, -3543723},
{1, -65, 1777, -26425, 230123, -1168411, 3181155, -3543595},
{1, -65, 1777, -26425, 230123, -1168379, 3180515, -3540555},
{1, -65, 1777, -26425, 230139, -1169003, 3188307, -3571803},
{1, -65, 1777, -26425, 230139, -1168971, 3187539, -3567355},
{1, -65, 1777, -26425, 230139, -1168971, 3187603, -3568059},
{1, -65, 1777, -26425, 230139, -1168939, 3186835, -3563483},
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A // MatrixForm

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& \quad 230139 c[5] - 1168939 c[6] + 3186899 c[7] - 3564187 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168907 c[6] + \\
& \quad 3186195 c[7] - 3560443 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168907 c[6] + 3186195 c[7] - 3560315 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168907 c[6] + \\
& \quad 3186259 c[7] - 3561147 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168875 c[6] + 3185555 c[7] - 3557275 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168843 c[6] + \\
& \quad 3184915 c[7] - 3554235 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169499 c[6] + 3193347 c[7] - 3588651 c[8], \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169467 c[6] + \\
& \quad 3192643 c[7] - 3584779 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 230\,155\,c[5] - 1\,169\,467\,c[6] + 3\,192\,707\,c[7] - 3\,585\,483\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,435\,c[6] + \\
& 3\,192\,003\,c[7] - 3\,581\,739\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,403\,c[6] + 3\,191\,235\,c[7] - 3\,577\,163\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,403\,c[6] + \\
& 3\,191\,299\,c[7] - 3\,577\,867\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,371\,c[6] + 3\,190\,595\,c[7] - 3\,573\,995\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,995\,c[6] + \\
& 3\,198\,451\,c[7] - 3\,606\,075\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,169\,963\,c[6] + 3\,197\,747\,c[7] - 3\,602\,331\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,963\,c[6] + \\
& 3\,197\,747\,c[7] - 3\,602\,203\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,169\,931\,c[6] + 3\,197\,043\,c[7] - 3\,598\,459\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,931\,c[6] + \\
& 3\,197\,107\,c[7] - 3\,599\,163\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,169\,899\,c[6] + 3\,196\,339\,c[7] - 3\,594\,587\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,867\,c[6] + \\
& 3\,195\,635\,c[7] - 3\,590\,715\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,187\,c[5] - 1\,170\,427\,c[6] + 3\,202\,147\,c[7] - 3\,615\,883\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,699\,c[6] + \\
& 3\,140\,675\,c[7] - 3\,437\,955\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,227\,c[6] + 3\,146\,355\,c[7] - 3\,457\,971\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,227\,c[6] + \\
& 3\,146\,419\,c[7] - 3\,458\,547\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,195\,c[6] + 3\,145\,715\,c[7] - 3\,454\,803\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,195\,c[6] + \\
& 3\,145\,715\,c[7] - 3\,454\,675\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,163\,c[6] + 3\,145\,075\,c[7] - 3\,451\,635\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& 3\,152\,099\,c[7] - 3\,478\,563\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,755\,c[6] + 3\,152\,163\,c[7] - 3\,479\,139\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] + \\
& 3\,151\,395\,c[7] - 3\,474\,691\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,459\,c[7] - 3\,475\,395\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& 3\,150\,755\,c[7] - 3\,471\,523\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,819\,c[7] - 3\,472\,227\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,659\,c[6] + \\
& 3\,150\,115\,c[7] - 3\,468\,483\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,659\,c[6] + 3\,150\,115\,c[7] - 3\,468\,355\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,627\,c[6] + \\
& 3\,149\,475\,c[7] - 3\,465\,315\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,283\,c[6] + 3\,157\,843\,c[7] - 3\,499\,155\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& 3\,157\,203\,c[7] - 3\,495\,987\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,499\,c[7] - 3\,492\,115\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] +
\end{aligned}$$

$3\,156\,563\,c[7] - 3\,492\,819\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,819\,c[5] - 1\,164\,187\,c[6] + 3\,155\,859\,c[7] - 3\,488\,947\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,155\,c[6] +$
 $3\,155\,155\,c[7] - 3\,485\,203\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,819\,c[5] - 1\,164\,155\,c[6] + 3\,155\,155\,c[7] - 3\,485\,075\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,155\,c[6] +$
 $3\,155\,219\,c[7] - 3\,485\,907\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,819\,c[5] - 1\,164\,123\,c[6] + 3\,154\,515\,c[7] - 3\,482\,035\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,747\,c[6] +$
 $3\,162\,307\,c[7] - 3\,513\,411\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,835\,c[5] - 1\,164\,715\,c[6] + 3\,161\,667\,c[7] - 3\,510\,243\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,683\,c[6] +$
 $3\,160\,963\,c[7] - 3\,506\,499\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,835\,c[5] - 1\,164\,651\,c[6] + 3\,160\,259\,c[7] - 3\,502\,627\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,619\,c[6] +$
 $3\,159\,555\,c[7] - 3\,498\,755\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] +$
 $229\,851\,c[5] - 1\,165\,243\,c[6] + 3\,167\,411\,c[7] - 3\,530\,835\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,179\,c[6] +$
 $3\,166\,067\,c[7] - 3\,523\,923\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,451\,c[5] - 1\,157\,979\,c[6] + 3\,110\,211\,c[7] - 3\,365\,307\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,979\,c[6] +$
 $3\,110\,275\,c[7] - 3\,365\,883\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,451\,c[5] - 1\,157\,947\,c[6] + 3\,109\,635\,c[7] - 3\,362\,715\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,507\,c[6] +$
 $3\,115\,955\,c[7] - 3\,385\,899\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,251\,c[7] - 3\,382\,027\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,475\,c[6] +$
 $3\,115\,315\,c[7] - 3\,382\,731\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,379\,c[7] - 3\,383\,307\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,443\,c[6] +$
 $3\,114\,675\,c[7] - 3\,379\,563\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,467\,c[5] - 1\,158\,411\,c[6] + 3\,114\,035\,c[7] - 3\,376\,395\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,159\,003\,c[6] +$
 $3\,121\,059\,c[7] - 3\,403\,323\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,483\,c[5] - 1\,158\,971\,c[6] + 3\,120\,419\,c[7] - 3\,400\,155\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,939\,c[6] +$
 $3\,119\,715\,c[7] - 3\,396\,283\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,483\,c[5] - 1\,158\,939\,c[6] + 3\,119\,779\,c[7] - 3\,396\,987\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,907\,c[6] +$
 $3\,119\,075\,c[7] - 3\,393\,115\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,483\,c[5] - 1\,158\,875\,c[6] + 3\,118\,435\,c[7] - 3\,390\,075\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,499\,c[6] +$
 $3\,126\,163\,c[7] - 3\,420\,747\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,499\,c[5] - 1\,159\,467\,c[6] + 3\,125\,523\,c[7] - 3\,417\,579\,c[8],$
 $c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,403\,c[6] +$
 $3\,124\,179\,c[7] - 3\,410\,667\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] +$
 $229\,499\,c[5] - 1\,159\,371\,c[6] + 3\,123\,475\,c[7] - 3\,406\,795\,c[8],$

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c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 963 c[6] +
  3 130 627 c[7] - 3 435 003 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 131 c[5] - 1 153 227 c[6] + 3 079 171 c[7] - 3 290 067 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 195 c[6] +
  3 078 595 c[7] - 3 287 475 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 147 c[5] - 1 153 723 c[6] + 3 084 275 c[7] - 3 307 491 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 691 c[6] +
  3 083 635 c[7] - 3 304 323 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 147 c[5] - 1 153 659 c[6] + 3 082 995 c[7] - 3 301 155 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 219 c[6] +
  3 089 379 c[7] - 3 324 915 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 163 c[5] - 1 154 187 c[6] + 3 088 739 c[7] - 3 321 747 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 155 c[6] +
  3 088 035 c[7] - 3 317 875 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
  229 163 c[5] - 1 154 123 c[6] + 3 087 395 c[7] - 3 314 835 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 827 c[5] - 1 148 939 c[6] +
  3 052 595 c[7] - 3 229 083 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
  228 827 c[5] - 1 148 907 c[6] + 3 051 955 c[7] - 3 225 915 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 843 c[5] - 1 149 435 c[6] +
  3 057 699 c[7] - 3 246 507 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
  228 507 c[5] - 1 144 155 c[6] + 3 020 915 c[7] - 3 150 675 c[8] }

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Array[c, 8].g

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49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 249 c[4] +
  11 295 595 c[5] - 57 584 267 c[6] + 158 332 355 c[7] - 180 305 395 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 249 c[4] +
  11 295 595 c[5] - 57 584 267 c[6] + 158 332 355 c[7] - 180 305 395 c[8] < 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 795 c[5] - 1 178 843 c[6] +
  3 252 035 c[7] - 3 721 435 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 811 c[5] - 1 179 371 c[6] + 3 257 715 c[7] - 3 741 195 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 811 c[5] - 1 179 371 c[6] +
  3 257 779 c[7] - 3 742 027 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
  230 811 c[5] - 1 179 339 c[6] + 3 257 075 c[7] - 3 738 155 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 459 c[5] - 1 173 659 c[6] +
  3 217 299 c[7] - 3 636 387 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
  230 459 c[5] - 1 173 627 c[6] + 3 216 595 c[7] - 3 632 515 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 459 c[5] - 1 173 595 c[6] +
  3 215 955 c[7] - 3 629 475 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
  230 475 c[5] - 1 174 219 c[6] + 3 223 747 c[7] - 3 660 723 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 475 c[5] - 1 174 187 c[6] +
  3 222 979 c[7] - 3 656 147 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
  230 475 c[5] - 1 174 187 c[6] + 3 223 043 c[7] - 3 656 979 c[8] ≥ 0 &&
  c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 475 c[5] - 1 174 155 c[6] +
  3 222 275 c[7] - 3 652 403 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
  230 475 c[5] - 1 174 155 c[6] + 3 222 339 c[7] - 3 653 107 c[8] ≥ 0 &&

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$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230475 c[5] - 1174123 c[6] + \\
& \quad 3221635 c[7] - 3649235 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230475 c[5] - 1174091 c[6] + 3220995 c[7] - 3646195 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230491 c[5] - 1174683 c[6] + \\
& \quad 3228019 c[7] - 3672995 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230491 c[5] - 1174683 c[6] + 3228083 c[7] - 3673699 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230491 c[5] - 1174683 c[6] + \\
& \quad 3228147 c[7] - 3674403 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230491 c[5] - 1174651 c[6] + 3227315 c[7] - 3669123 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230491 c[5] - 1174651 c[6] + \\
& \quad 3227379 c[7] - 3669827 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + \\
& \quad 230491 c[5] - 1174619 c[6] + 3226675 c[7] - 3665955 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230507 c[5] - \\
& \quad 1175147 c[6] + 3232419 c[7] - 3686547 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230107 c[5] - 1167915 c[6] + \\
& \quad 3176115 c[7] - 3526875 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168443 c[6] + 3181859 c[7] - 3547467 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168411 c[6] + \\
& \quad 3181155 c[7] - 3543723 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230123 c[5] - 1168411 c[6] + 3181155 c[7] - 3543595 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230123 c[5] - 1168379 c[6] + \\
& \quad 3180515 c[7] - 3540555 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1169003 c[6] + 3188307 c[7] - 3571803 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168971 c[6] + \\
& \quad 3187539 c[7] - 3567355 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168971 c[6] + 3187603 c[7] - 3568059 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168939 c[6] + \\
& \quad 3186835 c[7] - 3563483 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168939 c[6] + 3186899 c[7] - 3564315 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168939 c[6] + \\
& \quad 3186899 c[7] - 3564187 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168907 c[6] + 3186195 c[7] - 3560443 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168907 c[6] + \\
& \quad 3186195 c[7] - 3560315 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168907 c[6] + 3186259 c[7] - 3561147 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230139 c[5] - 1168875 c[6] + \\
& \quad 3185555 c[7] - 3557275 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230139 c[5] - 1168843 c[6] + 3184915 c[7] - 3554235 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169499 c[6] + \\
& \quad 3193347 c[7] - 3588651 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169467 c[6] + 3192643 c[7] - 3584779 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169467 c[6] + \\
& \quad 3192707 c[7] - 3585483 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169435 c[6] + 3192003 c[7] - 3581739 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169403 c[6] + \\
& \quad 3191235 c[7] - 3577163 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230155 c[5] - 1169403 c[6] + 3191299 c[7] - 3577867 c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230155 c[5] - 1169371 c[6] + \\
& \quad 3190595 c[7] - 3573995 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230171 c[5] - 1169995 c[6] + 3198451 c[7] - 3606075 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230171 c[5] - 1169963 c[6] + \\
& \quad 3197747 c[7] - 3602331 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230171 c[5] - 1169963 c[6] + 3197747 c[7] - 3602203 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230171 c[5] - 1169931 c[6] + \\
& \quad 3197043 c[7] - 3598459 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230171 c[5] - 1169931 c[6] + 3197107 c[7] - 3599163 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230171 c[5] - 1169899 c[6] + \\
& \quad 3196339 c[7] - 3594587 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + \\
& \quad 230171 c[5] - 1169867 c[6] + 3195635 c[7] - 3590715 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230187 c[5] - 1170427 c[6] + \\
& \quad 3202147 c[7] - 3615883 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229771 c[5] - 1162699 c[6] + 3140675 c[7] - 3437955 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163227 c[6] + \\
& \quad 3146355 c[7] - 3457971 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163227 c[6] + 3146419 c[7] - 3458547 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163195 c[6] + \\
& \quad 3145715 c[7] - 3454803 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229787 c[5] - 1163195 c[6] + 3145715 c[7] - 3454675 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229787 c[5] - 1163163 c[6] + \\
& \quad 3145075 c[7] - 3451635 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163755 c[6] + 3152099 c[7] - 3478563 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163755 c[6] + \\
& \quad 3152163 c[7] - 3479139 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163723 c[6] + 3151395 c[7] - 3474691 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163723 c[6] + \\
& \quad 3151459 c[7] - 3475395 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163691 c[6] + 3150755 c[7] - 3471523 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163691 c[6] + \\
& \quad 3150819 c[7] - 3472227 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163659 c[6] + 3150115 c[7] - 3468483 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163659 c[6] + \\
& \quad 3150115 c[7] - 3468355 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229803 c[5] - 1163627 c[6] + 3149475 c[7] - 3465315 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164283 c[6] + \\
& \quad 3157843 c[7] - 3499155 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229819 c[5] - 1164251 c[6] + 3157203 c[7] - 3495987 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164219 c[6] + \\
& \quad 3156499 c[7] - 3492115 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229819 c[5] - 1164219 c[6] + 3156563 c[7] - 3492819 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164187 c[6] + \\
& \quad 3155859 c[7] - 3488947 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + \\
& \quad 229819 c[5] - 1164155 c[6] + 3155155 c[7] - 3485203 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164155 c[6] + \\
& \quad 3155155 c[7] - 3485075 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 229\,819\,c[5] - 1\,164\,155\,c[6] + 3\,155\,219\,c[7] - 3\,485\,907\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,123\,c[6] + \\
& \quad 3\,154\,515\,c[7] - 3\,482\,035\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,747\,c[6] + 3\,162\,307\,c[7] - 3\,513\,411\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,715\,c[6] + \\
& \quad 3\,161\,667\,c[7] - 3\,510\,243\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,683\,c[6] + 3\,160\,963\,c[7] - 3\,506\,499\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,651\,c[6] + \\
& \quad 3\,160\,259\,c[7] - 3\,502\,627\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,619\,c[6] + 3\,159\,555\,c[7] - 3\,498\,755\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,243\,c[6] + \\
& \quad 3\,167\,411\,c[7] - 3\,530\,835\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,851\,c[5] - 1\,165\,179\,c[6] + 3\,166\,067\,c[7] - 3\,523\,923\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,979\,c[6] + \\
& \quad 3\,110\,211\,c[7] - 3\,365\,307\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,451\,c[5] - 1\,157\,979\,c[6] + 3\,110\,275\,c[7] - 3\,365\,883\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,947\,c[6] + \\
& \quad 3\,109\,635\,c[7] - 3\,362\,715\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,467\,c[5] - 1\,158\,507\,c[6] + 3\,115\,955\,c[7] - 3\,385\,899\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,475\,c[6] + \\
& \quad 3\,115\,251\,c[7] - 3\,382\,027\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,315\,c[7] - 3\,382\,731\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,475\,c[6] + \\
& \quad 3\,115\,379\,c[7] - 3\,383\,307\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,467\,c[5] - 1\,158\,443\,c[6] + 3\,114\,675\,c[7] - 3\,379\,563\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,411\,c[6] + \\
& \quad 3\,114\,035\,c[7] - 3\,376\,395\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,483\,c[5] - 1\,159\,003\,c[6] + 3\,121\,059\,c[7] - 3\,403\,323\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,971\,c[6] + \\
& \quad 3\,120\,419\,c[7] - 3\,400\,155\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,483\,c[5] - 1\,158\,939\,c[6] + 3\,119\,715\,c[7] - 3\,396\,283\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,939\,c[6] + \\
& \quad 3\,119\,779\,c[7] - 3\,396\,987\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,483\,c[5] - 1\,158\,907\,c[6] + 3\,119\,075\,c[7] - 3\,393\,115\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,875\,c[6] + \\
& \quad 3\,118\,435\,c[7] - 3\,390\,075\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,499\,c[5] - 1\,159\,499\,c[6] + 3\,126\,163\,c[7] - 3\,420\,747\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,467\,c[6] + \\
& \quad 3\,125\,523\,c[7] - 3\,417\,579\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,499\,c[5] - 1\,159\,403\,c[6] + 3\,124\,179\,c[7] - 3\,410\,667\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,371\,c[6] + \\
& \quad 3\,123\,475\,c[7] - 3\,406\,795\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& \quad 229\,515\,c[5] - 1\,159\,963\,c[6] + 3\,130\,627\,c[7] - 3\,435\,003\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,131\,c[5] - 1\,153\,227\,c[6] + \\
& \quad 3\,079\,171\,c[7] - 3\,290\,067\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& \quad 229\,131\,c[5] - 1\,153\,195\,c[6] + 3\,078\,595\,c[7] - 3\,287\,475\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,147\,c[5] - 1\,153\,723\,c[6] +
\end{aligned}$$

```

3 084 275 c[7] - 3 307 491 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 691 c[6] + 3 083 635 c[7] - 3 304 323 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 659 c[6] +
3 082 995 c[7] - 3 301 155 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 219 c[6] + 3 089 379 c[7] - 3 324 915 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 187 c[6] +
3 088 739 c[7] - 3 321 747 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 155 c[6] + 3 088 035 c[7] - 3 317 875 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 123 c[6] +
3 087 395 c[7] - 3 314 835 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 827 c[5] - 1 148 939 c[6] + 3 052 595 c[7] - 3 229 083 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 827 c[5] - 1 148 907 c[6] +
3 051 955 c[7] - 3 225 915 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 843 c[5] - 1 149 435 c[6] + 3 057 699 c[7] - 3 246 507 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 507 c[5] - 1 144 155 c[6] +
3 020 915 c[7] - 3 150 675 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -379 426 866, -98 595 447, -16 085 678, -2 253 718, -292 816}

GCD[0, 0, 0, -379 426 866, -98 595 447, -16 085 678, -2 253 718, -292 816]
1

cert.g
-166 471 875

{0, 0, 0, -379 426 866, -98 595 447, -16 085 678, -2 253 718, -292 816}.
Reverse[gpart[listdim17[[93]]]]
-166 471 875

```

cert.Transpose[A]

```
{104 378 925, 5 015 677, 104 400 637, 42 492 861, 190 612 717, 128 704 941, 166 182 125,
 215 061 757, 91 249 469, 190 634 429, 66 822 141, 128 726 653, 66 818 877,
 104 296 061, 66 843 853, 128 748 365, 190 652 877, 4 936 077, 66 840 589, 4 932 813,
 4 954 525, 214 917 021, 214 938 733, 190 511 405, 153 030 957, 190 508 141,
 239 387 773, 153 055 933, 214 960 445, 91 148 157, 190 533 117, 153 052 669,
 128 625 341, 91 144 893, 190 529 853, 128 622 077, 166 099 261, 214 982 157,
 153 074 381, 214 978 893, 190 551 565, 66 739 277, 128 643 789, 66 736 013,
 215 000 605, 190 573 277, 153 092 829, 128 665 501, 190 570 013, 66 757 725,
 4 849 949, 128 683 949, 239 243 037, 214 840 685, 239 264 749, 214 837 421,
 177 356 973, 214 834 157, 214 862 397, 239 286 461, 152 954 621, 214 859 133,
 152 951 357, 214 855 869, 190 428 541, 152 948 093, 190 425 277, 214 884 109,
 214 880 845, 152 973 069, 214 877 581, 152 969 805, 128 542 477, 91 062 029,
 190 446 989, 128 539 213, 214 899 293, 214 896 029, 190 468 701, 128 560 925,
 66 653 149, 214 917 741, 190 487 149, 214 739 373, 239 163 437, 239 160 173,
 214 761 085, 152 853 309, 214 757 821, 239 181 885, 214 754 557, 214 751 293,
 214 779 533, 214 776 269, 152 868 493, 214 773 005, 152 865 229, 190 342 413,
 214 797 981, 214 794 717, 190 364 125, 128 456 349, 214 813 165, 214 656 509,
 239 077 309, 214 674 957, 214 671 693, 214 668 429, 214 693 405, 214 690 141,
 152 782 365, 190 259 549, 214 588 829, 214 585 565, 214 607 277, 214 502 701}
```

chi = listdim17[[94]]

```
(-13 + x) (-9 + x)11 (5 + x)32 (-67 876 + 38 149 x - 8396 x2 + 906 x3 - 48 x4 + x5)
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```

A = {{1, -65, 1777, -26441, 230795, -1178811, 3251523, -3719547},
      {1, -65, 1777, -26441, 230811, -1179339, 3257267, -3740139},
      {1, -65, 1777, -26433, 230459, -1173627, 3216787, -3634371},
      {1, -65, 1777, -26433, 230459, -1173595, 3216083, -3630627},
      {1, -65, 1777, -26433, 230475, -1174187, 3223235, -3658707},
      {1, -65, 1777, -26433, 230475, -1174155, 3222531, -3654963},
      {1, -65, 1777, -26433, 230475, -1174123, 3221827, -3651219},
      {1, -65, 1777, -26433, 230475, -1174091, 3221123, -3647475},
      {1, -65, 1777, -26433, 230491, -1174683, 3228275, -3675555},
      {1, -65, 1777, -26433, 230491, -1174651, 3227571, -3671811},
      {1, -65, 1777, -26433, 230491, -1174619, 3226867, -3668067},
      {1, -65, 1777, -26425, 230107, -1167883, 3175603, -3524859},
      {1, -65, 1777, -26425, 230123, -1168411, 3181347, -3545451},
      {1, -65, 1777, -26425, 230123, -1168379, 3180643, -3541707},
      {1, -65, 1777, -26425, 230139, -1168939, 3187091, -3566043},
      {1, -65, 1777, -26425, 230139, -1168907, 3186387, -3562299},
      {1, -65, 1777, -26425, 230139, -1168875, 3185683, -3558555},
      {1, -65, 1777, -26425, 230139, -1168843, 3184979, -3554811},
      {1, -65, 1777, -26425, 230155, -1169435, 3192131, -3582891},
      {1, -65, 1777, -26425, 230155, -1169403, 3191427, -3579147},
      {1, -65, 1777, -26425, 230155, -1169371, 3190723, -3575403},
      {1, -65, 1777, -26425, 230171, -1169931, 3197171, -3599739},
      {1, -65, 1777, -26425, 230171, -1169899, 3196467, -3595995},
      {1, -65, 1777, -26417, 229771, -1162667, 3140163, -3435939},
      {1, -65, 1777, -26417, 229787, -1163163, 3145203, -3452787},
      {1, -65, 1777, -26417, 229803, -1163659, 3150243, -3469635},
      {1, -65, 1777, -26417, 229803, -1163627, 3149539, -3465891},
      {1, -65, 1777, -26417, 229819, -1164187, 3155987, -3490227},
      {1, -65, 1777, -26417, 229819, -1164155, 3155283, -3486483},
      {1, -65, 1777, -26417, 229819, -1164123, 3154579, -3482739},
      {1, -65, 1777, -26417, 229835, -1164683, 3161027, -3507075},
      {1, -65, 1777, -26409, 229451, -1157915, 3109059, -3360123},
      {1, -65, 1777, -26409, 229467, -1158411, 3114099, -3376971},
      {1, -65, 1777, -26409, 229483, -1158939, 3119843, -3397563},
      {1, -65, 1777, -26409, 229483, -1158907, 3119139, -3393819},
      {1, -65, 1777, -26409, 229499, -1159435, 3124883, -3414411},
      {1, -65, 1777, -26401, 229131, -1153163, 3077955, -3284307},
      {1, -65, 1777, -26401, 229147, -1153659, 3082995, -3301155},
      {1, -65, 1777, -26401, 229163, -1154187, 3088739, -3321747}};

```


A // MatrixForm

```
( 1 -65 1777 -26441 230795 -1178811 3251523 -3719547
 1 -65 1777 -26441 230811 -1179339 3257267 -3740139
 1 -65 1777 -26433 230459 -1173627 3216787 -3634371
 1 -65 1777 -26433 230459 -1173595 3216083 -3630627
 1 -65 1777 -26433 230475 -1174187 3223235 -3658707
 1 -65 1777 -26433 230475 -1174155 3222531 -3654963
 1 -65 1777 -26433 230475 -1174123 3221827 -3651219
 1 -65 1777 -26433 230475 -1174091 3221123 -3647475
 1 -65 1777 -26433 230491 -1174683 3228275 -3675555
 1 -65 1777 -26433 230491 -1174651 3227571 -3671811
 1 -65 1777 -26433 230491 -1174619 3226867 -3668067
 1 -65 1777 -26425 230107 -1167883 3175603 -3524859
 1 -65 1777 -26425 230123 -1168411 3181347 -3545451
 1 -65 1777 -26425 230123 -1168379 3180643 -3541707
 1 -65 1777 -26425 230139 -1168939 3187091 -3566043
 1 -65 1777 -26425 230139 -1168907 3186387 -3562299
 1 -65 1777 -26425 230139 -1168875 3185683 -3558555
 1 -65 1777 -26425 230139 -1168843 3184979 -3554811
 1 -65 1777 -26425 230155 -1169435 3192131 -3582891
 1 -65 1777 -26425 230155 -1169403 3191427 -3579147
 1 -65 1777 -26425 230155 -1169371 3190723 -3575403
 1 -65 1777 -26425 230171 -1169931 3197171 -3599739
 1 -65 1777 -26425 230171 -1169899 3196467 -3595995
 1 -65 1777 -26417 229771 -1162667 3140163 -3435939
 1 -65 1777 -26417 229787 -1163163 3145203 -3452787
 1 -65 1777 -26417 229803 -1163659 3150243 -3469635
 1 -65 1777 -26417 229803 -1163627 3149539 -3465891
 1 -65 1777 -26417 229819 -1164187 3155987 -3490227
 1 -65 1777 -26417 229819 -1164155 3155283 -3486483
 1 -65 1777 -26417 229819 -1164123 3154579 -3482739
 1 -65 1777 -26417 229835 -1164683 3161027 -3507075
 1 -65 1777 -26409 229451 -1157915 3109059 -3360123
 1 -65 1777 -26409 229467 -1158411 3114099 -3376971
 1 -65 1777 -26409 229483 -1158939 3119843 -3397563
 1 -65 1777 -26409 229483 -1158907 3119139 -3393819
 1 -65 1777 -26409 229499 -1159435 3124883 -3414411
 1 -65 1777 -26401 229131 -1153163 3077955 -3284307
 1 -65 1777 -26401 229147 -1153659 3082995 -3301155
 1 -65 1777 -26401 229163 -1154187 3088739 -3321747)
```

Dimensions[A]

```
{39, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3185, 87073, -1295249, 11295595, -57582859, 158309635, -180224819}
```

Array[c, 8].Transpose[A]

```
{c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] +
 230795 c[5] - 1178811 c[6] + 3251523 c[7] - 3719547 c[8],
 c[1] - 65 c[2] + 1777 c[3] - 26441 c[4] + 230811 c[5] - 1179339 c[6] +
 3257267 c[7] - 3740139 c[8], c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] +
```

$$\begin{aligned}
& 230\,459\,c[5] - 1\,173\,627\,c[6] + 3\,216\,787\,c[7] - 3\,634\,371\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,459\,c[5] - 1\,173\,595\,c[6] + \\
& 3\,216\,083\,c[7] - 3\,630\,627\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,475\,c[5] - 1\,174\,187\,c[6] + 3\,223\,235\,c[7] - 3\,658\,707\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,155\,c[6] + \\
& 3\,222\,531\,c[7] - 3\,654\,963\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,475\,c[5] - 1\,174\,123\,c[6] + 3\,221\,827\,c[7] - 3\,651\,219\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,475\,c[5] - 1\,174\,091\,c[6] + \\
& 3\,221\,123\,c[7] - 3\,647\,475\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,491\,c[5] - 1\,174\,683\,c[6] + 3\,228\,275\,c[7] - 3\,675\,555\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,491\,c[5] - 1\,174\,651\,c[6] + \\
& 3\,227\,571\,c[7] - 3\,671\,811\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + \\
& 230\,491\,c[5] - 1\,174\,619\,c[6] + 3\,226\,867\,c[7] - 3\,668\,067\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,107\,c[5] - 1\,167\,883\,c[6] + \\
& 3\,175\,603\,c[7] - 3\,524\,859\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,411\,c[6] + 3\,181\,347\,c[7] - 3\,545\,451\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,123\,c[5] - 1\,168\,379\,c[6] + \\
& 3\,180\,643\,c[7] - 3\,541\,707\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,187\,091\,c[7] - 3\,566\,043\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,907\,c[6] + \\
& 3\,186\,387\,c[7] - 3\,562\,299\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,875\,c[6] + 3\,185\,683\,c[7] - 3\,558\,555\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,843\,c[6] + \\
& 3\,184\,979\,c[7] - 3\,554\,811\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,192\,131\,c[7] - 3\,582\,891\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,403\,c[6] + \\
& 3\,191\,427\,c[7] - 3\,579\,147\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,371\,c[6] + 3\,190\,723\,c[7] - 3\,575\,403\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,931\,c[6] + \\
& 3\,197\,171\,c[7] - 3\,599\,739\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,169\,899\,c[6] + 3\,196\,467\,c[7] - 3\,595\,995\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,771\,c[5] - 1\,162\,667\,c[6] + \\
& 3\,140\,163\,c[7] - 3\,435\,939\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,163\,c[6] + 3\,145\,203\,c[7] - 3\,452\,787\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,659\,c[6] + \\
& 3\,150\,243\,c[7] - 3\,469\,635\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,627\,c[6] + 3\,149\,539\,c[7] - 3\,465\,891\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,187\,c[6] + \\
& 3\,155\,987\,c[7] - 3\,490\,227\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,155\,c[6] + 3\,155\,283\,c[7] - 3\,486\,483\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,123\,c[6] + \\
& 3\,154\,579\,c[7] - 3\,482\,739\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,683\,c[6] + 3\,161\,027\,c[7] - 3\,507\,075\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,915\,c[6] + \\
& 3\,109\,059\,c[7] - 3\,360\,123\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,411\,c[6] + 3\,114\,099\,c[7] - 3\,376\,971\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,939\,c[6] +
\end{aligned}$$

```

3 119 843 c[7] - 3 397 563 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 483 c[5] - 1 158 907 c[6] + 3 119 139 c[7] - 3 393 819 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 435 c[6] +
3 124 883 c[7] - 3 414 411 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 131 c[5] - 1 153 163 c[6] + 3 077 955 c[7] - 3 284 307 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 659 c[6] +
3 082 995 c[7] - 3 301 155 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 187 c[6] + 3 088 739 c[7] - 3 321 747 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 249 c[4] +
11 295 595 c[5] - 57 582 859 c[6] + 158 309 635 c[7] - 180 224 819 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 249 c[4] +
11 295 595 c[5] - 57 582 859 c[6] + 158 309 635 c[7] - 180 224 819 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] + 230 795 c[5] - 1 178 811 c[6] +
3 251 523 c[7] - 3 719 547 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 441 c[4] +
230 811 c[5] - 1 179 339 c[6] + 3 257 267 c[7] - 3 740 139 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 459 c[5] - 1 173 627 c[6] +
3 216 787 c[7] - 3 634 371 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 459 c[5] - 1 173 595 c[6] + 3 216 083 c[7] - 3 630 627 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 475 c[5] - 1 174 187 c[6] +
3 223 235 c[7] - 3 658 707 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 475 c[5] - 1 174 155 c[6] + 3 222 531 c[7] - 3 654 963 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 475 c[5] - 1 174 123 c[6] +
3 221 827 c[7] - 3 651 219 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 475 c[5] - 1 174 091 c[6] + 3 221 123 c[7] - 3 647 475 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 491 c[5] - 1 174 683 c[6] +
3 228 275 c[7] - 3 675 555 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 491 c[5] - 1 174 651 c[6] + 3 227 571 c[7] - 3 671 811 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 491 c[5] - 1 174 619 c[6] +
3 226 867 c[7] - 3 668 067 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 107 c[5] - 1 167 883 c[6] + 3 175 603 c[7] - 3 524 859 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 123 c[5] - 1 168 411 c[6] +
3 181 347 c[7] - 3 545 451 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 123 c[5] - 1 168 379 c[6] + 3 180 643 c[7] - 3 541 707 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 139 c[5] - 1 168 939 c[6] +
3 187 091 c[7] - 3 566 043 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 139 c[5] - 1 168 907 c[6] + 3 186 387 c[7] - 3 562 299 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 139 c[5] - 1 168 875 c[6] +
3 185 683 c[7] - 3 558 555 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 139 c[5] - 1 168 843 c[6] + 3 184 979 c[7] - 3 554 811 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 155 c[5] - 1 169 435 c[6] +
3 192 131 c[7] - 3 582 891 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 155 c[5] - 1 169 403 c[6] + 3 191 427 c[7] - 3 579 147 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 155 c[5] - 1 169 371 c[6] +

```

```

3 190 723 c[7] - 3 575 403 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 171 c[5] - 1 169 931 c[6] + 3 197 171 c[7] - 3 599 739 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 171 c[5] - 1 169 899 c[6] +
3 196 467 c[7] - 3 595 995 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 771 c[5] - 1 162 667 c[6] + 3 140 163 c[7] - 3 435 939 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 787 c[5] - 1 163 163 c[6] +
3 145 203 c[7] - 3 452 787 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 803 c[5] - 1 163 659 c[6] + 3 150 243 c[7] - 3 469 635 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 803 c[5] - 1 163 627 c[6] +
3 149 539 c[7] - 3 465 891 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 819 c[5] - 1 164 187 c[6] + 3 155 987 c[7] - 3 490 227 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 819 c[5] - 1 164 155 c[6] +
3 155 283 c[7] - 3 486 483 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 819 c[5] - 1 164 123 c[6] + 3 154 579 c[7] - 3 482 739 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 835 c[5] - 1 164 683 c[6] +
3 161 027 c[7] - 3 507 075 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 451 c[5] - 1 157 915 c[6] + 3 109 059 c[7] - 3 360 123 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 467 c[5] - 1 158 411 c[6] +
3 114 099 c[7] - 3 376 971 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 483 c[5] - 1 158 939 c[6] + 3 119 843 c[7] - 3 397 563 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 158 907 c[6] +
3 119 139 c[7] - 3 393 819 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 435 c[6] + 3 124 883 c[7] - 3 414 411 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 163 c[6] +
3 077 955 c[7] - 3 284 307 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 659 c[6] + 3 082 995 c[7] - 3 301 155 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 187 c[6] +
3 088 739 c[7] - 3 321 747 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -1 001 181, -347 490, -65 629, -9371}

GCD[0, 0, 0, 0, -1 001 181, -347 490, -65 629, -9371]
1

cert.g
-283 680 351

{0, 0, 0, 0, -1 001 181, -347 490, -65 629, -9371}.Reverse[gpart[listdim17[[94]]]]
-283 680 351

cert.Transpose[A]
{19 137 465, 2 587 945, 35 650 769, 35 648 881, 19 103 137, 19 101 249,
19 099 361, 19 097 473, 2 551 729, 2 549 841, 2 547 953, 68 711 705, 52 162 185,
52 160 297, 35 612 665, 35 610 777, 35 608 889, 35 607 001, 19 061 257,
19 059 369, 19 057 481, 2 509 849, 2 507 961, 85 223 121, 68 671 713, 52 120 305,
52 118 417, 35 570 785, 35 568 897, 35 567 009, 19 019 377, 85 181 241,
68 629 833, 52 080 313, 52 078 425, 35 528 905, 85 139 361, 68 587 953, 52 038 433}

```

```
chi = listdim17[[95]]
```

$$(-11 + x)^4 (-9 + x)^9 (-7 + x)^2 (5 + x)^{32} (100 - 21x + x^2)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-32 655, 22 053, -5718, 714, -43, 1},
 {-31 927, 21 893, -5710, 714, -43, 1}, {-32 039, 21 909, -5710, 714, -43, 1},
 {-32 151, 21 925, -5710, 714, -43, 1}, {-32 263, 21 941, -5710, 714, -43, 1},
 {-31 311, 21 749, -5702, 714, -43, 1}, {-31 423, 21 765, -5702, 714, -43, 1},
 {-31 535, 21 781, -5702, 714, -43, 1}, {-31 647, 21 797, -5702, 714, -43, 1},
 {-30 663, 21 605, -5694, 714, -43, 1}, {-30 807, 21 621, -5694, 714, -43, 1},
 {-30 919, 21 637, -5694, 714, -43, 1}, {-31 031, 21 653, -5694, 714, -43, 1},
 {-30 159, 21 477, -5686, 714, -43, 1}, {-30 303, 21 493, -5686, 714, -43, 1},
 {-30 271, 21 493, -5686, 714, -43, 1}, {-30 415, 21 509, -5686, 714, -43, 1},
 {-29 655, 21 349, -5678, 714, -43, 1}, {-29 799, 21 365, -5678, 714, -43, 1}}
```

```
A = {{-32 655, 22 053, -5718, 714, -43, 1},
 {-31 927, 21 893, -5710, 714, -43, 1}, {-32 039, 21 909, -5710, 714, -43, 1},
 {-32 151, 21 925, -5710, 714, -43, 1}, {-32 263, 21 941, -5710, 714, -43, 1},
 {-31 311, 21 749, -5702, 714, -43, 1}, {-31 423, 21 765, -5702, 714, -43, 1},
 {-31 535, 21 781, -5702, 714, -43, 1}, {-31 647, 21 797, -5702, 714, -43, 1},
 {-30 663, 21 605, -5694, 714, -43, 1}, {-30 807, 21 621, -5694, 714, -43, 1},
 {-30 919, 21 637, -5694, 714, -43, 1}, {-31 031, 21 653, -5694, 714, -43, 1},
 {-30 159, 21 477, -5686, 714, -43, 1}, {-30 303, 21 493, -5686, 714, -43, 1},
 {-30 271, 21 493, -5686, 714, -43, 1}, {-30 415, 21 509, -5686, 714, -43, 1},
 {-29 655, 21 349, -5678, 714, -43, 1}, {-29 799, 21 365, -5678, 714, -43, 1}};
```

A // MatrixForm

$$\begin{pmatrix} -32655 & 22053 & -5718 & 714 & -43 & 1 \\ -31927 & 21893 & -5710 & 714 & -43 & 1 \\ -32039 & 21909 & -5710 & 714 & -43 & 1 \\ -32151 & 21925 & -5710 & 714 & -43 & 1 \\ -32263 & 21941 & -5710 & 714 & -43 & 1 \\ -31311 & 21749 & -5702 & 714 & -43 & 1 \\ -31423 & 21765 & -5702 & 714 & -43 & 1 \\ -31535 & 21781 & -5702 & 714 & -43 & 1 \\ -31647 & 21797 & -5702 & 714 & -43 & 1 \\ -30663 & 21605 & -5694 & 714 & -43 & 1 \\ -30807 & 21621 & -5694 & 714 & -43 & 1 \\ -30919 & 21637 & -5694 & 714 & -43 & 1 \\ -31031 & 21653 & -5694 & 714 & -43 & 1 \\ -30159 & 21477 & -5686 & 714 & -43 & 1 \\ -30303 & 21493 & -5686 & 714 & -43 & 1 \\ -30271 & 21493 & -5686 & 714 & -43 & 1 \\ -30415 & 21509 & -5686 & 714 & -43 & 1 \\ -29655 & 21349 & -5678 & 714 & -43 & 1 \\ -29799 & 21365 & -5678 & 714 & -43 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1573335, 1074309, -279822, 34986, -2107, 49}

Array[c, 6].Transpose[A]

{-32655 c[1] + 22053 c[2] - 5718 c[3] + 714 c[4] - 43 c[5] + c[6],
-31927 c[1] + 21893 c[2] - 5710 c[3] + 714 c[4] - 43 c[5] + c[6],
-32039 c[1] + 21909 c[2] - 5710 c[3] + 714 c[4] - 43 c[5] + c[6],
-32151 c[1] + 21925 c[2] - 5710 c[3] + 714 c[4] - 43 c[5] + c[6],
-32263 c[1] + 21941 c[2] - 5710 c[3] + 714 c[4] - 43 c[5] + c[6],
-31311 c[1] + 21749 c[2] - 5702 c[3] + 714 c[4] - 43 c[5] + c[6],
-31423 c[1] + 21765 c[2] - 5702 c[3] + 714 c[4] - 43 c[5] + c[6],
-31535 c[1] + 21781 c[2] - 5702 c[3] + 714 c[4] - 43 c[5] + c[6],
-31647 c[1] + 21797 c[2] - 5702 c[3] + 714 c[4] - 43 c[5] + c[6],
-30663 c[1] + 21605 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6],
-30807 c[1] + 21621 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6],
-30919 c[1] + 21637 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6],
-31031 c[1] + 21653 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6],
-30159 c[1] + 21477 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
-30303 c[1] + 21493 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
-30271 c[1] + 21493 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
-30415 c[1] + 21509 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
-29655 c[1] + 21349 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6],
-29799 c[1] + 21365 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6]}

Array[c, 6].g

-1573335 c[1] + 1074309 c[2] - 279822 c[3] + 34986 c[4] - 2107 c[5] + 49 c[6]

```

cert = Flatten[Array[c, 6] /. FindInstance[
  -1573335 c[1] + 1074309 c[2] - 279822 c[3] + 34986 c[4] - 2107 c[5] + 49 c[6] < 0 &&
  -32655 c[1] + 22053 c[2] - 5718 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31927 c[1] + 21893 c[2] - 5710 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32039 c[1] + 21909 c[2] - 5710 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32151 c[1] + 21925 c[2] - 5710 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32263 c[1] + 21941 c[2] - 5710 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31311 c[1] + 21749 c[2] - 5702 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31423 c[1] + 21765 c[2] - 5702 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31535 c[1] + 21781 c[2] - 5702 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31647 c[1] + 21797 c[2] - 5702 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30663 c[1] + 21605 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30807 c[1] + 21621 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30919 c[1] + 21637 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31031 c[1] + 21653 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30159 c[1] + 21477 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30303 c[1] + 21493 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30271 c[1] + 21493 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30415 c[1] + 21509 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29655 c[1] + 21349 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29799 c[1] + 21365 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0,
  Array[c, 6], Integers]]
{-108085, -787474, -5728490, 0, 0, -18918837294}

GCD[-108085, -787474, -5728490, 0, 0, -18918837294]
1

Reverse[cert]
{-18918837294, 0, 0, -5728490, -787474, -108085}

cert.g
-1990617

{-108085, -787474, -5728490, 0, 0, -18918837294}.gpart[listdim17[[95]]]
-1990617

cert.Transpose[A]
{20079, 1502119, 1008055, 513991, 19927, 2490095,
 1996031, 1501967, 1007903, 19351, 2984007, 2489943,
 1995879, 513263, 3477919, 19199, 2983855, 1007175, 3971831}

```

```
chi = listdim17[[96]]
```

$$(-11+x)^2 (-9+x)^9 (-7+x) (5+x)^{32} (-84668 + 45287x - 9522x^2 + 984x^3 - 50x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -72, 2236, -39096, 420630, -2848728, 11844604, -27594024, 27507249},
      {1, -72, 2236, -39096, 420646, -2849368, 11853980, -27653672, 27646465},
      {1, -72, 2236, -39088, 420254, -2841800, 11782028, -27316800, 27024921},
      {1, -72, 2236, -39088, 420254, -2841800, 11782092, -27317824, 27028953},
      {1, -72, 2236, -39088, 420254, -2841768, 11781164, -27309152, 27002745},
      {1, -72, 2236, -39088, 420254, -2841768, 11781228, -27310304, 27007929},
      {1, -72, 2236, -39088, 420254, -2841736, 11780300, -27301504, 26980569},
      {1, -72, 2236, -39088, 420270, -2842408, 11790540, -27368800, 27141961},
      {1, -72, 2236, -39088, 420270, -2842408, 11790604, -27369952, 27146889},
      {1, -72, 2236, -39088, 420270, -2842376, 11789676, -27361152, 27119785},
      {1, -72, 2236, -39088, 420270, -2842376, 11789740, -27362304, 27124713},
      {1, -72, 2236, -39088, 420270, -2842344, 11788812, -27353504, 27097609},
      {1, -72, 2236, -39088, 420270, -2842344, 11788876, -27354656, 27102537},
      {1, -72, 2236, -39088, 420286, -2842952, 11797388, -27406656, 27219577},
      {1, -72, 2236, -39080, 419846, -2833592, 11700636, -26919000, 26258337},
      {1, -72, 2236, -39080, 419862, -2834232, 11710076, -26979928, 26403633},
      {1, -72, 2236, -39080, 419862, -2834200, 11709148, -26971128, 26376273},
      {1, -72, 2236, -39080, 419862, -2834200, 11709212, -26972280, 26381457},
      {1, -72, 2236, -39080, 419862, -2834200, 11709212, -26972152, 26380305},
      {1, -72, 2236, -39080, 419862, -2834168, 11708284, -26963480, 26354097},
      {1, -72, 2236, -39080, 419862, -2834168, 11708348, -26964504, 26358129},
      {1, -72, 2236, -39080, 419878, -2834840, 11718588, -27031928, 26520417},
      {1, -72, 2236, -39080, 419878, -2834808, 11717724, -27024280, 26498241},
      {1, -72, 2236, -39080, 419878, -2834808, 11717788, -27025432, 26503425},
      {1, -72, 2236, -39080, 419878, -2834776, 11716860, -27016632, 26476065},
      {1, -72, 2236, -39080, 419878, -2834776, 11716924, -27017784, 26481249},
      {1, -72, 2236, -39080, 419878, -2834744, 11715996, -27008984, 26453889},
      {1, -72, 2236, -39080, 419894, -2835448, 11727164, -27085080, 26642385},
      {1, -72, 2236, -39080, 419894, -2835416, 11726300, -27077432, 26620209},
      {1, -72, 2236, -39080, 419894, -2835384, 11725436, -27069784, 26598033},
      {1, -72, 2236, -39080, 419894, -2835352, 11724508, -27060984, 26570929},
      {1, -72, 2236, -39080, 419894, -2835352, 11724572, -27062136, 26575857},
      {1, -72, 2236, -39080, 419910, -2835992, 11734012, -27122936, 26720001},
      {1, -72, 2236, -39080, 419910, -2835960, 11733084, -27114136, 26692897},
      {1, -72, 2236, -39080, 419910, -2835960, 11733148, -27115288, 26697825},
      {1, -72, 2236, -39072, 419470, -2826632, 11637132, -26633104, 25749801},
      {1, -72, 2236, -39072, 419486, -2827240, 11645772, -26687536, 25878105},
      {1, -72, 2236, -39072, 419486, -2827208, 11644844, -26678608, 25849593},
      {1, -72, 2236, -39072, 419486, -2827208, 11644908, -26679760, 25854777},
      {1, -72, 2236, -39072, 419486, -2827176, 11643980, -26670960, 25827417},
      {1, -72, 2236, -39072, 419502, -2827816, 11653420, -26731760, 25971561},
      {1, -72, 2236, -39072, 419502, -2827784, 11652556, -26724112, 25949385},
```



```
{1, -72, 2236, -39 072, 419 502, -2 827 784, 11 652 620, -26 725 264, 25 954 569},
{1, -72, 2236, -39 072, 419 502, -2 827 752, 11 651 692, -26 716 464, 25 927 209},
{1, -72, 2236, -39 072, 419 518, -2 828 392, 11 661 132, -26 777 264, 26 071 353},
{1, -72, 2236, -39 072, 419 518, -2 828 392, 11 661 196, -26 778 416, 26 076 537},
{1, -72, 2236, -39 072, 419 518, -2 828 360, 11 660 268, -26 769 616, 26 049 177},
{1, -72, 2236, -39 072, 419 534, -2 829 000, 11 669 708, -26 830 416, 26 193 321},
{1, -72, 2236, -39 072, 419 534, -2 828 968, 11 668 844, -26 822 768, 26 171 145},
{1, -72, 2236, -39 072, 419 534, -2 828 936, 11 667 916, -26 813 968, 26 144 041},
{1, -72, 2236, -39 064, 419 110, -2 820 184, 11 579 676, -26 378 440, 25 300 737},
{1, -72, 2236, -39 064, 419 126, -2 820 792, 11 588 252, -26 431 592, 25 422 705},
{1, -72, 2236, -39 064, 419 126, -2 820 760, 11 587 388, -26 423 944, 25 400 529},
{1, -72, 2236, -39 064, 419 126, -2 820 760, 11 587 452, -26 425 096, 25 405 713},
{1, -72, 2236, -39 064, 419 142, -2 821 400, 11 596 892, -26 486 024, 25 551 009},
{1, -72, 2236, -39 064, 419 142, -2 821 368, 11 595 964, -26 477 096, 25 522 497},
{1, -72, 2236, -39 064, 419 142, -2 821 368, 11 596 028, -26 478 376, 25 528 833},
{1, -72, 2236, -39 064, 419 142, -2 821 336, 11 595 100, -26 469 448, 25 500 321},
{1, -72, 2236, -39 064, 419 158, -2 821 976, 11 604 540, -26 530 248, 25 644 465},
{1, -72, 2236, -39 056, 418 750, -2 813 736, 11 522 220, -26 123 776, 24 851 673},
{1, -72, 2236, -39 056, 418 766, -2 814 344, 11 530 796, -26 176 928, 24 973 641}};
```

A // MatrixForm

```
1 -72 2236 -39 096 420 630 -2 848 728 11 844 604 -27 594 024 27 507 249
1 -72 2236 -39 096 420 646 -2 849 368 11 853 980 -27 653 672 27 646 465
1 -72 2236 -39 088 420 254 -2 841 800 11 782 028 -27 316 800 27 024 921
1 -72 2236 -39 088 420 254 -2 841 800 11 782 092 -27 317 824 27 028 953
1 -72 2236 -39 088 420 254 -2 841 768 11 781 164 -27 309 152 27 002 745
1 -72 2236 -39 088 420 254 -2 841 768 11 781 228 -27 310 304 27 007 929
1 -72 2236 -39 088 420 254 -2 841 736 11 780 300 -27 301 504 26 980 569
1 -72 2236 -39 088 420 270 -2 842 408 11 790 540 -27 368 800 27 141 961
1 -72 2236 -39 088 420 270 -2 842 408 11 790 604 -27 369 952 27 146 889
1 -72 2236 -39 088 420 270 -2 842 376 11 789 676 -27 361 152 27 119 785
1 -72 2236 -39 088 420 270 -2 842 376 11 789 740 -27 362 304 27 124 713
1 -72 2236 -39 088 420 270 -2 842 344 11 788 812 -27 353 504 27 097 609
1 -72 2236 -39 088 420 270 -2 842 344 11 788 876 -27 354 656 27 102 537
1 -72 2236 -39 088 420 286 -2 842 952 11 797 388 -27 406 656 27 219 577
1 -72 2236 -39 080 419 846 -2 833 592 11 700 636 -26 919 000 26 258 337
1 -72 2236 -39 080 419 862 -2 834 232 11 710 076 -26 979 928 26 403 633
1 -72 2236 -39 080 419 862 -2 834 200 11 709 148 -26 971 128 26 376 273
1 -72 2236 -39 080 419 862 -2 834 200 11 709 212 -26 972 280 26 381 457
1 -72 2236 -39 080 419 862 -2 834 200 11 709 212 -26 972 152 26 380 305
1 -72 2236 -39 080 419 862 -2 834 168 11 708 284 -26 963 480 26 354 097
1 -72 2236 -39 080 419 862 -2 834 168 11 708 348 -26 964 504 26 358 129
1 -72 2236 -39 080 419 878 -2 834 840 11 718 588 -27 031 928 26 520 417
1 -72 2236 -39 080 419 878 -2 834 808 11 717 724 -27 024 280 26 498 241
1 -72 2236 -39 080 419 878 -2 834 808 11 717 788 -27 025 432 26 503 425
1 -72 2236 -39 080 419 878 -2 834 776 11 716 860 -27 016 632 26 476 065
1 -72 2236 -39 080 419 878 -2 834 776 11 716 924 -27 017 784 26 481 249
1 -72 2236 -39 080 419 878 -2 834 744 11 715 996 -27 008 984 26 453 889
1 -72 2236 -39 080 419 894 -2 835 448 11 727 164 -27 085 080 26 642 385
1 -72 2236 -39 080 419 894 -2 835 416 11 726 300 -27 077 432 26 620 209
1 -72 2236 -39 080 419 894 -2 835 384 11 725 436 -27 069 784 26 598 033
1 -72 2236 -39 080 419 894 -2 835 352 11 724 508 -27 060 984 26 570 929
```

```

1 -72 2236 -39080 419894 -2835352 11724572 -27062136 26575857
1 -72 2236 -39080 419910 -2835992 11734012 -27122936 26720001
1 -72 2236 -39080 419910 -2835960 11733084 -27114136 26692897
1 -72 2236 -39080 419910 -2835960 11733148 -27115288 26697825
1 -72 2236 -39072 419470 -2826632 11637132 -26633104 25749801
1 -72 2236 -39072 419486 -2827240 11645772 -26687536 25878105
1 -72 2236 -39072 419486 -2827208 11644844 -26678608 25849593
1 -72 2236 -39072 419486 -2827208 11644908 -26679760 25854777
1 -72 2236 -39072 419486 -2827176 11643980 -26670960 25827417
1 -72 2236 -39072 419502 -2827816 11653420 -26731760 25971561
1 -72 2236 -39072 419502 -2827784 11652556 -26724112 25949385
1 -72 2236 -39072 419502 -2827784 11652620 -26725264 25954569
1 -72 2236 -39072 419502 -2827752 11651692 -26716464 25927209
1 -72 2236 -39072 419518 -2828392 11661132 -26777264 26071353
1 -72 2236 -39072 419518 -2828392 11661196 -26778416 26076537
1 -72 2236 -39072 419518 -2828360 11660268 -26769616 26049177
1 -72 2236 -39072 419534 -2829000 11669708 -26830416 26193321
1 -72 2236 -39072 419534 -2828968 11668844 -26822768 26171145
1 -72 2236 -39072 419534 -2828936 11667916 -26813968 26144041
1 -72 2236 -39064 419110 -2820184 11579676 -26378440 25300737
1 -72 2236 -39064 419126 -2820792 11588252 -26431592 25422705
1 -72 2236 -39064 419126 -2820760 11587388 -26423944 25400529
1 -72 2236 -39064 419126 -2820760 11587452 -26425096 25405713
1 -72 2236 -39064 419142 -2821400 11596892 -26486024 25551009
1 -72 2236 -39064 419142 -2821368 11595964 -26477096 25522497
1 -72 2236 -39064 419142 -2821368 11596028 -26478376 25528833
1 -72 2236 -39064 419142 -2821336 11595100 -26469448 25500321
1 -72 2236 -39064 419158 -2821976 11604540 -26530248 25644465
1 -72 2236 -39056 418750 -2813736 11522220 -26123776 24851673
1 -72 2236 -39056 418766 -2814344 11530796 -26176928 24973641

```

Dimensions[A]

{61, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```

{49, -3528, 109564, -1915344, 20594926,
 -139311080, 578038348, -1342366976, 1332051993}

```

Array[c, 9].Transpose[A]

```

{c[1] - 72 c[2] + 2236 c[3] - 39096 c[4] + 420630 c[5] -
 2848728 c[6] + 11844604 c[7] - 27594024 c[8] + 27507249 c[9],
 c[1] - 72 c[2] + 2236 c[3] - 39096 c[4] + 420646 c[5] - 2849368 c[6] +
 11853980 c[7] - 27653672 c[8] + 27646465 c[9],
 c[1] - 72 c[2] + 2236 c[3] - 39088 c[4] + 420254 c[5] - 2841800 c[6] +
 11782028 c[7] - 27316800 c[8] + 27024921 c[9],
 c[1] - 72 c[2] + 2236 c[3] - 39088 c[4] + 420254 c[5] - 2841800 c[6] +
 11782092 c[7] - 27317824 c[8] + 27028953 c[9],
 c[1] - 72 c[2] + 2236 c[3] - 39088 c[4] + 420254 c[5] - 2841768 c[6] +
 11781164 c[7] - 27309152 c[8] + 27002745 c[9],
 c[1] - 72 c[2] + 2236 c[3] - 39088 c[4] + 420254 c[5] - 2841768 c[6] +
 11781228 c[7] - 27310304 c[8] + 27007929 c[9],

```

$c[1] - 72 c[2] + 2236 c[3] - 39\,088 c[4] + 420\,254 c[5] - 2\,841\,736 c[6] + 11\,780\,300 c[7] -$
 $27\,301\,504 c[8] + 26\,980\,569 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,088 c[4] +$
 $420\,270 c[5] - 2\,842\,408 c[6] + 11\,790\,540 c[7] - 27\,368\,800 c[8] + 27\,141\,961 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,088 c[4] + 420\,270 c[5] - 2\,842\,408 c[6] + 11\,790\,604 c[7] -$
 $27\,369\,952 c[8] + 27\,146\,889 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,088 c[4] +$
 $420\,270 c[5] - 2\,842\,376 c[6] + 11\,789\,676 c[7] - 27\,361\,152 c[8] + 27\,119\,785 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,088 c[4] + 420\,270 c[5] - 2\,842\,376 c[6] + 11\,789\,740 c[7] -$
 $27\,362\,304 c[8] + 27\,124\,713 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,088 c[4] +$
 $420\,270 c[5] - 2\,842\,344 c[6] + 11\,788\,812 c[7] - 27\,353\,504 c[8] + 27\,097\,609 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,088 c[4] + 420\,270 c[5] - 2\,842\,344 c[6] + 11\,788\,876 c[7] -$
 $27\,354\,656 c[8] + 27\,102\,537 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,088 c[4] +$
 $420\,286 c[5] - 2\,842\,952 c[6] + 11\,797\,388 c[7] - 27\,406\,656 c[8] + 27\,219\,577 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,846 c[5] - 2\,833\,592 c[6] + 11\,700\,636 c[7] -$
 $26\,919\,000 c[8] + 26\,258\,337 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,862 c[5] - 2\,834\,232 c[6] + 11\,710\,076 c[7] - 26\,979\,928 c[8] + 26\,403\,633 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,862 c[5] - 2\,834\,200 c[6] + 11\,709\,148 c[7] -$
 $26\,971\,128 c[8] + 26\,376\,273 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,862 c[5] - 2\,834\,200 c[6] + 11\,709\,212 c[7] - 26\,972\,280 c[8] + 26\,381\,457 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,862 c[5] - 2\,834\,200 c[6] + 11\,709\,212 c[7] -$
 $26\,972\,152 c[8] + 26\,380\,305 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,862 c[5] - 2\,834\,168 c[6] + 11\,708\,284 c[7] - 26\,963\,480 c[8] + 26\,354\,097 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,862 c[5] - 2\,834\,168 c[6] + 11\,708\,348 c[7] -$
 $26\,964\,504 c[8] + 26\,358\,129 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,878 c[5] - 2\,834\,840 c[6] + 11\,718\,588 c[7] - 27\,031\,928 c[8] + 26\,520\,417 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,878 c[5] - 2\,834\,808 c[6] + 11\,717\,724 c[7] -$
 $27\,024\,280 c[8] + 26\,498\,241 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,878 c[5] - 2\,834\,808 c[6] + 11\,717\,788 c[7] - 27\,025\,432 c[8] + 26\,503\,425 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,878 c[5] - 2\,834\,776 c[6] + 11\,716\,860 c[7] -$
 $27\,016\,632 c[8] + 26\,476\,065 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,878 c[5] - 2\,834\,776 c[6] + 11\,716\,924 c[7] - 27\,017\,784 c[8] + 26\,481\,249 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,878 c[5] - 2\,834\,744 c[6] + 11\,715\,996 c[7] -$
 $27\,008\,984 c[8] + 26\,453\,889 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,894 c[5] - 2\,835\,448 c[6] + 11\,727\,164 c[7] - 27\,085\,080 c[8] + 26\,642\,385 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,416 c[6] + 11\,726\,300 c[7] -$
 $27\,077\,432 c[8] + 26\,620\,209 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,894 c[5] - 2\,835\,384 c[6] + 11\,725\,436 c[7] - 27\,069\,784 c[8] + 26\,598\,033 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,352 c[6] + 11\,724\,508 c[7] -$
 $27\,060\,984 c[8] + 26\,570\,929 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,894 c[5] - 2\,835\,352 c[6] + 11\,724\,572 c[7] - 27\,062\,136 c[8] + 26\,575\,857 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,910 c[5] - 2\,835\,992 c[6] + 11\,734\,012 c[7] -$
 $27\,122\,936 c[8] + 26\,720\,001 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,910 c[5] - 2\,835\,960 c[6] + 11\,733\,084 c[7] - 27\,114\,136 c[8] + 26\,692\,897 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,910 c[5] - 2\,835\,960 c[6] + 11\,733\,148 c[7] -$
 $27\,115\,288 c[8] + 26\,697\,825 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$
 $419\,470 c[5] - 2\,826\,632 c[6] + 11\,637\,132 c[7] - 26\,633\,104 c[8] + 25\,749\,801 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,240 c[6] + 11\,645\,772 c[7] -$
 $26\,687\,536 c[8] + 25\,878\,105 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$

```

419 486 c[5] - 2 827 208 c[6] + 11 644 844 c[7] - 26 678 608 c[8] + 25 849 593 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 486 c[5] - 2 827 208 c[6] + 11 644 908 c[7] -
26 679 760 c[8] + 25 854 777 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] +
419 486 c[5] - 2 827 176 c[6] + 11 643 980 c[7] - 26 670 960 c[8] + 25 827 417 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 502 c[5] - 2 827 816 c[6] + 11 653 420 c[7] -
26 731 760 c[8] + 25 971 561 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] +
419 502 c[5] - 2 827 784 c[6] + 11 652 556 c[7] - 26 724 112 c[8] + 25 949 385 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 502 c[5] - 2 827 784 c[6] + 11 652 620 c[7] -
26 725 264 c[8] + 25 954 569 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] +
419 502 c[5] - 2 827 752 c[6] + 11 651 692 c[7] - 26 716 464 c[8] + 25 927 209 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 518 c[5] - 2 828 392 c[6] + 11 661 132 c[7] -
26 777 264 c[8] + 26 071 353 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] +
419 518 c[5] - 2 828 392 c[6] + 11 661 196 c[7] - 26 778 416 c[8] + 26 076 537 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 518 c[5] - 2 828 360 c[6] + 11 660 268 c[7] -
26 769 616 c[8] + 26 049 177 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] +
419 534 c[5] - 2 829 000 c[6] + 11 669 708 c[7] - 26 830 416 c[8] + 26 193 321 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 534 c[5] - 2 828 968 c[6] + 11 668 844 c[7] -
26 822 768 c[8] + 26 171 145 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] +
419 534 c[5] - 2 828 936 c[6] + 11 667 916 c[7] - 26 813 968 c[8] + 26 144 041 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 110 c[5] - 2 820 184 c[6] + 11 579 676 c[7] -
26 378 440 c[8] + 25 300 737 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] +
419 126 c[5] - 2 820 792 c[6] + 11 588 252 c[7] - 26 431 592 c[8] + 25 422 705 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 126 c[5] - 2 820 760 c[6] + 11 587 388 c[7] -
26 423 944 c[8] + 25 400 529 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] +
419 126 c[5] - 2 820 760 c[6] + 11 587 452 c[7] - 26 425 096 c[8] + 25 405 713 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 142 c[5] - 2 821 400 c[6] + 11 596 892 c[7] -
26 486 024 c[8] + 25 551 009 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] +
419 142 c[5] - 2 821 368 c[6] + 11 595 964 c[7] - 26 477 096 c[8] + 25 522 497 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 142 c[5] - 2 821 368 c[6] + 11 596 028 c[7] -
26 478 376 c[8] + 25 528 833 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] +
419 142 c[5] - 2 821 336 c[6] + 11 595 100 c[7] - 26 469 448 c[8] + 25 500 321 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 158 c[5] - 2 821 976 c[6] + 11 604 540 c[7] -
26 530 248 c[8] + 25 644 465 c[9] , c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] +
418 750 c[5] - 2 813 736 c[6] + 11 522 220 c[7] - 26 123 776 c[8] + 24 851 673 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 344 c[6] +
11 530 796 c[7] - 26 176 928 c[8] + 24 973 641 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3528 c[2] + 109 564 c[3] - 1 915 344 c[4] + 20 594 926 c[5] -
139 311 080 c[6] + 578 038 348 c[7] - 1 342 366 976 c[8] + 1 332 051 993 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3528 c[2] + 109 564 c[3] - 1 915 344 c[4] + 20 594 926 c[5] -
139 311 080 c[6] + 578 038 348 c[7] - 1 342 366 976 c[8] + 1 332 051 993 c[9] < 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 096 c[4] + 420 630 c[5] - 2 848 728 c[6] +
11 844 604 c[7] - 27 594 024 c[8] + 27 507 249 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 096 c[4] + 420 646 c[5] - 2 849 368 c[6] +

```

$$\begin{aligned}
& 11\,853\,980\,c[7] - 27\,653\,672\,c[8] + 27\,646\,465\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,254\,c[5] - 2\,841\,800\,c[6] + \\
& \quad 11\,782\,028\,c[7] - 27\,316\,800\,c[8] + 27\,024\,921\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,254\,c[5] - 2\,841\,800\,c[6] + \\
& \quad 11\,782\,092\,c[7] - 27\,317\,824\,c[8] + 27\,028\,953\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,254\,c[5] - 2\,841\,768\,c[6] + \\
& \quad 11\,781\,164\,c[7] - 27\,309\,152\,c[8] + 27\,002\,745\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,254\,c[5] - 2\,841\,768\,c[6] + \\
& \quad 11\,781\,228\,c[7] - 27\,310\,304\,c[8] + 27\,007\,929\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,254\,c[5] - 2\,841\,736\,c[6] + \\
& \quad 11\,780\,300\,c[7] - 27\,301\,504\,c[8] + 26\,980\,569\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,270\,c[5] - 2\,842\,408\,c[6] + \\
& \quad 11\,790\,540\,c[7] - 27\,368\,800\,c[8] + 27\,141\,961\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,270\,c[5] - 2\,842\,408\,c[6] + \\
& \quad 11\,790\,604\,c[7] - 27\,369\,952\,c[8] + 27\,146\,889\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,270\,c[5] - 2\,842\,376\,c[6] + \\
& \quad 11\,789\,676\,c[7] - 27\,361\,152\,c[8] + 27\,119\,785\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,270\,c[5] - 2\,842\,376\,c[6] + \\
& \quad 11\,789\,740\,c[7] - 27\,362\,304\,c[8] + 27\,124\,713\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,270\,c[5] - 2\,842\,344\,c[6] + \\
& \quad 11\,788\,812\,c[7] - 27\,353\,504\,c[8] + 27\,097\,609\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,270\,c[5] - 2\,842\,344\,c[6] + \\
& \quad 11\,788\,876\,c[7] - 27\,354\,656\,c[8] + 27\,102\,537\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,286\,c[5] - 2\,842\,952\,c[6] + \\
& \quad 11\,797\,388\,c[7] - 27\,406\,656\,c[8] + 27\,219\,577\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,846\,c[5] - 2\,833\,592\,c[6] + \\
& \quad 11\,700\,636\,c[7] - 26\,919\,000\,c[8] + 26\,258\,337\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,862\,c[5] - 2\,834\,232\,c[6] + \\
& \quad 11\,710\,076\,c[7] - 26\,979\,928\,c[8] + 26\,403\,633\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,862\,c[5] - 2\,834\,200\,c[6] + \\
& \quad 11\,709\,148\,c[7] - 26\,971\,128\,c[8] + 26\,376\,273\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,862\,c[5] - 2\,834\,200\,c[6] + \\
& \quad 11\,709\,212\,c[7] - 26\,972\,280\,c[8] + 26\,381\,457\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,862\,c[5] - 2\,834\,200\,c[6] + \\
& \quad 11\,709\,212\,c[7] - 26\,972\,152\,c[8] + 26\,380\,305\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,862\,c[5] - 2\,834\,168\,c[6] + \\
& \quad 11\,708\,284\,c[7] - 26\,963\,480\,c[8] + 26\,354\,097\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,862\,c[5] - 2\,834\,168\,c[6] + \\
& \quad 11\,708\,348\,c[7] - 26\,964\,504\,c[8] + 26\,358\,129\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,878\,c[5] - 2\,834\,840\,c[6] + \\
& \quad 11\,718\,588\,c[7] - 27\,031\,928\,c[8] + 26\,520\,417\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,878\,c[5] - 2\,834\,808\,c[6] + \\
& \quad 11\,717\,724\,c[7] - 27\,024\,280\,c[8] + 26\,498\,241\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,878\,c[5] - 2\,834\,808\,c[6] + \\
& \quad 11\,717\,788\,c[7] - 27\,025\,432\,c[8] + 26\,503\,425\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,878\,c[5] - 2\,834\,776\,c[6] + \\
& \quad 11\,716\,860\,c[7] - 27\,016\,632\,c[8] + 26\,476\,065\,c[9] \geq 0 \ \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,878 c[5] - 2\,834\,776 c[6] + \\
& \quad 11\,716\,924 c[7] - 27\,017\,784 c[8] + 26\,481\,249 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,878 c[5] - 2\,834\,744 c[6] + \\
& \quad 11\,715\,996 c[7] - 27\,008\,984 c[8] + 26\,453\,889 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,448 c[6] + \\
& \quad 11\,727\,164 c[7] - 27\,085\,080 c[8] + 26\,642\,385 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,416 c[6] + \\
& \quad 11\,726\,300 c[7] - 27\,077\,432 c[8] + 26\,620\,209 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,384 c[6] + \\
& \quad 11\,725\,436 c[7] - 27\,069\,784 c[8] + 26\,598\,033 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,352 c[6] + \\
& \quad 11\,724\,508 c[7] - 27\,060\,984 c[8] + 26\,570\,929 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,352 c[6] + \\
& \quad 11\,724\,572 c[7] - 27\,062\,136 c[8] + 26\,575\,857 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,910 c[5] - 2\,835\,992 c[6] + \\
& \quad 11\,734\,012 c[7] - 27\,122\,936 c[8] + 26\,720\,001 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,910 c[5] - 2\,835\,960 c[6] + \\
& \quad 11\,733\,084 c[7] - 27\,114\,136 c[8] + 26\,692\,897 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,910 c[5] - 2\,835\,960 c[6] + \\
& \quad 11\,733\,148 c[7] - 27\,115\,288 c[8] + 26\,697\,825 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,470 c[5] - 2\,826\,632 c[6] + \\
& \quad 11\,637\,132 c[7] - 26\,633\,104 c[8] + 25\,749\,801 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,240 c[6] + \\
& \quad 11\,645\,772 c[7] - 26\,687\,536 c[8] + 25\,878\,105 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,208 c[6] + \\
& \quad 11\,644\,844 c[7] - 26\,678\,608 c[8] + 25\,849\,593 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,208 c[6] + \\
& \quad 11\,644\,908 c[7] - 26\,679\,760 c[8] + 25\,854\,777 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,176 c[6] + \\
& \quad 11\,643\,980 c[7] - 26\,670\,960 c[8] + 25\,827\,417 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,502 c[5] - 2\,827\,816 c[6] + \\
& \quad 11\,653\,420 c[7] - 26\,731\,760 c[8] + 25\,971\,561 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,502 c[5] - 2\,827\,784 c[6] + \\
& \quad 11\,652\,556 c[7] - 26\,724\,112 c[8] + 25\,949\,385 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,502 c[5] - 2\,827\,784 c[6] + \\
& \quad 11\,652\,620 c[7] - 26\,725\,264 c[8] + 25\,954\,569 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,502 c[5] - 2\,827\,752 c[6] + \\
& \quad 11\,651\,692 c[7] - 26\,716\,464 c[8] + 25\,927\,209 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,392 c[6] + \\
& \quad 11\,661\,132 c[7] - 26\,777\,264 c[8] + 26\,071\,353 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,392 c[6] + \\
& \quad 11\,661\,196 c[7] - 26\,778\,416 c[8] + 26\,076\,537 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,360 c[6] + \\
& \quad 11\,660\,268 c[7] - 26\,769\,616 c[8] + 26\,049\,177 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,534 c[5] - 2\,829\,000 c[6] + \\
& \quad 11\,669\,708 c[7] - 26\,830\,416 c[8] + 26\,193\,321 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,534 c[5] - 2\,828\,968 c[6] +
\end{aligned}$$

```

11 668 844 c[7] - 26 822 768 c[8] + 26 171 145 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 534 c[5] - 2 828 936 c[6] +
11 667 916 c[7] - 26 813 968 c[8] + 26 144 041 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 110 c[5] - 2 820 184 c[6] +
11 579 676 c[7] - 26 378 440 c[8] + 25 300 737 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 126 c[5] - 2 820 792 c[6] +
11 588 252 c[7] - 26 431 592 c[8] + 25 422 705 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 126 c[5] - 2 820 760 c[6] +
11 587 388 c[7] - 26 423 944 c[8] + 25 400 529 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 126 c[5] - 2 820 760 c[6] +
11 587 452 c[7] - 26 425 096 c[8] + 25 405 713 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 142 c[5] - 2 821 400 c[6] +
11 596 892 c[7] - 26 486 024 c[8] + 25 551 009 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 142 c[5] - 2 821 368 c[6] +
11 595 964 c[7] - 26 477 096 c[8] + 25 522 497 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 142 c[5] - 2 821 368 c[6] +
11 596 028 c[7] - 26 478 376 c[8] + 25 528 833 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 142 c[5] - 2 821 336 c[6] +
11 595 100 c[7] - 26 469 448 c[8] + 25 500 321 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 158 c[5] - 2 821 976 c[6] +
11 604 540 c[7] - 26 530 248 c[8] + 25 644 465 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 750 c[5] - 2 813 736 c[6] +
11 522 220 c[7] - 26 123 776 c[8] + 24 851 673 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 344 c[6] +
11 530 796 c[7] - 26 176 928 c[8] + 24 973 641 c[9] ≥ 0, Array[c, 9], Integers]]

{0, 0, 0, -15 349 003 083, -3 936 212 014,
-661 763 942, -97 017 114, -13 355 954, -1 781 204}

GCD[0, 0, 0, -15 349 003 083, -3 936 212 014,
-661 763 942, -97 017 114, -13 355 954, -1 781 204]

1

cert.g
-1 782 410 192

{0, 0, 0, -15 349 003 083, -3 936 212 014, -661 763 942,
-97 017 114, -13 355 954, -1 781 204}.Reverse[gpart[listdim17[[96]]]]

-1 782 410 192

```

```
cert.Transpose[A]
```

```
{432 768 168, 33 686 088, 432 367 472, 717 954 544, 432 351 536, 375 553 712, 432 335 600,
 33 269 456, 432 459 856, 33 253 520, 432 443 920, 33 237 584, 432 427 984,
 33 329 968, 717 337 208, 375 060 632, 431 842 520, 375 044 696, 717 429 592,
 431 826 584, 717 413 656, 431 950 840, 431 934 904, 375 137 080, 431 918 968,
 375 121 144, 431 903 032, 432 043 224, 432 027 288, 432 011 352, 32 805 016,
 431 995 416, 432 103 736, 32 897 400, 432 087 800, 431 333 504, 32 243 168,
 431 409 952, 374 612 128, 431 394 016, 431 502 336, 431 486 400, 374 688 576,
 431 470 464, 431 578 784, 374 780 960, 431 562 848, 431 671 168, 431 655 232,
 32 448 896, 430 961 448, 431 053 832, 431 037 896, 374 240 072, 31 963 496,
 431 130 280, 31 947 560, 431 114 344, 431 222 664, 430 589 392, 430 681 776}
```

```
chi = listdim17[[97]]
```

```
 $(-11 + x)^2 (-9 + x)^{10} (-7 + x) (5 + x)^{32} (9404 - 3987 x + 615 x^2 - 41 x^3 + x^4)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -63, 1669, -24 067, 203 667, -1 009 373, 2 705 447, -3 014 433},
      {1, -63, 1669, -24 067, 203 667, -1 009 341, 2 704 871, -3 011 841},
      {1, -63, 1669, -24 067, 203 683, -1 009 805, 2 709 207, -3 024 945},
      {1, -63, 1669, -24 059, 203 315, -1 003 725, 2 666 375, -2 916 153},
      {1, -63, 1669, -24 059, 203 331, -1 004 189, 2 670 711, -2 929 257},
      {1, -63, 1669, -24 059, 203 331, -1 004 189, 2 670 775, -2 929 833},
      {1, -63, 1669, -24 059, 203 331, -1 004 189, 2 670 839, -2 930 409},
      {1, -63, 1669, -24 059, 203 331, -1 004 157, 2 670 135, -2 926 665},
      {1, -63, 1669, -24 059, 203 347, -1 004 653, 2 674 983, -2 941 785},
      {1, -63, 1669, -24 059, 203 347, -1 004 653, 2 675 047, -2 942 361},
      {1, -63, 1669, -24 059, 203 347, -1 004 653, 2 675 111, -2 942 937},
      {1, -63, 1669, -24 059, 203 347, -1 004 653, 2 675 175, -2 943 513},
      {1, -63, 1669, -24 059, 203 347, -1 004 621, 2 674 471, -2 939 769},
      {1, -63, 1669, -24 059, 203 347, -1 004 621, 2 674 535, -2 940 345},
      {1, -63, 1669, -24 059, 203 363, -1 005 117, 2 679 447, -2 956 041},
      {1, -63, 1669, -24 059, 203 363, -1 005 085, 2 678 807, -2 952 873},
      {1, -63, 1669, -24 059, 203 363, -1 005 085, 2 678 871, -2 953 449},
      {1, -63, 1669, -24 059, 203 363, -1 005 085, 2 678 935, -2 954 025},
      {1, -63, 1669, -24 059, 203 379, -1 005 517, 2 682 631, -2 963 961},
      {1, -63, 1669, -24 051, 203 011, -999 469, 2 640 247, -2 856 609},
      {1, -63, 1669, -24 051, 203 011, -999 469, 2 640 311, -2 857 185},
      {1, -63, 1669, -24 051, 203 011, -999 437, 2 639 735, -2 854 593},
      {1, -63, 1669, -24 051, 203 027, -999 965, 2 645 223, -2 872 881},
      {1, -63, 1669, -24 051, 203 027, -999 965, 2 645 287, -2 873 457},
      {1, -63, 1669, -24 051, 203 027, -999 965, 2 645 351, -2 874 033},
```



```

{1, -63, 1669, -24 051, 203 027, -999 933, 2 644 583, -2 869 713},
{1, -63, 1669, -24 051, 203 027, -999 933, 2 644 647, -2 870 289},
{1, -63, 1669, -24 051, 203 027, -999 933, 2 644 711, -2 870 865},
{1, -63, 1669, -24 051, 203 027, -999 933, 2 644 775, -2 871 441},
{1, -63, 1669, -24 051, 203 027, -999 901, 2 644 071, -2 867 697},
{1, -63, 1669, -24 051, 203 027, -999 901, 2 644 135, -2 868 273},
{1, -63, 1669, -24 051, 203 027, -999 901, 2 644 199, -2 868 849},
{1, -63, 1669, -24 051, 203 043, -1 000 397, 2 649 047, -2 883 969},
{1, -63, 1669, -24 051, 203 043, -1 000 397, 2 649 111, -2 884 545},
{1, -63, 1669, -24 051, 203 043, -1 000 397, 2 649 175, -2 885 121},
{1, -63, 1669, -24 051, 203 043, -1 000 365, 2 648 407, -2 880 801},
{1, -63, 1669, -24 051, 203 043, -1 000 365, 2 648 471, -2 881 377},
{1, -63, 1669, -24 051, 203 043, -1 000 365, 2 648 535, -2 881 953},
{1, -63, 1669, -24 051, 203 043, -1 000 333, 2 647 895, -2 878 785},
{1, -63, 1669, -24 051, 203 059, -1 000 829, 2 652 871, -2 895 057},
{1, -63, 1669, -24 051, 203 059, -1 000 829, 2 652 935, -2 895 633},
{1, -63, 1669, -24 051, 203 059, -1 000 797, 2 652 231, -2 891 889},
{1, -63, 1669, -24 051, 203 059, -1 000 797, 2 652 295, -2 892 465},
{1, -63, 1669, -24 051, 203 075, -1 001 261, 2 656 695, -2 906 145},
{1, -63, 1669, -24 043, 202 707, -995 245, 2 614 823, -2 800 809},
{1, -63, 1669, -24 043, 202 707, -995 213, 2 614 183, -2 797 641},
{1, -63, 1669, -24 043, 202 707, -995 213, 2 614 247, -2 798 217},
{1, -63, 1669, -24 043, 202 707, -995 181, 2 613 671, -2 795 625},
{1, -63, 1669, -24 043, 202 723, -995 709, 2 619 287, -2 815 065},
{1, -63, 1669, -24 043, 202 723, -995 677, 2 618 647, -2 811 897},
{1, -63, 1669, -24 043, 202 723, -995 677, 2 618 711, -2 812 473},
{1, -63, 1669, -24 043, 202 723, -995 645, 2 618 007, -2 808 729},
{1, -63, 1669, -24 043, 202 723, -995 645, 2 618 071, -2 809 305},
{1, -63, 1669, -24 043, 202 723, -995 645, 2 618 135, -2 809 881},
{1, -63, 1669, -24 043, 202 723, -995 613, 2 617 495, -2 806 713},
{1, -63, 1669, -24 043, 202 739, -996 141, 2 623 111, -2 826 153},
{1, -63, 1669, -24 043, 202 739, -996 141, 2 623 175, -2 826 729},
{1, -63, 1669, -24 043, 202 739, -996 109, 2 622 471, -2 822 985},
{1, -63, 1669, -24 043, 202 739, -996 109, 2 622 535, -2 823 561},
{1, -63, 1669, -24 043, 202 739, -996 109, 2 622 599, -2 824 137},
{1, -63, 1669, -24 043, 202 739, -996 077, 2 621 831, -2 819 817},
{1, -63, 1669, -24 043, 202 739, -996 077, 2 621 895, -2 820 393},
{1, -63, 1669, -24 043, 202 755, -996 573, 2 626 935, -2 837 241},
{1, -63, 1669, -24 043, 202 755, -996 541, 2 626 295, -2 834 073},
{1, -63, 1669, -24 043, 202 755, -996 509, 2 625 655, -2 830 905},
{1, -63, 1669, -24 035, 202 403, -990 925, 2 587 607, -2 736 657},
{1, -63, 1669, -24 035, 202 419, -991 389, 2 592 071, -2 750 913},
{1, -63, 1669, -24 035, 202 419, -991 357, 2 591 431, -2 747 745},
{1, -63, 1669, -24 035, 202 419, -991 357, 2 591 495, -2 748 321},
{1, -63, 1669, -24 035, 202 435, -991 853, 2 596 535, -2 765 169},
{1, -63, 1669, -24 035, 202 435, -991 821, 2 595 895, -2 762 001},
{1, -63, 1669, -24 035, 202 435, -991 821, 2 595 959, -2 762 577},

```

```
{1, -63, 1669, -24 035, 202 435, -991 789, 2 595 255, -2 758 833},
{1, -63, 1669, -24 035, 202 451, -992 285, 2 600 359, -2 776 257},
{1, -63, 1669, -24 027, 202 115, -987 069, 2 564 855, -2 686 761},
{1, -63, 1669, -24 027, 202 131, -987 533, 2 569 319, -2 701 017}};
```

```
A // MatrixForm
```

```
( 1 -63 1669 -24 067 203 667 -1 009 373 2 705 447 -3 014 433
 1 -63 1669 -24 067 203 667 -1 009 341 2 704 871 -3 011 841
 1 -63 1669 -24 067 203 683 -1 009 805 2 709 207 -3 024 945
 1 -63 1669 -24 059 203 315 -1 003 725 2 666 375 -2 916 153
 1 -63 1669 -24 059 203 331 -1 004 189 2 670 711 -2 929 257
 1 -63 1669 -24 059 203 331 -1 004 189 2 670 775 -2 929 833
 1 -63 1669 -24 059 203 331 -1 004 189 2 670 839 -2 930 409
 1 -63 1669 -24 059 203 331 -1 004 157 2 670 135 -2 926 665
 1 -63 1669 -24 059 203 347 -1 004 653 2 674 983 -2 941 785
 1 -63 1669 -24 059 203 347 -1 004 653 2 675 047 -2 942 361
 1 -63 1669 -24 059 203 347 -1 004 653 2 675 111 -2 942 937
 1 -63 1669 -24 059 203 347 -1 004 653 2 675 175 -2 943 513
 1 -63 1669 -24 059 203 347 -1 004 621 2 674 471 -2 939 769
 1 -63 1669 -24 059 203 347 -1 004 621 2 674 535 -2 940 345
 1 -63 1669 -24 059 203 363 -1 005 117 2 679 447 -2 956 041
 1 -63 1669 -24 059 203 363 -1 005 085 2 678 807 -2 952 873
 1 -63 1669 -24 059 203 363 -1 005 085 2 678 871 -2 953 449
 1 -63 1669 -24 059 203 363 -1 005 085 2 678 935 -2 954 025
 1 -63 1669 -24 059 203 379 -1 005 517 2 682 631 -2 963 961
 1 -63 1669 -24 051 203 011 -999 469 2 640 247 -2 856 609
 1 -63 1669 -24 051 203 011 -999 469 2 640 311 -2 857 185
 1 -63 1669 -24 051 203 011 -999 437 2 639 735 -2 854 593
 1 -63 1669 -24 051 203 027 -999 965 2 645 223 -2 872 881
 1 -63 1669 -24 051 203 027 -999 965 2 645 287 -2 873 457
 1 -63 1669 -24 051 203 027 -999 965 2 645 351 -2 874 033
 1 -63 1669 -24 051 203 027 -999 933 2 644 583 -2 869 713
 1 -63 1669 -24 051 203 027 -999 933 2 644 647 -2 870 289
 1 -63 1669 -24 051 203 027 -999 933 2 644 711 -2 870 865
 1 -63 1669 -24 051 203 027 -999 933 2 644 775 -2 871 441
 1 -63 1669 -24 051 203 027 -999 901 2 644 071 -2 867 697
 1 -63 1669 -24 051 203 027 -999 901 2 644 135 -2 868 273
 1 -63 1669 -24 051 203 027 -999 901 2 644 199 -2 868 849
 1 -63 1669 -24 051 203 043 -1 000 397 2 649 047 -2 883 969
 1 -63 1669 -24 051 203 043 -1 000 397 2 649 111 -2 884 545
 1 -63 1669 -24 051 203 043 -1 000 397 2 649 175 -2 885 121
 1 -63 1669 -24 051 203 043 -1 000 365 2 648 407 -2 880 801
 1 -63 1669 -24 051 203 043 -1 000 365 2 648 471 -2 881 377
 1 -63 1669 -24 051 203 043 -1 000 365 2 648 535 -2 881 953
 1 -63 1669 -24 051 203 043 -1 000 333 2 647 895 -2 878 785
 1 -63 1669 -24 051 203 059 -1 000 829 2 652 871 -2 895 057
 1 -63 1669 -24 051 203 059 -1 000 829 2 652 935 -2 895 633
 1 -63 1669 -24 051 203 059 -1 000 797 2 652 231 -2 891 889
 1 -63 1669 -24 051 203 059 -1 000 797 2 652 295 -2 892 465
 1 -63 1669 -24 051 203 075 -1 001 261 2 656 695 -2 906 145
 1 -63 1669 -24 043 202 707 -995 245 2 614 823 -2 800 809
 1 -63 1669 -24 043 202 707 -995 213 2 614 183 -2 797 641
 1 -63 1669 -24 043 202 707 -995 213 2 614 247 -2 798 217
 1 -63 1669 -24 043 202 707 -995 181 2 613 671 -2 795 625
 - - - - - )
```

1	-63	1669	-24 043	202 723	-995 709	2 619 287	-2 815 065
1	-63	1669	-24 043	202 723	-995 677	2 618 647	-2 811 897
1	-63	1669	-24 043	202 723	-995 677	2 618 711	-2 812 473
1	-63	1669	-24 043	202 723	-995 645	2 618 007	-2 808 729
1	-63	1669	-24 043	202 723	-995 645	2 618 071	-2 809 305
1	-63	1669	-24 043	202 723	-995 645	2 618 135	-2 809 881
1	-63	1669	-24 043	202 723	-995 613	2 617 495	-2 806 713
1	-63	1669	-24 043	202 739	-996 141	2 623 111	-2 826 153
1	-63	1669	-24 043	202 739	-996 141	2 623 175	-2 826 729
1	-63	1669	-24 043	202 739	-996 109	2 622 471	-2 822 985
1	-63	1669	-24 043	202 739	-996 109	2 622 535	-2 823 561
1	-63	1669	-24 043	202 739	-996 109	2 622 599	-2 824 137
1	-63	1669	-24 043	202 739	-996 077	2 621 831	-2 819 817
1	-63	1669	-24 043	202 739	-996 077	2 621 895	-2 820 393
1	-63	1669	-24 043	202 755	-996 573	2 626 935	-2 837 241
1	-63	1669	-24 043	202 755	-996 541	2 626 295	-2 834 073
1	-63	1669	-24 043	202 755	-996 509	2 625 655	-2 830 905
1	-63	1669	-24 035	202 403	-990 925	2 587 607	-2 736 657
1	-63	1669	-24 035	202 419	-991 389	2 592 071	-2 750 913
1	-63	1669	-24 035	202 419	-991 357	2 591 431	-2 747 745
1	-63	1669	-24 035	202 419	-991 357	2 591 495	-2 748 321
1	-63	1669	-24 035	202 435	-991 853	2 596 535	-2 765 169
1	-63	1669	-24 035	202 435	-991 821	2 595 895	-2 762 001
1	-63	1669	-24 035	202 435	-991 821	2 595 959	-2 762 577
1	-63	1669	-24 035	202 435	-991 789	2 595 255	-2 758 833
1	-63	1669	-24 035	202 451	-992 285	2 600 359	-2 776 257
1	-63	1669	-24 027	202 115	-987 069	2 564 855	-2 686 761
1	-63	1669	-24 027	202 131	-987 533	2 569 319	-2 701 017

Dimensions[A]

{76, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81 781, -1 179 315, 9 981 091, -49 479 853, 132 687 095, -147 943 249}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 667 c[5] -
 1 009 373 c[6] + 2 705 447 c[7] - 3 014 433 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24 067 c[4] + 203 667 c[5] - 1 009 341 c[6] + 2 704 871 c[7] - 3 011 841 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 683 c[5] - 1 009 805 c[6] +
 2 709 207 c[7] - 3 024 945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
 203 315 c[5] - 1 003 725 c[6] + 2 666 375 c[7] - 2 916 153 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 331 c[5] - 1 004 189 c[6] +
 2 670 711 c[7] - 2 929 257 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
 203 331 c[5] - 1 004 189 c[6] + 2 670 775 c[7] - 2 929 833 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 331 c[5] - 1 004 189 c[6] +
 2 670 839 c[7] - 2 930 409 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
 203 331 c[5] - 1 004 157 c[6] + 2 670 135 c[7] - 2 926 665 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 347 c[5] - 1 004 653 c[6] +
 2 674 983 c[7] - 2 941 785 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
 203 347 c[5] - 1 004 653 c[6] + 2 675 047 c[7] - 2 942 361 c[8],

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,653 c[6] + \\
& 2\,675\,111 c[7] - 2\,942\,937 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& 203\,347 c[5] - 1\,004\,653 c[6] + 2\,675\,175 c[7] - 2\,943\,513 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,621 c[6] + \\
& 2\,674\,471 c[7] - 2\,939\,769 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& 203\,347 c[5] - 1\,004\,621 c[6] + 2\,674\,535 c[7] - 2\,940\,345 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,117 c[6] + \\
& 2\,679\,447 c[7] - 2\,956\,041 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& 203\,363 c[5] - 1\,005\,085 c[6] + 2\,678\,807 c[7] - 2\,952\,873 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,085 c[6] + \\
& 2\,678\,871 c[7] - 2\,953\,449 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& 203\,363 c[5] - 1\,005\,085 c[6] + 2\,678\,935 c[7] - 2\,954\,025 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,379 c[5] - 1\,005\,517 c[6] + \\
& 2\,682\,631 c[7] - 2\,963\,961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,011 c[5] - 999\,469 c[6] + 2\,640\,247 c[7] - 2\,856\,609 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,469 c[6] + \\
& 2\,640\,311 c[7] - 2\,857\,185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,011 c[5] - 999\,437 c[6] + 2\,639\,735 c[7] - 2\,854\,593 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,965 c[6] + \\
& 2\,645\,223 c[7] - 2\,872\,881 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,965 c[6] + 2\,645\,287 c[7] - 2\,873\,457 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,965 c[6] + \\
& 2\,645\,351 c[7] - 2\,874\,033 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,933 c[6] + 2\,644\,583 c[7] - 2\,869\,713 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& 2\,644\,647 c[7] - 2\,870\,289 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,933 c[6] + 2\,644\,711 c[7] - 2\,870\,865 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& 2\,644\,775 c[7] - 2\,871\,441 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,901 c[6] + 2\,644\,071 c[7] - 2\,867\,697 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,901 c[6] + \\
& 2\,644\,135 c[7] - 2\,868\,273 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,901 c[6] + 2\,644\,199 c[7] - 2\,868\,849 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] + \\
& 2\,649\,047 c[7] - 2\,883\,969 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,397 c[6] + 2\,649\,111 c[7] - 2\,884\,545 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] + \\
& 2\,649\,175 c[7] - 2\,885\,121 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,365 c[6] + 2\,648\,407 c[7] - 2\,880\,801 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,365 c[6] + \\
& 2\,648\,471 c[7] - 2\,881\,377 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,365 c[6] + 2\,648\,535 c[7] - 2\,881\,953 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,333 c[6] + \\
& 2\,647\,895 c[7] - 2\,878\,785 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,829 c[6] + 2\,652\,871 c[7] - 2\,895\,057 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,829 c[6] + \\
& 2\,652\,935 c[7] - 2\,895\,633 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 203\,059\,c[5] - 1\,000\,797\,c[6] + 2\,652\,231\,c[7] - 2\,891\,889\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,797\,c[6] + \\
& 2\,652\,295\,c[7] - 2\,892\,465\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,261\,c[6] + 2\,656\,695\,c[7] - 2\,906\,145\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,245\,c[6] + \\
& 2\,614\,823\,c[7] - 2\,800\,809\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,183\,c[7] - 2\,797\,641\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,213\,c[6] + \\
& 2\,614\,247\,c[7] - 2\,798\,217\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,181\,c[6] + 2\,613\,671\,c[7] - 2\,795\,625\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] + \\
& 2\,619\,287\,c[7] - 2\,815\,065\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,647\,c[7] - 2\,811\,897\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,711\,c[7] - 2\,812\,473\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,007\,c[7] - 2\,808\,729\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] + \\
& 2\,618\,071\,c[7] - 2\,809\,305\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,135\,c[7] - 2\,809\,881\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,613\,c[6] + \\
& 2\,617\,495\,c[7] - 2\,806\,713\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,111\,c[7] - 2\,826\,153\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& 2\,623\,175\,c[7] - 2\,826\,729\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,471\,c[7] - 2\,822\,985\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& 2\,622\,535\,c[7] - 2\,823\,561\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,599\,c[7] - 2\,824\,137\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,077\,c[6] + \\
& 2\,621\,831\,c[7] - 2\,819\,817\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,895\,c[7] - 2\,820\,393\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,935\,c[7] - 2\,837\,241\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,295\,c[7] - 2\,834\,073\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,509\,c[6] + \\
& 2\,625\,655\,c[7] - 2\,830\,905\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,925\,c[6] + 2\,587\,607\,c[7] - 2\,736\,657\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,071\,c[7] - 2\,750\,913\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,431\,c[7] - 2\,747\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,495\,c[7] - 2\,748\,321\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,535\,c[7] - 2\,765\,169\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,821\,c[6] + \\
& 2\,595\,895\,c[7] - 2\,762\,001\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,959\,c[7] - 2\,762\,577\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,789\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,595\,255\,c[7] - 2\,758\,833\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,285\,c[6] + 2\,600\,359\,c[7] - 2\,776\,257\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& 2\,564\,855\,c[7] - 2\,686\,761\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,533\,c[6] + 2\,569\,319\,c[7] - 2\,701\,017\,c[8] \}
\end{aligned}$$

Array[c, 8].g

$$\begin{aligned}
& 49\,c[1] - 3087\,c[2] + 81\,781\,c[3] - 1\,179\,315\,c[4] + \\
& 9\,981\,091\,c[5] - 49\,479\,853\,c[6] + 132\,687\,095\,c[7] - 147\,943\,249\,c[8]
\end{aligned}$$

cert =

$$\begin{aligned}
& \text{Flatten}[\text{Array}[c, 8] /. \text{FindInstance}[49\,c[1] - 3087\,c[2] + 81\,781\,c[3] - 1\,179\,315\,c[4] + \\
& \quad 9\,981\,091\,c[5] - 49\,479\,853\,c[6] + 132\,687\,095\,c[7] - 147\,943\,249\,c[8] < 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,667\,c[5] - 1\,009\,373\,c[6] + \\
& \quad 2\,705\,447\,c[7] - 3\,014\,433\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& \quad 203\,667\,c[5] - 1\,009\,341\,c[6] + 2\,704\,871\,c[7] - 3\,011\,841\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,683\,c[5] - 1\,009\,805\,c[6] + \\
& \quad 2\,709\,207\,c[7] - 3\,024\,945\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,315\,c[5] - 1\,003\,725\,c[6] + 2\,666\,375\,c[7] - 2\,916\,153\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,189\,c[6] + \\
& \quad 2\,670\,711\,c[7] - 2\,929\,257\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,331\,c[5] - 1\,004\,189\,c[6] + 2\,670\,775\,c[7] - 2\,929\,833\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,189\,c[6] + \\
& \quad 2\,670\,839\,c[7] - 2\,930\,409\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,331\,c[5] - 1\,004\,157\,c[6] + 2\,670\,135\,c[7] - 2\,926\,665\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,653\,c[6] + \\
& \quad 2\,674\,983\,c[7] - 2\,941\,785\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,347\,c[5] - 1\,004\,653\,c[6] + 2\,675\,047\,c[7] - 2\,942\,361\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,653\,c[6] + \\
& \quad 2\,675\,111\,c[7] - 2\,942\,937\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,347\,c[5] - 1\,004\,653\,c[6] + 2\,675\,175\,c[7] - 2\,943\,513\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,621\,c[6] + \\
& \quad 2\,674\,471\,c[7] - 2\,939\,769\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,347\,c[5] - 1\,004\,621\,c[6] + 2\,674\,535\,c[7] - 2\,940\,345\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,117\,c[6] + \\
& \quad 2\,679\,447\,c[7] - 2\,956\,041\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,363\,c[5] - 1\,005\,085\,c[6] + 2\,678\,807\,c[7] - 2\,952\,873\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,085\,c[6] + \\
& \quad 2\,678\,871\,c[7] - 2\,953\,449\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,363\,c[5] - 1\,005\,085\,c[6] + 2\,678\,935\,c[7] - 2\,954\,025\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,379\,c[5] - 1\,005\,517\,c[6] + \\
& \quad 2\,682\,631\,c[7] - 2\,963\,961\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,011\,c[5] - 999\,469\,c[6] + 2\,640\,247\,c[7] - 2\,856\,609\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,469\,c[6] + \\
& \quad 2\,640\,311\,c[7] - 2\,857\,185\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,011\,c[5] - 999\,437\,c[6] + 2\,639\,735\,c[7] - 2\,854\,593\,c[8] \geq 0 \&\& \\
& \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,965\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,645\,223\,c[7] - 2\,872\,881\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,965\,c[6] + 2\,645\,287\,c[7] - 2\,873\,457\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,965\,c[6] + \\
& 2\,645\,351\,c[7] - 2\,874\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,933\,c[6] + 2\,644\,583\,c[7] - 2\,869\,713\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,933\,c[6] + \\
& 2\,644\,647\,c[7] - 2\,870\,289\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,933\,c[6] + 2\,644\,711\,c[7] - 2\,870\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,933\,c[6] + \\
& 2\,644\,775\,c[7] - 2\,871\,441\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,901\,c[6] + 2\,644\,071\,c[7] - 2\,867\,697\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,901\,c[6] + \\
& 2\,644\,135\,c[7] - 2\,868\,273\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,901\,c[6] + 2\,644\,199\,c[7] - 2\,868\,849\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - \\
& 1\,000\,397\,c[6] + 2\,649\,047\,c[7] - 2\,883\,969\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,397\,c[6] + \\
& 2\,649\,111\,c[7] - 2\,884\,545\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,397\,c[6] + 2\,649\,175\,c[7] - 2\,885\,121\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,365\,c[6] + \\
& 2\,648\,407\,c[7] - 2\,880\,801\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,365\,c[6] + 2\,648\,471\,c[7] - 2\,881\,377\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,365\,c[6] + \\
& 2\,648\,535\,c[7] - 2\,881\,953\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,333\,c[6] + 2\,647\,895\,c[7] - 2\,878\,785\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,829\,c[6] + \\
& 2\,652\,871\,c[7] - 2\,895\,057\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,829\,c[6] + 2\,652\,935\,c[7] - 2\,895\,633\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,797\,c[6] + \\
& 2\,652\,231\,c[7] - 2\,891\,889\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,797\,c[6] + 2\,652\,295\,c[7] - 2\,892\,465\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,261\,c[6] + \\
& 2\,656\,695\,c[7] - 2\,906\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,245\,c[6] + 2\,614\,823\,c[7] - 2\,800\,809\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,213\,c[6] + \\
& 2\,614\,183\,c[7] - 2\,797\,641\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,247\,c[7] - 2\,798\,217\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& 2\,613\,671\,c[7] - 2\,795\,625\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,287\,c[7] - 2\,815\,065\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,647\,c[7] - 2\,811\,897\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,711\,c[7] - 2\,812\,473\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] + \\
& 2\,618\,007\,c[7] - 2\,808\,729\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,071\,c[7] - 2\,809\,305\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] +
\end{aligned}$$

```

2 618 135 c[7] - 2 809 881 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 723 c[5] - 995 613 c[6] + 2 617 495 c[7] - 2 806 713 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 141 c[6] +
2 623 111 c[7] - 2 826 153 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 739 c[5] - 996 141 c[6] + 2 623 175 c[7] - 2 826 729 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 109 c[6] +
2 622 471 c[7] - 2 822 985 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 739 c[5] - 996 109 c[6] + 2 622 535 c[7] - 2 823 561 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 109 c[6] +
2 622 599 c[7] - 2 824 137 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 739 c[5] - 996 077 c[6] + 2 621 831 c[7] - 2 819 817 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 077 c[6] +
2 621 895 c[7] - 2 820 393 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 755 c[5] - 996 573 c[6] + 2 626 935 c[7] - 2 837 241 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 755 c[5] - 996 541 c[6] +
2 626 295 c[7] - 2 834 073 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 755 c[5] - 996 509 c[6] + 2 625 655 c[7] - 2 830 905 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 403 c[5] - 990 925 c[6] +
2 587 607 c[7] - 2 736 657 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 419 c[5] - 991 389 c[6] + 2 592 071 c[7] - 2 750 913 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 419 c[5] - 991 357 c[6] +
2 591 431 c[7] - 2 747 745 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 419 c[5] - 991 357 c[6] + 2 591 495 c[7] - 2 748 321 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 435 c[5] - 991 853 c[6] +
2 596 535 c[7] - 2 765 169 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 435 c[5] - 991 821 c[6] + 2 595 895 c[7] - 2 762 001 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 435 c[5] - 991 821 c[6] +
2 595 959 c[7] - 2 762 577 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 435 c[5] - 991 789 c[6] + 2 595 255 c[7] - 2 758 833 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 285 c[6] +
2 600 359 c[7] - 2 776 257 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 069 c[6] + 2 564 855 c[7] - 2 686 761 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 533 c[6] +
2 569 319 c[7] - 2 701 017 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, 0, -60 315, -31 871, -8411}

GCD[0, 0, 0, 0, 0, -60 315, -31 871, -8411]
1

cert.g
-142 403 711

{0, 0, 0, 0, 0, -60 315, -31 871, -8411}.Reverse[gpart[listdim17[[97]]]]
-142 403 711

```


cert.Transpose[A]

```
{9 427 121, 4 053 425, 4 064 673, 87 398 633, 87 409 881, 90 214 873, 93 019 865, 82 036 185,
84 616 137, 87 421 129, 90 226 121, 93 031 113, 82 047 433, 84 852 425, 90 237 369,
82 058 681, 84 863 673, 87 668 665, 79 501 225, 162 598 897, 165 403 889, 160 030 193,
170 788 833, 173 593 825, 176 398 817, 162 610 145, 165 415 137, 168 220 129,
171 025 121, 160 041 441, 162 846 433, 165 651 425, 168 231 377, 171 036 369,
173 841 361, 160 052 689, 162 857 681, 165 662 673, 157 483 985, 165 673 921,
168 478 913, 157 495 233, 160 300 225, 163 116 465, 248 782 841, 240 604 153,
243 409 145, 238 035 449, 254 404 073, 246 225 385, 249 030 377, 238 046 697,
240 851 689, 243 656 681, 235 477 993, 251 846 617, 254 651 609, 243 667 929,
246 472 921, 249 277 913, 235 489 241, 238 294 233, 249 289 161, 241 110 473,
232 931 785, 316 040 705, 321 661 937, 313 483 249, 316 288 241, 327 283 169,
319 104 481, 321 909 473, 310 925 793, 324 725 713, 388 919 801, 394 541 033}
```

chi = listdim17[[98]]

$$(-13 + x) (-9 + x)^{10} (5 + x)^{32} (95 - 20x + x^2)^2 (68 - 17x + x^2)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```

{{354 445, -273 550, 84 751, -13 564, 1187, -54, 1},
 {355 965, -273 870, 84 767, -13 564, 1187, -54, 1},
 {344 565, -270 710, 84 487, -13 556, 1187, -54, 1},
 {346 437, -271 062, 84 503, -13 556, 1187, -54, 1},
 {346 085, -271 030, 84 503, -13 556, 1187, -54, 1},
 {348 309, -271 414, 84 519, -13 556, 1187, -54, 1},
 {347 893, -271 382, 84 519, -13 556, 1187, -54, 1},
 {347 957, -271 382, 84 519, -13 556, 1187, -54, 1},
 {347 605, -271 350, 84 519, -13 556, 1187, -54, 1},
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 {349 413, -271 702, 84 535, -13 556, 1187, -54, 1},
 {349 477, -271 702, 84 535, -13 556, 1187, -54, 1},
 {349 125, -271 670, 84 535, -13 556, 1187, -54, 1},
 {338 013, -268 542, 84 255, -13 548, 1187, -54, 1},
 {337 725, -268 510, 84 255, -13 548, 1187, -54, 1},
 {339 885, -268 894, 84 271, -13 548, 1187, -54, 1},
 {339 533, -268 862, 84 271, -13 548, 1187, -54, 1},
 {339 597, -268 862, 84 271, -13 548, 1187, -54, 1},
 {339 245, -268 830, 84 271, -13 548, 1187, -54, 1},
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 {341 405, -269 214, 84 287, -13 548, 1187, -54, 1},
 {341 469, -269 214, 84 287, -13 548, 1187, -54, 1},
 {341 053, -269 182, 84 287, -13 548, 1187, -54, 1},
 {341 117, -269 182, 84 287, -13 548, 1187, -54, 1},
 {340 765, -269 150, 84 287, -13 548, 1187, -54, 1},
 {342 989, -269 534, 84 303, -13 548, 1187, -54, 1},
 {343 053, -269 534, 84 303, -13 548, 1187, -54, 1},
 {342 637, -269 502, 84 303, -13 548, 1187, -54, 1},
 {331 461, -266 374, 84 023, -13 540, 1187, -54, 1},
 {331 173, -266 342, 84 023, -13 540, 1187, -54, 1},
 {330 885, -266 310, 84 023, -13 540, 1187, -54, 1},
 {333 333, -266 726, 84 039, -13 540, 1187, -54, 1},
 {333 045, -266 694, 84 039, -13 540, 1187, -54, 1},
 {332 693, -266 662, 84 039, -13 540, 1187, -54, 1},
 {332 757, -266 662, 84 039, -13 540, 1187, -54, 1},
 {332 405, -266 630, 84 039, -13 540, 1187, -54, 1},
 {334 629, -267 014, 84 055, -13 540, 1187, -54, 1},
 {334 277, -266 982, 84 055, -13 540, 1187, -54, 1},
 {333 925, -266 950, 84 055, -13 540, 1187, -54, 1},
 {336 213, -267 334, 84 071, -13 540, 1187, -54, 1},
 {323 037, -263 854, 83 775, -13 532, 1187, -54, 1},
 {324 621, -264 174, 83 791, -13 532, 1187, -54, 1},
 {324 333, -264 142, 83 791, -13 532, 1187, -54, 1},
 {324 045, -264 110, 83 791, -13 532, 1187, -54, 1},
 {325 917, -264 462, 83 807, -13 532, 1187, -54, 1},
 {325 565, -264 430, 83 807, -13 532, 1187, -54, 1},
 {317 205, -261 910, 83 559, -13 524, 1187, -54, 1}}

```

```

A = {{354 445, -273 550, 84 751, -13 564, 1187, -54, 1},
      {355 965, -273 870, 84 767, -13 564, 1187, -54, 1},
      {344 565, -270 710, 84 487, -13 556, 1187, -54, 1},
      {346 437, -271 062, 84 503, -13 556, 1187, -54, 1},
      {346 085, -271 030, 84 503, -13 556, 1187, -54, 1},
      {348 309, -271 414, 84 519, -13 556, 1187, -54, 1},
      {347 893, -271 382, 84 519, -13 556, 1187, -54, 1},
      {347 957, -271 382, 84 519, -13 556, 1187, -54, 1},
      {347 605, -271 350, 84 519, -13 556, 1187, -54, 1},
      {349 765, -271 734, 84 535, -13 556, 1187, -54, 1},
      {349 413, -271 702, 84 535, -13 556, 1187, -54, 1},
      {349 477, -271 702, 84 535, -13 556, 1187, -54, 1},
      {349 125, -271 670, 84 535, -13 556, 1187, -54, 1},
      {338 013, -268 542, 84 255, -13 548, 1187, -54, 1},
      {337 725, -268 510, 84 255, -13 548, 1187, -54, 1},
      {339 885, -268 894, 84 271, -13 548, 1187, -54, 1},
      {339 533, -268 862, 84 271, -13 548, 1187, -54, 1},
      {339 597, -268 862, 84 271, -13 548, 1187, -54, 1},
      {339 245, -268 830, 84 271, -13 548, 1187, -54, 1},
      {341 757, -269 246, 84 287, -13 548, 1187, -54, 1},
      {341 405, -269 214, 84 287, -13 548, 1187, -54, 1},
      {341 469, -269 214, 84 287, -13 548, 1187, -54, 1},
      {341 053, -269 182, 84 287, -13 548, 1187, -54, 1},
      {341 117, -269 182, 84 287, -13 548, 1187, -54, 1},
      {340 765, -269 150, 84 287, -13 548, 1187, -54, 1},
      {342 989, -269 534, 84 303, -13 548, 1187, -54, 1},
      {343 053, -269 534, 84 303, -13 548, 1187, -54, 1},
      {342 637, -269 502, 84 303, -13 548, 1187, -54, 1},
      {331 461, -266 374, 84 023, -13 540, 1187, -54, 1},
      {331 173, -266 342, 84 023, -13 540, 1187, -54, 1},
      {330 885, -266 310, 84 023, -13 540, 1187, -54, 1},
      {333 333, -266 726, 84 039, -13 540, 1187, -54, 1},
      {333 045, -266 694, 84 039, -13 540, 1187, -54, 1},
      {332 693, -266 662, 84 039, -13 540, 1187, -54, 1},
      {332 757, -266 662, 84 039, -13 540, 1187, -54, 1},
      {332 405, -266 630, 84 039, -13 540, 1187, -54, 1},
      {334 629, -267 014, 84 055, -13 540, 1187, -54, 1},
      {334 277, -266 982, 84 055, -13 540, 1187, -54, 1},
      {333 925, -266 950, 84 055, -13 540, 1187, -54, 1},
      {336 213, -267 334, 84 071, -13 540, 1187, -54, 1},
      {323 037, -263 854, 83 775, -13 532, 1187, -54, 1},
      {324 621, -264 174, 83 791, -13 532, 1187, -54, 1},
      {324 333, -264 142, 83 791, -13 532, 1187, -54, 1},
      {324 045, -264 110, 83 791, -13 532, 1187, -54, 1},
      {325 917, -264 462, 83 807, -13 532, 1187, -54, 1},
      {325 565, -264 430, 83 807, -13 532, 1187, -54, 1},
      {317 205, -261 910, 83 559, -13 524, 1187, -54, 1}};

```

A // MatrixForm

$$\begin{pmatrix} 354445 & -273550 & 84751 & -13564 & 1187 & -54 & 1 \\ 355965 & -273870 & 84767 & -13564 & 1187 & -54 & 1 \\ 344565 & -270710 & 84487 & -13556 & 1187 & -54 & 1 \\ 346437 & -271062 & 84503 & -13556 & 1187 & -54 & 1 \\ 346085 & -271030 & 84503 & -13556 & 1187 & -54 & 1 \\ 348309 & -271414 & 84519 & -13556 & 1187 & -54 & 1 \\ 347893 & -271382 & 84519 & -13556 & 1187 & -54 & 1 \\ 347957 & -271382 & 84519 & -13556 & 1187 & -54 & 1 \\ 347605 & -271350 & 84519 & -13556 & 1187 & -54 & 1 \\ 349765 & -271734 & 84535 & -13556 & 1187 & -54 & 1 \\ 349413 & -271702 & 84535 & -13556 & 1187 & -54 & 1 \\ 349477 & -271702 & 84535 & -13556 & 1187 & -54 & 1 \\ 349125 & -271670 & 84535 & -13556 & 1187 & -54 & 1 \\ 338013 & -268542 & 84255 & -13548 & 1187 & -54 & 1 \\ 337725 & -268510 & 84255 & -13548 & 1187 & -54 & 1 \\ 339885 & -268894 & 84271 & -13548 & 1187 & -54 & 1 \\ 339533 & -268862 & 84271 & -13548 & 1187 & -54 & 1 \\ 339597 & -268862 & 84271 & -13548 & 1187 & -54 & 1 \\ 339245 & -268830 & 84271 & -13548 & 1187 & -54 & 1 \\ 341757 & -269246 & 84287 & -13548 & 1187 & -54 & 1 \\ 341405 & -269214 & 84287 & -13548 & 1187 & -54 & 1 \\ 341469 & -269214 & 84287 & -13548 & 1187 & -54 & 1 \\ 341053 & -269182 & 84287 & -13548 & 1187 & -54 & 1 \\ 341117 & -269182 & 84287 & -13548 & 1187 & -54 & 1 \\ 340765 & -269150 & 84287 & -13548 & 1187 & -54 & 1 \\ 342989 & -269534 & 84303 & -13548 & 1187 & -54 & 1 \\ 343053 & -269534 & 84303 & -13548 & 1187 & -54 & 1 \\ 342637 & -269502 & 84303 & -13548 & 1187 & -54 & 1 \\ 331461 & -266374 & 84023 & -13540 & 1187 & -54 & 1 \\ 331173 & -266342 & 84023 & -13540 & 1187 & -54 & 1 \\ 330885 & -266310 & 84023 & -13540 & 1187 & -54 & 1 \\ 333333 & -266726 & 84039 & -13540 & 1187 & -54 & 1 \\ 333045 & -266694 & 84039 & -13540 & 1187 & -54 & 1 \\ 332693 & -266662 & 84039 & -13540 & 1187 & -54 & 1 \\ 332757 & -266662 & 84039 & -13540 & 1187 & -54 & 1 \\ 332405 & -266630 & 84039 & -13540 & 1187 & -54 & 1 \\ 334629 & -267014 & 84055 & -13540 & 1187 & -54 & 1 \\ 334277 & -266982 & 84055 & -13540 & 1187 & -54 & 1 \\ 333925 & -266950 & 84055 & -13540 & 1187 & -54 & 1 \\ 336213 & -267334 & 84071 & -13540 & 1187 & -54 & 1 \\ 323037 & -263854 & 83775 & -13532 & 1187 & -54 & 1 \\ 324621 & -264174 & 83791 & -13532 & 1187 & -54 & 1 \\ 324333 & -264142 & 83791 & -13532 & 1187 & -54 & 1 \\ 324045 & -264110 & 83791 & -13532 & 1187 & -54 & 1 \\ 325917 & -264462 & 83807 & -13532 & 1187 & -54 & 1 \\ 325565 & -264430 & 83807 & -13532 & 1187 & -54 & 1 \\ 317205 & -261910 & 83559 & -13524 & 1187 & -54 & 1 \end{pmatrix}$$

Dimensions[A]

{47, 7}

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{17 160 565, -13 324 630, 4 143 271, -664 276, 58 163, -2646, 49}

Array[c, 7].Transpose[A]
```

$\{ 354\,445\,c[1] - 273\,550\,c[2] + 84\,751\,c[3] - 13\,564\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $355\,965\,c[1] - 273\,870\,c[2] + 84\,767\,c[3] - 13\,564\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $344\,565\,c[1] - 270\,710\,c[2] + 84\,487\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $346\,437\,c[1] - 271\,062\,c[2] + 84\,503\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $346\,085\,c[1] - 271\,030\,c[2] + 84\,503\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $348\,309\,c[1] - 271\,414\,c[2] + 84\,519\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $347\,893\,c[1] - 271\,382\,c[2] + 84\,519\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $347\,957\,c[1] - 271\,382\,c[2] + 84\,519\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $347\,605\,c[1] - 271\,350\,c[2] + 84\,519\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $349\,765\,c[1] - 271\,734\,c[2] + 84\,535\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $349\,413\,c[1] - 271\,702\,c[2] + 84\,535\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $349\,477\,c[1] - 271\,702\,c[2] + 84\,535\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $349\,125\,c[1] - 271\,670\,c[2] + 84\,535\,c[3] - 13\,556\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $338\,013\,c[1] - 268\,542\,c[2] + 84\,255\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $337\,725\,c[1] - 268\,510\,c[2] + 84\,255\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $339\,885\,c[1] - 268\,894\,c[2] + 84\,271\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $339\,533\,c[1] - 268\,862\,c[2] + 84\,271\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $339\,597\,c[1] - 268\,862\,c[2] + 84\,271\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $339\,245\,c[1] - 268\,830\,c[2] + 84\,271\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $341\,757\,c[1] - 269\,246\,c[2] + 84\,287\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $341\,405\,c[1] - 269\,214\,c[2] + 84\,287\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
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 $341\,053\,c[1] - 269\,182\,c[2] + 84\,287\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $341\,117\,c[1] - 269\,182\,c[2] + 84\,287\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $340\,765\,c[1] - 269\,150\,c[2] + 84\,287\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $342\,989\,c[1] - 269\,534\,c[2] + 84\,303\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $343\,053\,c[1] - 269\,534\,c[2] + 84\,303\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $342\,637\,c[1] - 269\,502\,c[2] + 84\,303\,c[3] - 13\,548\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $331\,461\,c[1] - 266\,374\,c[2] + 84\,023\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $331\,173\,c[1] - 266\,342\,c[2] + 84\,023\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $330\,885\,c[1] - 266\,310\,c[2] + 84\,023\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $333\,333\,c[1] - 266\,726\,c[2] + 84\,039\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $333\,045\,c[1] - 266\,694\,c[2] + 84\,039\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $332\,693\,c[1] - 266\,662\,c[2] + 84\,039\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $332\,757\,c[1] - 266\,662\,c[2] + 84\,039\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $332\,405\,c[1] - 266\,630\,c[2] + 84\,039\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $334\,629\,c[1] - 267\,014\,c[2] + 84\,055\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $334\,277\,c[1] - 266\,982\,c[2] + 84\,055\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $333\,925\,c[1] - 266\,950\,c[2] + 84\,055\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $336\,213\,c[1] - 267\,334\,c[2] + 84\,071\,c[3] - 13\,540\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $323\,037\,c[1] - 263\,854\,c[2] + 83\,775\,c[3] - 13\,532\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $324\,621\,c[1] - 264\,174\,c[2] + 83\,791\,c[3] - 13\,532\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $324\,333\,c[1] - 264\,142\,c[2] + 83\,791\,c[3] - 13\,532\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $324\,045\,c[1] - 264\,110\,c[2] + 83\,791\,c[3] - 13\,532\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $325\,917\,c[1] - 264\,462\,c[2] + 83\,807\,c[3] - 13\,532\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $325\,565\,c[1] - 264\,430\,c[2] + 83\,807\,c[3] - 13\,532\,c[4] + 1187\,c[5] - 54\,c[6] + c[7],$
 $317\,205\,c[1] - 261\,910\,c[2] + 83\,559\,c[3] - 13\,524\,c[4] + 1187\,c[5] - 54\,c[6] + c[7] \}$

Array[c, 7].g

17 160 565 c[1] - 13 324 630 c[2] + 4 143 271 c[3] -
664 276 c[4] + 58 163 c[5] - 2646 c[6] + 49 c[7]

cert =

Flatten[Array[c, 7] /. FindInstance[17 160 565 c[1] - 13 324 630 c[2] + 4 143 271 c[3] -
664 276 c[4] + 58 163 c[5] - 2646 c[6] + 49 c[7] < 0 &&
354 445 c[1] - 273 550 c[2] + 84 751 c[3] - 13 564 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 355 965 c[1] - 273 870 c[2] + 84 767 c[3] - 13 564 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 344 565 c[1] - 270 710 c[2] +
84 487 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
346 437 c[1] - 271 062 c[2] + 84 503 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 346 085 c[1] - 271 030 c[2] + 84 503 c[3] - 13 556 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 348 309 c[1] - 271 414 c[2] +
84 519 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
347 893 c[1] - 271 382 c[2] + 84 519 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 347 957 c[1] - 271 382 c[2] + 84 519 c[3] - 13 556 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 347 605 c[1] - 271 350 c[2] +
84 519 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
349 765 c[1] - 271 734 c[2] + 84 535 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 349 413 c[1] - 271 702 c[2] + 84 535 c[3] - 13 556 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 349 477 c[1] - 271 702 c[2] +
84 535 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
349 125 c[1] - 271 670 c[2] + 84 535 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 338 013 c[1] - 268 542 c[2] + 84 255 c[3] - 13 548 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 337 725 c[1] - 268 510 c[2] +
84 255 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
339 885 c[1] - 268 894 c[2] + 84 271 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 339 533 c[1] - 268 862 c[2] + 84 271 c[3] - 13 548 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 339 597 c[1] - 268 862 c[2] +
84 271 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
339 245 c[1] - 268 830 c[2] + 84 271 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 341 757 c[1] - 269 246 c[2] + 84 287 c[3] - 13 548 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 341 405 c[1] - 269 214 c[2] +
84 287 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
341 469 c[1] - 269 214 c[2] + 84 287 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 341 053 c[1] - 269 182 c[2] + 84 287 c[3] - 13 548 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 341 117 c[1] - 269 182 c[2] +
84 287 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
340 765 c[1] - 269 150 c[2] + 84 287 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 342 989 c[1] - 269 534 c[2] + 84 303 c[3] - 13 548 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 343 053 c[1] - 269 534 c[2] +
84 303 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
342 637 c[1] - 269 502 c[2] + 84 303 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 331 461 c[1] - 266 374 c[2] + 84 023 c[3] - 13 540 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 331 173 c[1] - 266 342 c[2] +
84 023 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&

```

330 885 c[1] - 266 310 c[2] + 84 023 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 333 333 c[1] - 266 726 c[2] + 84 039 c[3] - 13 540 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 333 045 c[1] - 266 694 c[2] +
84 039 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
332 693 c[1] - 266 662 c[2] + 84 039 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 332 757 c[1] - 266 662 c[2] + 84 039 c[3] - 13 540 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 332 405 c[1] - 266 630 c[2] +
84 039 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
334 629 c[1] - 267 014 c[2] + 84 055 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 334 277 c[1] - 266 982 c[2] + 84 055 c[3] - 13 540 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 333 925 c[1] - 266 950 c[2] +
84 055 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
336 213 c[1] - 267 334 c[2] + 84 071 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 323 037 c[1] - 263 854 c[2] + 83 775 c[3] - 13 532 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 324 621 c[1] - 264 174 c[2] +
83 791 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
324 333 c[1] - 264 142 c[2] + 83 791 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 324 045 c[1] - 264 110 c[2] + 83 791 c[3] - 13 532 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0 && 325 917 c[1] - 264 462 c[2] +
83 807 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
325 565 c[1] - 264 430 c[2] + 83 807 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
0 && 317 205 c[1] - 261 910 c[2] + 83 559 c[3] - 13 524 c[4] +
1187 c[5] - 54 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{8888, 97 759, 768 048, 3 059 218, 0, 0, 0}

GCD[8888, 97 759, 768 048, 3 059 218, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 3 059 218, 768 048, 97 759, 8888}

cert.g
-13 493 610

{8888, 97 759, 768 048, 3 059 218, 0, 0, 0}.gpart[listdim17[[98]]]
-13 493 610

cert.Transpose[A]
{5 935 806, 451 454, 17 466 998, 11 982 934, 11 982 646, 6 498 870, 5 929 750, 6 498 582,
6 498 294, 445 686, 445 398, 1 014 230, 1 013 942, 17 460 942, 18 029 486, 11 976 878,
11 976 590, 12 545 422, 12 545 134, 6 492 814, 6 492 526, 7 061 358, 6 492 238, 7 061 070,
7 060 782, 1 577 006, 2 145 838, 1 576 718, 17 454 886, 18 023 430, 18 591 974, 11 970 822,
12 539 366, 12 539 078, 13 107 910, 13 107 622, 7 623 846, 7 623 558, 7 623 270, 2 708 326,
22 932 894, 18 017 374, 18 585 918, 19 154 462, 13 670 398, 13 670 110, 19 716 950}

```



```
chi = listdim17[[99]]
```

$$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (59 - 16x + x^2) (-1104 + 331x - 32x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -63, 1669, -24067, 203603, -1007709, 2691367, -2975841},
      {1, -63, 1669, -24067, 203619, -1008237, 2697111, -2996433},
      {1, -63, 1669, -24067, 203619, -1008205, 2696471, -2993265},
      {1, -63, 1669, -24067, 203619, -1008173, 2695767, -2989393},
      {1, -63, 1669, -24067, 203619, -1008141, 2695127, -2986225},
      {1, -63, 1669, -24067, 203635, -1008669, 2700871, -3006817},
      {1, -63, 1669, -24067, 203635, -1008637, 2700231, -3003649},
      {1, -63, 1669, -24067, 203651, -1009101, 2704631, -3017201},
      {1, -63, 1669, -24067, 203667, -1009533, 2708391, -3027585},
      {1, -63, 1669, -24059, 203267, -1002461, 2655223, -2883177},
      {1, -63, 1669, -24059, 203283, -1002957, 2660327, -2900601},
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      {1, -63, 1669, -24059, 203299, -1003421, 2664791, -2914857},
      {1, -63, 1669, -24059, 203299, -1003389, 2664087, -2910985},
      {1, -63, 1669, -24059, 203299, -1003389, 2664151, -2911689},
      {1, -63, 1669, -24059, 203315, -1003917, 2669895, -2932281},
      {1, -63, 1669, -24059, 203315, -1003885, 2669255, -2929113},
      {1, -63, 1669, -24059, 203315, -1003853, 2668551, -2925241},
      {1, -63, 1669, -24059, 203331, -1004413, 2674999, -2949705},
      {1, -63, 1669, -24059, 203331, -1004381, 2674359, -2946537},
      {1, -63, 1669, -24059, 203331, -1004349, 2673655, -2942665},
      {1, -63, 1669, -24059, 203347, -1004845, 2678759, -2960089},
      {1, -63, 1669, -24059, 203347, -1004781, 2677415, -2953049},
      {1, -63, 1669, -24059, 203363, -1005277, 2682519, -2970473},
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      {1, -63, 1669, -24051, 202979, -998605, 2632471, -2833281},
      {1, -63, 1669, -24051, 202995, -999133, 2638215, -2853873},
      {1, -63, 1669, -24051, 202995, -999101, 2637575, -2850705},
      {1, -63, 1669, -24051, 203011, -999597, 2642679, -2868129},
      {1, -63, 1669, -24051, 203011, -999565, 2641975, -2864257},
      {1, -63, 1669, -24051, 203027, -1000093, 2647783, -2885553},
      {1, -63, 1669, -24051, 203027, -1000029, 2646439, -2878513},
      {1, -63, 1669, -24051, 203043, -1000589, 2652887, -2902977},
      {1, -63, 1669, -24051, 203043, -1000557, 2652247, -2899809},
      {1, -63, 1669, -24051, 203043, -1000525, 2651543, -2895937},
      {1, -63, 1669, -24051, 203059, -1001021, 2656647, -2913361},
      {1, -63, 1669, -24043, 202675, -994317, 2605895, -2772297},
```

```
{1, -63, 1669, -24 043, 202 691, -994 813, 2 610 999, -2 789 721},
{1, -63, 1669, -24 043, 202 707, -995 309, 2 616 103, -2 807 145},
{1, -63, 1669, -24 043, 202 707, -995 277, 2 615 463, -2 803 977},
{1, -63, 1669, -24 043, 202 707, -995 245, 2 614 759, -2 800 105},
{1, -63, 1669, -24 043, 202 723, -995 773, 2 620 567, -2 821 401},
{1, -63, 1669, -24 043, 202 723, -995 741, 2 619 863, -2 817 529},
{1, -63, 1669, -24 043, 202 739, -996 269, 2 625 671, -2 838 825},
{1, -63, 1669, -24 043, 202 755, -996 765, 2 630 775, -2 856 249},
{1, -63, 1669, -24 043, 202 771, -997 197, 2 634 535, -2 866 633},
{1, -63, 1669, -24 035, 202 371, -990 029, 2 579 319, -2 711 313},
{1, -63, 1669, -24 035, 202 387, -990 493, 2 583 783, -2 725 569},
{1, -63, 1669, -24 035, 202 403, -990 989, 2 588 887, -2 742 993},
{1, -63, 1669, -24 035, 202 419, -991 485, 2 593 991, -2 760 417},
{1, -63, 1669, -24 035, 202 467, -992 941, 2 608 663, -2 809 521},
{1, -63, 1669, -24 027, 202 067, -985 709, 2 552 103, -2 647 161},
{1, -63, 1669, -24 027, 202 083, -986 205, 2 557 207, -2 664 585},
{1, -63, 1669, -24 027, 202 131, -987 661, 2 571 879, -2 713 689},
{1, -63, 1669, -24 019, 201 763, -981 421, 2 525 527, -2 586 177},
{1, -63, 1669, -24 019, 201 795, -982 381, 2 535 095, -2 617 857},
{1, -63, 1669, -24 011, 201 459, -977 101, 2 498 311, -2 522 025},
{1, -63, 1669, -24 011, 201 475, -977 597, 2 503 415, -2 539 449}};
```

```
A // MatrixForm
```

```
1 -63 1669 -24 067 203 603 -1 007 709 2 691 367 -2 975 841
1 -63 1669 -24 067 203 619 -1 008 237 2 697 111 -2 996 433
1 -63 1669 -24 067 203 619 -1 008 205 2 696 471 -2 993 265
1 -63 1669 -24 067 203 619 -1 008 173 2 695 767 -2 989 393
1 -63 1669 -24 067 203 619 -1 008 141 2 695 127 -2 986 225
1 -63 1669 -24 067 203 635 -1 008 669 2 700 871 -3 006 817
1 -63 1669 -24 067 203 635 -1 008 637 2 700 231 -3 003 649
1 -63 1669 -24 067 203 651 -1 009 101 2 704 631 -3 017 201
1 -63 1669 -24 067 203 667 -1 009 533 2 708 391 -3 027 585
1 -63 1669 -24 059 203 267 -1 002 461 2 655 223 -2 883 177
1 -63 1669 -24 059 203 283 -1 002 957 2 660 327 -2 900 601
1 -63 1669 -24 059 203 283 -1 002 925 2 659 687 -2 897 433
1 -63 1669 -24 059 203 299 -1 003 421 2 664 791 -2 914 857
1 -63 1669 -24 059 203 299 -1 003 389 2 664 087 -2 910 985
1 -63 1669 -24 059 203 299 -1 003 389 2 664 151 -2 911 689
1 -63 1669 -24 059 203 315 -1 003 917 2 669 895 -2 932 281
1 -63 1669 -24 059 203 315 -1 003 885 2 669 255 -2 929 113
1 -63 1669 -24 059 203 315 -1 003 853 2 668 551 -2 925 241
1 -63 1669 -24 059 203 331 -1 004 413 2 674 999 -2 949 705
1 -63 1669 -24 059 203 331 -1 004 381 2 674 359 -2 946 537
1 -63 1669 -24 059 203 331 -1 004 349 2 673 655 -2 942 665
1 -63 1669 -24 059 203 347 -1 004 845 2 678 759 -2 960 089
1 -63 1669 -24 059 203 347 -1 004 781 2 677 415 -2 953 049
1 -63 1669 -24 059 203 363 -1 005 277 2 682 519 -2 970 473
1 -63 1669 -24 051 202 979 -998 637 2 633 111 -2 836 449
1 -63 1669 -24 051 202 979 -998 605 2 632 471 -2 833 281
1 -63 1669 -24 051 202 995 -999 133 2 638 215 -2 853 873
1 -63 1669 -24 051 202 995 -999 101 2 637 575 -2 850 705
1 -63 1669 -24 051 203 011 -999 597 2 642 679 -2 868 129
```

```

1 -63 1669 -24 051 203 011 -999 565 2 641 975 -2 864 257
1 -63 1669 -24 051 203 027 -1 000 093 2 647 783 -2 885 553
1 -63 1669 -24 051 203 027 -1 000 029 2 646 439 -2 878 513
1 -63 1669 -24 051 203 043 -1 000 589 2 652 887 -2 902 977
1 -63 1669 -24 051 203 043 -1 000 557 2 652 247 -2 899 809
1 -63 1669 -24 051 203 043 -1 000 525 2 651 543 -2 895 937
1 -63 1669 -24 051 203 059 -1 001 021 2 656 647 -2 913 361
1 -63 1669 -24 043 202 675 -994 317 2 605 895 -2 772 297
1 -63 1669 -24 043 202 691 -994 813 2 610 999 -2 789 721
1 -63 1669 -24 043 202 707 -995 309 2 616 103 -2 807 145
1 -63 1669 -24 043 202 707 -995 277 2 615 463 -2 803 977
1 -63 1669 -24 043 202 707 -995 245 2 614 759 -2 800 105
1 -63 1669 -24 043 202 723 -995 773 2 620 567 -2 821 401
1 -63 1669 -24 043 202 723 -995 741 2 619 863 -2 817 529
1 -63 1669 -24 043 202 739 -996 269 2 625 671 -2 838 825
1 -63 1669 -24 043 202 755 -996 765 2 630 775 -2 856 249
1 -63 1669 -24 043 202 771 -997 197 2 634 535 -2 866 633
1 -63 1669 -24 035 202 371 -990 029 2 579 319 -2 711 313
1 -63 1669 -24 035 202 387 -990 493 2 583 783 -2 725 569
1 -63 1669 -24 035 202 403 -990 989 2 588 887 -2 742 993
1 -63 1669 -24 035 202 419 -991 485 2 593 991 -2 760 417
1 -63 1669 -24 035 202 467 -992 941 2 608 663 -2 809 521
1 -63 1669 -24 027 202 067 -985 709 2 552 103 -2 647 161
1 -63 1669 -24 027 202 083 -986 205 2 557 207 -2 664 585
1 -63 1669 -24 027 202 131 -987 661 2 571 879 -2 713 689
1 -63 1669 -24 019 201 763 -981 421 2 525 527 -2 586 177
1 -63 1669 -24 019 201 795 -982 381 2 535 095 -2 617 857
1 -63 1669 -24 011 201 459 -977 101 2 498 311 -2 522 025
1 -63 1669 -24 011 201 475 -977 597 2 503 415 -2 539 449

```

Dimensions[A]

{58, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81 781, -1 179 131, 9 972 739, -49 352 541, 131 897 879, -146 253 273}

Array[c, 8].Transpose[A]

```

{c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 603 c[5] -
  1 007 709 c[6] + 2 691 367 c[7] - 2 975 841 c[8], c[1] - 63 c[2] + 1669 c[3] -
  24 067 c[4] + 203 619 c[5] - 1 008 237 c[6] + 2 697 111 c[7] - 2 996 433 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 619 c[5] - 1 008 205 c[6] +
  2 696 471 c[7] - 2 993 265 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 619 c[5] - 1 008 173 c[6] + 2 695 767 c[7] - 2 989 393 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 619 c[5] - 1 008 141 c[6] +
  2 695 127 c[7] - 2 986 225 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 635 c[5] - 1 008 669 c[6] + 2 700 871 c[7] - 3 006 817 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 635 c[5] - 1 008 637 c[6] +
  2 700 231 c[7] - 3 003 649 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 651 c[5] - 1 009 101 c[6] + 2 704 631 c[7] - 3 017 201 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 667 c[5] - 1 009 533 c[6] +
  2 708 391 c[7] - 3 027 585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +

```

$$\begin{aligned}
& 203\,267\,c[5] - 1\,002\,461\,c[6] + 2\,655\,223\,c[7] - 2\,883\,177\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,957\,c[6] + \\
& 2\,660\,327\,c[7] - 2\,900\,601\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,925\,c[6] + 2\,659\,687\,c[7] - 2\,897\,433\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,421\,c[6] + \\
& 2\,664\,791\,c[7] - 2\,914\,857\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,389\,c[6] + 2\,664\,087\,c[7] - 2\,910\,985\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,389\,c[6] + \\
& 2\,664\,151\,c[7] - 2\,911\,689\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,917\,c[6] + 2\,669\,895\,c[7] - 2\,932\,281\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,885\,c[6] + \\
& 2\,669\,255\,c[7] - 2\,929\,113\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,853\,c[6] + 2\,668\,551\,c[7] - 2\,925\,241\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,413\,c[6] + \\
& 2\,674\,999\,c[7] - 2\,949\,705\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,381\,c[6] + 2\,674\,359\,c[7] - 2\,946\,537\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,349\,c[6] + \\
& 2\,673\,655\,c[7] - 2\,942\,665\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,845\,c[6] + 2\,678\,759\,c[7] - 2\,960\,089\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,781\,c[6] + \\
& 2\,677\,415\,c[7] - 2\,953\,049\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,277\,c[6] + 2\,682\,519\,c[7] - 2\,970\,473\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,637\,c[6] + \\
& 2\,633\,111\,c[7] - 2\,836\,449\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,605\,c[6] + 2\,632\,471\,c[7] - 2\,833\,281\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,133\,c[6] + \\
& 2\,638\,215\,c[7] - 2\,853\,873\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,101\,c[6] + 2\,637\,575\,c[7] - 2\,850\,705\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,597\,c[6] + \\
& 2\,642\,679\,c[7] - 2\,868\,129\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,565\,c[6] + 2\,641\,975\,c[7] - 2\,864\,257\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 1\,000\,093\,c[6] + \\
& 2\,647\,783\,c[7] - 2\,885\,553\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 1\,000\,029\,c[6] + 2\,646\,439\,c[7] - 2\,878\,513\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,589\,c[6] + \\
& 2\,652\,887\,c[7] - 2\,902\,977\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,557\,c[6] + 2\,652\,247\,c[7] - 2\,899\,809\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,525\,c[6] + \\
& 2\,651\,543\,c[7] - 2\,895\,937\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,001\,021\,c[6] + 2\,656\,647\,c[7] - 2\,913\,361\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,675\,c[5] - 994\,317\,c[6] + \\
& 2\,605\,895\,c[7] - 2\,772\,297\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,813\,c[6] + 2\,610\,999\,c[7] - 2\,789\,721\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,309\,c[6] + \\
& 2\,616\,103\,c[7] - 2\,807\,145\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,277\,c[6] + 2\,615\,463\,c[7] - 2\,803\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,245\,c[6] +
\end{aligned}$$

```

2 614 759 c[7] - 2 800 105 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 723 c[5] - 995 773 c[6] + 2 620 567 c[7] - 2 821 401 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 723 c[5] - 995 741 c[6] +
2 619 863 c[7] - 2 817 529 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 739 c[5] - 996 269 c[6] + 2 625 671 c[7] - 2 838 825 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 755 c[5] - 996 765 c[6] +
2 630 775 c[7] - 2 856 249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 771 c[5] - 997 197 c[6] + 2 634 535 c[7] - 2 866 633 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 371 c[5] - 990 029 c[6] +
2 579 319 c[7] - 2 711 313 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 387 c[5] - 990 493 c[6] + 2 583 783 c[7] - 2 725 569 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 403 c[5] - 990 989 c[6] +
2 588 887 c[7] - 2 742 993 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 419 c[5] - 991 485 c[6] + 2 593 991 c[7] - 2 760 417 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 941 c[6] +
2 608 663 c[7] - 2 809 521 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 067 c[5] - 985 709 c[6] + 2 552 103 c[7] - 2 647 161 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 205 c[6] +
2 557 207 c[7] - 2 664 585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 131 c[5] - 987 661 c[6] + 2 571 879 c[7] - 2 713 689 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 763 c[5] - 981 421 c[6] +
2 525 527 c[7] - 2 586 177 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 795 c[5] - 982 381 c[6] + 2 535 095 c[7] - 2 617 857 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 101 c[6] +
2 498 311 c[7] - 2 522 025 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 475 c[5] - 977 597 c[6] + 2 503 415 c[7] - 2 539 449 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
9 972 739 c[5] - 49 352 541 c[6] + 131 897 879 c[7] - 146 253 273 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
9 972 739 c[5] - 49 352 541 c[6] + 131 897 879 c[7] - 146 253 273 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 603 c[5] - 1 007 709 c[6] +
2 691 367 c[7] - 2 975 841 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 619 c[5] - 1 008 237 c[6] + 2 697 111 c[7] - 2 996 433 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 619 c[5] - 1 008 205 c[6] +
2 696 471 c[7] - 2 993 265 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 619 c[5] - 1 008 173 c[6] + 2 695 767 c[7] - 2 989 393 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 619 c[5] - 1 008 141 c[6] +
2 695 127 c[7] - 2 986 225 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 635 c[5] - 1 008 669 c[6] + 2 700 871 c[7] - 3 006 817 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 635 c[5] - 1 008 637 c[6] +
2 700 231 c[7] - 3 003 649 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 651 c[5] - 1 009 101 c[6] + 2 704 631 c[7] - 3 017 201 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 667 c[5] - 1 009 533 c[6] +

```

$$\begin{aligned}
& 2\,708\,391\,c[7] - 3\,027\,585\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,267\,c[5] - 1\,002\,461\,c[6] + 2\,655\,223\,c[7] - 2\,883\,177\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,283\,c[5] - 1\,002\,957\,c[6] + \\
& 2\,660\,327\,c[7] - 2\,900\,601\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,283\,c[5] - 1\,002\,925\,c[6] + 2\,659\,687\,c[7] - 2\,897\,433\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,421\,c[6] + \\
& 2\,664\,791\,c[7] - 2\,914\,857\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,299\,c[5] - 1\,003\,389\,c[6] + 2\,664\,087\,c[7] - 2\,910\,985\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,299\,c[5] - 1\,003\,389\,c[6] + \\
& 2\,664\,151\,c[7] - 2\,911\,689\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,917\,c[6] + 2\,669\,895\,c[7] - 2\,932\,281\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,885\,c[6] + \\
& 2\,669\,255\,c[7] - 2\,929\,113\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,315\,c[5] - 1\,003\,853\,c[6] + 2\,668\,551\,c[7] - 2\,925\,241\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,413\,c[6] + \\
& 2\,674\,999\,c[7] - 2\,949\,705\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,381\,c[6] + 2\,674\,359\,c[7] - 2\,946\,537\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - \\
& 1\,004\,349\,c[6] + 2\,673\,655\,c[7] - 2\,942\,665\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,845\,c[6] + \\
& 2\,678\,759\,c[7] - 2\,960\,089\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,781\,c[6] + 2\,677\,415\,c[7] - 2\,953\,049\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,277\,c[6] + \\
& 2\,682\,519\,c[7] - 2\,970\,473\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,637\,c[6] + 2\,633\,111\,c[7] - 2\,836\,449\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,605\,c[6] + \\
& 2\,632\,471\,c[7] - 2\,833\,281\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,133\,c[6] + 2\,638\,215\,c[7] - 2\,853\,873\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,101\,c[6] + \\
& 2\,637\,575\,c[7] - 2\,850\,705\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,597\,c[6] + 2\,642\,679\,c[7] - 2\,868\,129\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,565\,c[6] + \\
& 2\,641\,975\,c[7] - 2\,864\,257\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 1\,000\,093\,c[6] + 2\,647\,783\,c[7] - 2\,885\,553\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 1\,000\,029\,c[6] + \\
& 2\,646\,439\,c[7] - 2\,878\,513\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,589\,c[6] + 2\,652\,887\,c[7] - 2\,902\,977\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,557\,c[6] + \\
& 2\,652\,247\,c[7] - 2\,899\,809\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,525\,c[6] + 2\,651\,543\,c[7] - 2\,895\,937\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,001\,021\,c[6] + \\
& 2\,656\,647\,c[7] - 2\,913\,361\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,675\,c[5] - 994\,317\,c[6] + 2\,605\,895\,c[7] - 2\,772\,297\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,813\,c[6] + \\
& 2\,610\,999\,c[7] - 2\,789\,721\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,309\,c[6] + 2\,616\,103\,c[7] - 2\,807\,145\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,277\,c[6] +
\end{aligned}$$

```

2 615 463 c[7] - 2 803 977 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 707 c[5] - 995 245 c[6] + 2 614 759 c[7] - 2 800 105 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 723 c[5] - 995 773 c[6] +
2 620 567 c[7] - 2 821 401 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 723 c[5] - 995 741 c[6] + 2 619 863 c[7] - 2 817 529 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 269 c[6] +
2 625 671 c[7] - 2 838 825 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 755 c[5] - 996 765 c[6] + 2 630 775 c[7] - 2 856 249 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 771 c[5] - 997 197 c[6] +
2 634 535 c[7] - 2 866 633 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 371 c[5] - 990 029 c[6] + 2 579 319 c[7] - 2 711 313 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 387 c[5] - 990 493 c[6] +
2 583 783 c[7] - 2 725 569 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 403 c[5] - 990 989 c[6] + 2 588 887 c[7] - 2 742 993 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 419 c[5] - 991 485 c[6] +
2 593 991 c[7] - 2 760 417 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 467 c[5] - 992 941 c[6] + 2 608 663 c[7] - 2 809 521 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 067 c[5] - 985 709 c[6] +
2 552 103 c[7] - 2 647 161 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 083 c[5] - 986 205 c[6] + 2 557 207 c[7] - 2 664 585 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 661 c[6] +
2 571 879 c[7] - 2 713 689 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 763 c[5] - 981 421 c[6] + 2 525 527 c[7] - 2 586 177 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 381 c[6] +
2 535 095 c[7] - 2 617 857 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 459 c[5] - 977 101 c[6] + 2 498 311 c[7] - 2 522 025 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 597 c[6] +
2 503 415 c[7] - 2 539 449 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -314 129 288, -78 844 475, -12 081 240, -1 578 458, -190 430}

GCD[0, 0, 0, -314 129 288, -78 844 475, -12 081 240, -1 578 458, -190 430]
1

cert.g
-148 360 649

{0, 0, 0, -314 129 288, -78 844 475, -12 081 240, -1 578 458, -190 430}.
Reverse[gpart[listdim17[[99]]]]
-148 360 649

```

```
cert.Transpose[A]
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 11485607, 3871735, 13944775, 34275975, 6330903, 26662103, 19048231,
 6338023, 11434359, 19055351, 3820487, 24151687, 11441479, 3827607,
 21521639, 13907767, 6293895, 26625095, 13914887, 19011223, 6301015,
 11397351, 3783479, 3790599, 8767303, 21484631, 13870759, 6256887,
 3746471, 16344167, 8730295, 6219879, 3589831, 8693287, 11166695, 3552823}
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```
chi = listdim17[[100]]
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```
 $(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-65104 + 37193x - 8288x^2 + 902x^3 - 48x^4 + x^5)$ 
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```
CoefficientList[feasibleinterlacingpolylist[chi], x]
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A // MatrixForm

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1 -63 1669 -24 067 203 619 -1 008 173 2 695 831 -2 990 097
1 -63 1669 -24 067 203 619 -1 008 141 2 695 191 -2 986 929
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1 -63 1669 -24 067 203 635 -1 008 637 2 700 295 -3 004 353
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1 -63 1669 -24 067 203 635 -1 008 573 2 699 015 -2 998 017
1 -63 1669 -24 067 203 651 -1 009 069 2 704 119 -3 015 441
1 -63 1669 -24 067 203 651 -1 009 037 2 703 479 -3 012 273
1 -63 1669 -24 059 203 283 -1 002 957 2 660 327 -2 900 601
1 -63 1669 -24 059 203 283 -1 002 925 2 659 687 -2 897 433
1 -63 1669 -24 059 203 299 -1 003 453 2 665 431 -2 918 025
1 -63 1669 -24 059 203 299 -1 003 421 2 664 791 -2 914 857
1 -63 1669 -24 059 203 299 -1 003 399 2 664 151 -2 911 689

```

1	-63	1669	-24 059	203 299	1 003 357	2 663 511	-2 908 521
1	-63	1669	-24 059	203 315	-1 003 917	2 669 895	-2 932 281
1	-63	1669	-24 059	203 315	-1 003 885	2 669 255	-2 929 113
1	-63	1669	-24 059	203 315	-1 003 853	2 668 615	-2 925 945
1	-63	1669	-24 059	203 315	-1 003 821	2 667 975	-2 922 777
1	-63	1669	-24 059	203 331	-1 004 413	2 674 999	-2 949 705
1	-63	1669	-24 059	203 331	-1 004 381	2 674 359	-2 946 537
1	-63	1669	-24 059	203 331	-1 004 349	2 673 719	-2 943 369
1	-63	1669	-24 059	203 331	-1 004 317	2 673 079	-2 940 201
1	-63	1669	-24 059	203 331	-1 004 285	2 672 439	-2 937 033
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1	-63	1669	-24 043	202 643	-993 421	2 597 607	-2 746 953
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1	-63	1669	-24 043				

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1 -63 1669 -24 043 202 707 -995 213 2 614 183 -2 797 641
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1 -63 1669 -24 043 202 723 -995 741 2 619 927 -2 818 233
1 -63 1669 -24 043 202 723 -995 709 2 619 287 -2 815 065
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1 -63 1669 -24 043 202 739 -996 205 2 624 391 -2 832 489
1 -63 1669 -24 043 202 739 -996 173 2 623 751 -2 829 321
1 -63 1669 -24 043 202 755 -996 701 2 629 495 -2 849 913
1 -63 1669 -24 043 202 755 -996 669 2 628 855 -2 846 745
1 -63 1669 -24 035 202 339 -989 101 2 570 391 -2 682 801
1 -63 1669 -24 035 202 355 -989 565 2 574 855 -2 697 057
1 -63 1669 -24 035 202 355 -989 533 2 574 215 -2 693 889
1 -63 1669 -24 035 202 371 -990 029 2 579 319 -2 711 313
1 -63 1669 -24 035 202 371 -989 997 2 578 679 -2 708 145
1 -63 1669 -24 035 202 387 -990 493 2 583 783 -2 725 569
1 -63 1669 -24 035 202 387 -990 461 2 583 143 -2 722 401
1 -63 1669 -24 035 202 387 -990 429 2 582 503 -2 719 233
1 -63 1669 -24 035 202 403 -990 989 2 588 887 -2 742 993
1 -63 1669 -24 035 202 403 -990 957 2 588 247 -2 739 825
1 -63 1669 -24 035 202 403 -990 925 2 587 607 -2 736 657
1 -63 1669 -24 035 202 403 -990 893 2 586 967 -2 733 489
1 -63 1669 -24 035 202 419 -991 453 2 593 351 -2 757 249
1 -63 1669 -24 035 202 419 -991 421 2 592 711 -2 754 081
1 -63 1669 -24 035 202 419 -991 389 2 592 071 -2 750 913
1 -63 1669 -24 035 202 435 -991 917 2 597 815 -2 771 505
1 -63 1669 -24 027 202 035 -984 781 2 543 175 -2 618 649
1 -63 1669 -24 027 202 051 -985 245 2 547 639 -2 632 905
1 -63 1669 -24 027 202 067 -985 709 2 552 103 -2 647 161
1 -63 1669 -24 027 202 067 -985 677 2 551 463 -2 643 993
1 -63 1669 -24 027 202 083 -986 173 2 556 567 -2 661 417
1 -63 1669 -24 027 202 083 -986 141 2 555 927 -2 658 249
1 -63 1669 -24 027 202 099 -986 669 2 561 671 -2 678 841
1 -63 1669 -24 027 202 099 -986 637 2 561 031 -2 675 673
1 -63 1669 -24 027 202 115 -987 133 2 566 135 -2 693 097
1 -63 1669 -24 019 201 747 -980 925 2 520 423 -2 568 753
1 -63 1669 -24 019 201 763 -981 389 2 524 887 -2 583 009
1 -63 1669 -24 019 201 779 -981 853 2 529 351 -2 597 265
1 -63 1669 -24 019 201 795 -982 349 2 534 455 -2 614 689
1 -63 1669 -24 011 201 443 -976 605 2 493 207 -2 504 601
1 -63 1669 -24 011 201 459 -977 069 2 497 671 -2 518 857

```

Dimensions[A]

```
{109, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3087, 81 781, -1 179 131, 9 972 739, -49 351 133, 131 875 223, -146 172 377}
```

Array[c, 8].Transpose[A]

```
{c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 619 c[5] -
  1 008 173 c[6] + 2 695 831 c[7] - 2 990 097 c[8], c[1] - 63 c[2] + 1669 c[3] -
  24 067 c[4] + 203 619 c[5] - 1 008 141 c[6] + 2 695 191 c[7] - 2 986 929 c[8],
```

$c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,619 c[5] - 1\,008\,109 c[6] +$
 $2\,694\,551 c[7] - 2\,983\,761 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,635 c[5] - 1\,008\,637 c[6] + 2\,700\,295 c[7] - 3\,004\,353 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,635 c[5] - 1\,008\,605 c[6] +$
 $2\,699\,655 c[7] - 3\,001\,185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,635 c[5] - 1\,008\,573 c[6] + 2\,699\,015 c[7] - 2\,998\,017 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,651 c[5] - 1\,009\,069 c[6] +$
 $2\,704\,119 c[7] - 3\,015\,441 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] +$
 $203\,651 c[5] - 1\,009\,037 c[6] + 2\,703\,479 c[7] - 3\,012\,273 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,283 c[5] - 1\,002\,957 c[6] +$
 $2\,660\,327 c[7] - 2\,900\,601 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,283 c[5] - 1\,002\,925 c[6] + 2\,659\,687 c[7] - 2\,897\,433 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,299 c[5] - 1\,003\,453 c[6] +$
 $2\,665\,431 c[7] - 2\,918\,025 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,299 c[5] - 1\,003\,421 c[6] + 2\,664\,791 c[7] - 2\,914\,857 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,299 c[5] - 1\,003\,389 c[6] +$
 $2\,664\,151 c[7] - 2\,911\,689 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,299 c[5] - 1\,003\,357 c[6] + 2\,663\,511 c[7] - 2\,908\,521 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,315 c[5] - 1\,003\,917 c[6] +$
 $2\,669\,895 c[7] - 2\,932\,281 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,315 c[5] - 1\,003\,885 c[6] + 2\,669\,255 c[7] - 2\,929\,113 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,315 c[5] - 1\,003\,853 c[6] +$
 $2\,668\,615 c[7] - 2\,925\,945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,315 c[5] - 1\,003\,821 c[6] + 2\,667\,975 c[7] - 2\,922\,777 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,413 c[6] +$
 $2\,674\,999 c[7] - 2\,949\,705 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,331 c[5] - 1\,004\,381 c[6] + 2\,674\,359 c[7] - 2\,946\,537 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,349 c[6] +$
 $2\,673\,719 c[7] - 2\,943\,369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,331 c[5] - 1\,004\,317 c[6] + 2\,673\,079 c[7] - 2\,940\,201 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,285 c[6] +$
 $2\,672\,439 c[7] - 2\,937\,033 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,331 c[5] - 1\,004\,253 c[6] + 2\,671\,799 c[7] - 2\,933\,865 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,845 c[6] +$
 $2\,678\,823 c[7] - 2\,960\,793 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,347 c[5] - 1\,004\,813 c[6] + 2\,678\,183 c[7] - 2\,957\,625 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,781 c[6] +$
 $2\,677\,543 c[7] - 2\,954\,457 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] +$
 $203\,347 c[5] - 1\,004\,749 c[6] + 2\,676\,903 c[7] - 2\,951\,289 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,245 c[6] +$
 $2\,682\,007 c[7] - 2\,968\,713 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $202\,947 c[5] - 997\,741 c[6] + 2\,624\,823 c[7] - 2\,811\,105 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,947 c[5] - 997\,709 c[6] + 2\,624\,183 c[7] -$
 $2\,807\,937 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,963 c[5] -$
 $998\,205 c[6] + 2\,629\,287 c[7] - 2\,825\,361 c[8], c[1] - 63 c[2] + 1669 c[3] -$
 $24\,051 c[4] + 202\,963 c[5] - 998\,173 c[6] + 2\,628\,647 c[7] - 2\,822\,193 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,979 c[5] - 998\,669 c[6] +$

$$\begin{aligned}
& 2\,633\,751\,c[7] - 2\,839\,617\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,979\,c[5] - 998\,637\,c[6] + 2\,633\,111\,c[7] - 2\,836\,449\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,605\,c[6] + \\
& 2\,632\,471\,c[7] - 2\,833\,281\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,133\,c[6] + 2\,638\,215\,c[7] - 2\,853\,873\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,101\,c[6] + \\
& 2\,637\,575\,c[7] - 2\,850\,705\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,069\,c[6] + 2\,636\,935\,c[7] - 2\,847\,537\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,597\,c[6] + \\
& 2\,642\,679\,c[7] - 2\,868\,129\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,565\,c[6] + 2\,642\,039\,c[7] - 2\,864\,961\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,533\,c[6] + \\
& 2\,641\,399\,c[7] - 2\,861\,793\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,501\,c[6] + 2\,640\,759\,c[7] - 2\,858\,625\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 1\,000\,093\,c[6] + \\
& 2\,647\,783\,c[7] - 2\,885\,553\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 1\,000\,061\,c[6] + 2\,647\,143\,c[7] - 2\,882\,385\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 1\,000\,029\,c[6] + \\
& 2\,646\,503\,c[7] - 2\,879\,217\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,997\,c[6] + 2\,645\,863\,c[7] - 2\,876\,049\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,965\,c[6] + \\
& 2\,645\,223\,c[7] - 2\,872\,881\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,557\,c[6] + 2\,652\,247\,c[7] - 2\,899\,809\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,525\,c[6] + \\
& 2\,651\,607\,c[7] - 2\,896\,641\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,493\,c[6] + 2\,650\,967\,c[7] - 2\,893\,473\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,461\,c[6] + \\
& 2\,650\,327\,c[7] - 2\,890\,305\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,001\,021\,c[6] + 2\,656\,711\,c[7] - 2\,914\,065\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,989\,c[6] + \\
& 2\,656\,071\,c[7] - 2\,910\,897\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,957\,c[6] + 2\,655\,431\,c[7] - 2\,907\,729\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,627\,c[5] - 992\,957\,c[6] + \\
& 2\,593\,143\,c[7] - 2\,732\,697\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,643\,c[5] - 993\,421\,c[6] + 2\,597\,607\,c[7] - 2\,746\,953\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,659\,c[5] - 993\,885\,c[6] + \\
& 2\,602\,071\,c[7] - 2\,761\,209\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,659\,c[5] - 993\,853\,c[6] + 2\,601\,431\,c[7] - 2\,758\,041\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,675\,c[5] - 994\,349\,c[6] + \\
& 2\,606\,535\,c[7] - 2\,775\,465\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,675\,c[5] - 994\,317\,c[6] + 2\,605\,895\,c[7] - 2\,772\,297\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,813\,c[6] + \\
& 2\,610\,999\,c[7] - 2\,789\,721\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,781\,c[6] + 2\,610\,359\,c[7] - 2\,786\,553\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,749\,c[6] + \\
& 2\,609\,719\,c[7] - 2\,783\,385\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,309\,c[6] + 2\,616\,103\,c[7] - 2\,807\,145\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,277 c[6] + \\
& \quad 2\,615\,463 c[7] - 2\,803\,977 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,245 c[6] + 2\,614\,823 c[7] - 2\,800\,809 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,213 c[6] + \\
& \quad 2\,614\,183 c[7] - 2\,797\,641 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,181 c[6] + 2\,613\,543 c[7] - 2\,794\,473 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,773 c[6] + \\
& \quad 2\,620\,567 c[7] - 2\,821\,401 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,741 c[6] + 2\,619\,927 c[7] - 2\,818\,233 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,709 c[6] + \\
& \quad 2\,619\,287 c[7] - 2\,815\,065 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,677 c[6] + 2\,618\,647 c[7] - 2\,811\,897 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,237 c[6] + \\
& \quad 2\,625\,031 c[7] - 2\,835\,657 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,205 c[6] + 2\,624\,391 c[7] - 2\,832\,489 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,173 c[6] + \\
& \quad 2\,623\,751 c[7] - 2\,829\,321 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,701 c[6] + 2\,629\,495 c[7] - 2\,849\,913 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,669 c[6] + \\
& \quad 2\,628\,855 c[7] - 2\,846\,745 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,339 c[5] - 989\,101 c[6] + 2\,570\,391 c[7] - 2\,682\,801 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,355 c[5] - 989\,565 c[6] + \\
& \quad 2\,574\,855 c[7] - 2\,697\,057 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,355 c[5] - 989\,533 c[6] + 2\,574\,215 c[7] - 2\,693\,889 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,371 c[5] - 990\,029 c[6] + \\
& \quad 2\,579\,319 c[7] - 2\,711\,313 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,371 c[5] - 989\,997 c[6] + 2\,578\,679 c[7] - 2\,708\,145 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,387 c[5] - 990\,493 c[6] + \\
& \quad 2\,583\,783 c[7] - 2\,725\,569 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,387 c[5] - 990\,461 c[6] + 2\,583\,143 c[7] - 2\,722\,401 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,387 c[5] - 990\,429 c[6] + \\
& \quad 2\,582\,503 c[7] - 2\,719\,233 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,989 c[6] + 2\,588\,887 c[7] - 2\,742\,993 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,957 c[6] + \\
& \quad 2\,588\,247 c[7] - 2\,739\,825 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,925 c[6] + 2\,587\,607 c[7] - 2\,736\,657 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,893 c[6] + \\
& \quad 2\,586\,967 c[7] - 2\,733\,489 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,453 c[6] + 2\,593\,351 c[7] - 2\,757\,249 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,421 c[6] + \\
& \quad 2\,592\,711 c[7] - 2\,754\,081 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,389 c[6] + 2\,592\,071 c[7] - 2\,750\,913 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,917 c[6] + \\
& \quad 2\,597\,815 c[7] - 2\,771\,505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,035 c[5] - 984\,781 c[6] + 2\,543\,175 c[7] - 2\,618\,649 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,051 c[5] - 985\,245 c[6] + \\
& \quad 2\,547\,639 c[7] - 2\,632\,905 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] +
\end{aligned}$$

```

202 067 c[5] - 985 709 c[6] + 2 552 103 c[7] - 2 647 161 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 067 c[5] - 985 677 c[6] +
2 551 463 c[7] - 2 643 993 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 083 c[5] - 986 173 c[6] + 2 556 567 c[7] - 2 661 417 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 141 c[6] +
2 555 927 c[7] - 2 658 249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 099 c[5] - 986 669 c[6] + 2 561 671 c[7] - 2 678 841 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 637 c[6] +
2 561 031 c[7] - 2 675 673 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 133 c[6] + 2 566 135 c[7] - 2 693 097 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 747 c[5] - 980 925 c[6] +
2 520 423 c[7] - 2 568 753 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 763 c[5] - 981 389 c[6] + 2 524 887 c[7] - 2 583 009 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 779 c[5] - 981 853 c[6] +
2 529 351 c[7] - 2 597 265 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 795 c[5] - 982 349 c[6] + 2 534 455 c[7] - 2 614 689 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 443 c[5] - 976 605 c[6] +
2 493 207 c[7] - 2 504 601 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 459 c[5] - 977 069 c[6] + 2 497 671 c[7] - 2 518 857 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
9 972 739 c[5] - 49 351 133 c[6] + 131 875 223 c[7] - 146 172 377 c[8]

```

cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
9 972 739 c[5] - 49 351 133 c[6] + 131 875 223 c[7] - 146 172 377 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 619 c[5] - 1 008 173 c[6] +
2 695 831 c[7] - 2 990 097 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 619 c[5] - 1 008 141 c[6] + 2 695 191 c[7] - 2 986 929 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 619 c[5] - 1 008 109 c[6] +
2 694 551 c[7] - 2 983 761 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 635 c[5] - 1 008 637 c[6] + 2 700 295 c[7] - 3 004 353 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 635 c[5] - 1 008 605 c[6] +
2 699 655 c[7] - 3 001 185 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 635 c[5] - 1 008 573 c[6] + 2 699 015 c[7] - 2 998 017 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] - 1 009 069 c[6] +
2 704 119 c[7] - 3 015 441 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 651 c[5] - 1 009 037 c[6] + 2 703 479 c[7] - 3 012 273 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 283 c[5] - 1 002 957 c[6] +
2 660 327 c[7] - 2 900 601 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 283 c[5] - 1 002 925 c[6] + 2 659 687 c[7] - 2 897 433 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 299 c[5] - 1 003 453 c[6] +
2 665 431 c[7] - 2 918 025 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 299 c[5] - 1 003 421 c[6] + 2 664 791 c[7] - 2 914 857 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 299 c[5] - 1 003 389 c[6] +
2 664 151 c[7] - 2 911 689 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +

```


$$\begin{aligned}
& 203\,299\,c[5] - 1\,003\,357\,c[6] + 2\,663\,511\,c[7] - 2\,908\,521\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,917\,c[6] + \\
& \quad 2\,669\,895\,c[7] - 2\,932\,281\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,315\,c[5] - 1\,003\,885\,c[6] + 2\,669\,255\,c[7] - 2\,929\,113\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,853\,c[6] + \\
& \quad 2\,668\,615\,c[7] - 2\,925\,945\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,315\,c[5] - 1\,003\,821\,c[6] + 2\,667\,975\,c[7] - 2\,922\,777\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,413\,c[6] + \\
& \quad 2\,674\,999\,c[7] - 2\,949\,705\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,331\,c[5] - 1\,004\,381\,c[6] + 2\,674\,359\,c[7] - 2\,946\,537\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,349\,c[6] + \\
& \quad 2\,673\,719\,c[7] - 2\,943\,369\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,331\,c[5] - 1\,004\,317\,c[6] + 2\,673\,079\,c[7] - 2\,940\,201\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,285\,c[6] + \\
& \quad 2\,672\,439\,c[7] - 2\,937\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,331\,c[5] - 1\,004\,253\,c[6] + 2\,671\,799\,c[7] - 2\,933\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,845\,c[6] + \\
& \quad 2\,678\,823\,c[7] - 2\,960\,793\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,347\,c[5] - 1\,004\,813\,c[6] + 2\,678\,183\,c[7] - 2\,957\,625\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,781\,c[6] + \\
& \quad 2\,677\,543\,c[7] - 2\,954\,457\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& \quad 203\,347\,c[5] - 1\,004\,749\,c[6] + 2\,676\,903\,c[7] - 2\,951\,289\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,245\,c[6] + \\
& \quad 2\,682\,007\,c[7] - 2\,968\,713\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 202\,947\,c[5] - 997\,741\,c[6] + 2\,624\,823\,c[7] - 2\,811\,105\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,947\,c[5] - 997\,709\,c[6] + \\
& \quad 2\,624\,183\,c[7] - 2\,807\,937\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 202\,963\,c[5] - 998\,205\,c[6] + 2\,629\,287\,c[7] - 2\,825\,361\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,963\,c[5] - 998\,173\,c[6] + \\
& \quad 2\,628\,647\,c[7] - 2\,822\,193\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 202\,979\,c[5] - 998\,669\,c[6] + 2\,633\,751\,c[7] - 2\,839\,617\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,637\,c[6] + \\
& \quad 2\,633\,111\,c[7] - 2\,836\,449\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 202\,979\,c[5] - 998\,605\,c[6] + 2\,632\,471\,c[7] - 2\,833\,281\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,133\,c[6] + \\
& \quad 2\,638\,215\,c[7] - 2\,853\,873\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 202\,995\,c[5] - 999\,101\,c[6] + 2\,637\,575\,c[7] - 2\,850\,705\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,069\,c[6] + \\
& \quad 2\,636\,935\,c[7] - 2\,847\,537\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,011\,c[5] - 999\,597\,c[6] + 2\,642\,679\,c[7] - 2\,868\,129\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,565\,c[6] + \\
& \quad 2\,642\,039\,c[7] - 2\,864\,961\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,011\,c[5] - 999\,533\,c[6] + 2\,641\,399\,c[7] - 2\,861\,793\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,501\,c[6] + \\
& \quad 2\,640\,759\,c[7] - 2\,858\,625\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,027\,c[5] - 1\,000\,093\,c[6] + 2\,647\,783\,c[7] - 2\,885\,553\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 1\,000\,061\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,647\,143\,c[7] - 2\,882\,385\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 1\,000\,029\,c[6] + 2\,646\,503\,c[7] - 2\,879\,217\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,997\,c[6] + \\
& 2\,645\,863\,c[7] - 2\,876\,049\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,965\,c[6] + 2\,645\,223\,c[7] - 2\,872\,881\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,557\,c[6] + \\
& 2\,652\,247\,c[7] - 2\,899\,809\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,525\,c[6] + 2\,651\,607\,c[7] - 2\,896\,641\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,493\,c[6] + \\
& 2\,650\,967\,c[7] - 2\,893\,473\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,461\,c[6] + 2\,650\,327\,c[7] - 2\,890\,305\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,001\,021\,c[6] + \\
& 2\,656\,711\,c[7] - 2\,914\,065\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,989\,c[6] + 2\,656\,071\,c[7] - 2\,910\,897\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,957\,c[6] + \\
& 2\,655\,431\,c[7] - 2\,907\,729\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,627\,c[5] - 992\,957\,c[6] + 2\,593\,143\,c[7] - 2\,732\,697\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,643\,c[5] - 993\,421\,c[6] + \\
& 2\,597\,607\,c[7] - 2\,746\,953\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,659\,c[5] - 993\,885\,c[6] + 2\,602\,071\,c[7] - 2\,761\,209\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,659\,c[5] - 993\,853\,c[6] + \\
& 2\,601\,431\,c[7] - 2\,758\,041\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,675\,c[5] - 994\,349\,c[6] + 2\,606\,535\,c[7] - 2\,775\,465\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,675\,c[5] - 994\,317\,c[6] + \\
& 2\,605\,895\,c[7] - 2\,772\,297\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,813\,c[6] + 2\,610\,999\,c[7] - 2\,789\,721\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,781\,c[6] + \\
& 2\,610\,359\,c[7] - 2\,786\,553\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,749\,c[6] + 2\,609\,719\,c[7] - 2\,783\,385\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,309\,c[6] + \\
& 2\,616\,103\,c[7] - 2\,807\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,277\,c[6] + 2\,615\,463\,c[7] - 2\,803\,977\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,245\,c[6] + \\
& 2\,614\,823\,c[7] - 2\,800\,809\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,183\,c[7] - 2\,797\,641\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& 2\,613\,543\,c[7] - 2\,794\,473\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,773\,c[6] + 2\,620\,567\,c[7] - 2\,821\,401\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,741\,c[6] + \\
& 2\,619\,927\,c[7] - 2\,818\,233\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,287\,c[7] - 2\,815\,065\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,647\,c[7] - 2\,811\,897\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,237\,c[6] + 2\,625\,031\,c[7] - 2\,835\,657\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,205\,c[6] + \\
& 2\,624\,391\,c[7] - 2\,832\,489\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,751\,c[7] - 2\,829\,321\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,701 c[6] + \\
& \quad 2\,629\,495 c[7] - 2\,849\,913 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,669 c[6] + 2\,628\,855 c[7] - 2\,846\,745 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,339 c[5] - 989\,101 c[6] + \\
& \quad 2\,570\,391 c[7] - 2\,682\,801 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,355 c[5] - 989\,565 c[6] + 2\,574\,855 c[7] - 2\,697\,057 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,355 c[5] - 989\,533 c[6] + \\
& \quad 2\,574\,215 c[7] - 2\,693\,889 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,371 c[5] - 990\,029 c[6] + 2\,579\,319 c[7] - 2\,711\,313 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,371 c[5] - 989\,997 c[6] + \\
& \quad 2\,578\,679 c[7] - 2\,708\,145 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,387 c[5] - 990\,493 c[6] + 2\,583\,783 c[7] - 2\,725\,569 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,387 c[5] - 990\,461 c[6] + \\
& \quad 2\,583\,143 c[7] - 2\,722\,401 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,387 c[5] - 990\,429 c[6] + 2\,582\,503 c[7] - 2\,719\,233 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,989 c[6] + \\
& \quad 2\,588\,887 c[7] - 2\,742\,993 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,957 c[6] + 2\,588\,247 c[7] - 2\,739\,825 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,925 c[6] + \\
& \quad 2\,587\,607 c[7] - 2\,736\,657 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,893 c[6] + 2\,586\,967 c[7] - 2\,733\,489 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,453 c[6] + \\
& \quad 2\,593\,351 c[7] - 2\,757\,249 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,421 c[6] + 2\,592\,711 c[7] - 2\,754\,081 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,389 c[6] + \\
& \quad 2\,592\,071 c[7] - 2\,750\,913 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,917 c[6] + 2\,597\,815 c[7] - 2\,771\,505 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,035 c[5] - 984\,781 c[6] + \\
& \quad 2\,543\,175 c[7] - 2\,618\,649 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,051 c[5] - 985\,245 c[6] + 2\,547\,639 c[7] - 2\,632\,905 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,067 c[5] - 985\,709 c[6] + \\
& \quad 2\,552\,103 c[7] - 2\,647\,161 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,067 c[5] - 985\,677 c[6] + 2\,551\,463 c[7] - 2\,643\,993 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,173 c[6] + \\
& \quad 2\,556\,567 c[7] - 2\,661\,417 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,141 c[6] + 2\,555\,927 c[7] - 2\,658\,249 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,669 c[6] + \\
& \quad 2\,561\,671 c[7] - 2\,678\,841 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,637 c[6] + 2\,561\,031 c[7] - 2\,675\,673 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,133 c[6] + \\
& \quad 2\,566\,135 c[7] - 2\,693\,097 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,747 c[5] - 980\,925 c[6] + 2\,520\,423 c[7] - 2\,568\,753 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,763 c[5] - 981\,389 c[6] + \\
& \quad 2\,524\,887 c[7] - 2\,583\,009 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,779 c[5] - 981\,853 c[6] + 2\,529\,351 c[7] - 2\,597\,265 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,349 c[6] + \\
& \quad 2\,534\,455 c[7] - 2\,614\,689 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] +
\end{aligned}$$

```

201 443 c[5] - 976 605 c[6] + 2 493 207 c[7] - 2 504 601 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 069 c[6] +
2 497 671 c[7] - 2 518 857 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -64 158 067, -16 846 854, -2 755 344, -386 464, -50 242}

GCD[0, 0, 0, -64 158 067, -16 846 854, -2 755 344, -386 464, -50 242]
1

cert.g
-197 624 815

{0, 0, 0, -64 158 067, -16 846 854, -2 755 344, -386 464, -50 242}.
Reverse[gpart[listdim17[[100]]]]
-197 624 815

cert.Transpose[A]
{2 882 265, 2 881 561, 2 880 857, 2 886 873, 2 886 169, 2 885 465, 2 890 777, 2 890 073,
2 846 193, 2 845 489, 2 851 505, 2 850 801, 2 850 097, 2 849 393, 2 856 113, 2 855 409,
2 854 705, 2 854 001, 2 861 425, 2 860 721, 2 860 017, 2 859 313, 2 858 609, 2 857 905,
2 865 329, 2 864 625, 2 863 921, 2 863 217, 2 868 529, 2 810 121, 2 809 417, 2 814 729,
2 814 025, 2 819 337, 2 818 633, 2 817 929, 2 823 945, 2 823 241, 2 822 537, 2 828 553,
2 827 849, 2 827 145, 2 826 441, 2 833 865, 2 833 161, 2 832 457, 2 831 753, 2 831 049,
2 838 473, 2 837 769, 2 837 065, 2 836 361, 2 843 081, 2 842 377, 2 841 673, 2 777 953,
2 782 561, 2 787 169, 2 786 465, 2 791 777, 2 791 073, 2 796 385, 2 795 681, 2 794 977,
2 801 697, 2 800 993, 2 800 289, 2 799 585, 2 798 881, 2 806 305, 2 805 601, 2 804 897,
2 804 193, 2 810 913, 2 810 209, 2 809 505, 2 815 521, 2 814 817, 2 755 001, 2 759 609,
2 758 905, 2 764 217, 2 763 513, 2 768 825, 2 768 121, 2 767 417, 2 774 137, 2 773 433,
2 772 729, 2 772 025, 2 778 745, 2 778 041, 2 777 337, 2 783 353, 2 727 441,
2 732 049, 2 736 657, 2 735 953, 2 741 265, 2 740 561, 2 746 577, 2 745 873,
2 751 185, 2 704 489, 2 709 097, 2 713 705, 2 719 017, 2 676 929, 2 681 537}

chi = listdim17[[101]]
(-9 + x)11 (5 + x)32 (876 448 - 562 217 x + 147 157 x2 - 20 170 x3 + 1530 x4 - 61 x5 + x6)

CoefficientList[feasibleinterlacingpolylist[chi], x]

```

```

A = {{1, -65, 1777, -26433, 230475, -1174123, 3221699, -3650067},
      {1, -65, 1777, -26433, 230491, -1174715, 3228787, -3677571},
      {1, -65, 1777, -26433, 230491, -1174683, 3228083, -3673699},
      {1, -65, 1777, -26425, 230123, -1168411, 3181155, -3543723},
      {1, -65, 1777, -26425, 230139, -1168971, 3187603, -3568059},
      {1, -65, 1777, -26425, 230139, -1168939, 3186899, -3564315},
      {1, -65, 1777, -26425, 230155, -1169499, 3193347, -3588651},
      {1, -65, 1777, -26425, 230155, -1169435, 3191939, -3581035},
      {1, -65, 1777, -26425, 230155, -1169435, 3192003, -3581739},
      {1, -65, 1777, -26425, 230171, -1169995, 3198451, -3606075},
      {1, -65, 1777, -26425, 230171, -1169963, 3197747, -3602331},
      {1, -65, 1777, -26425, 230171, -1169931, 3197043, -3598459},
      {1, -65, 1777, -26425, 230187, -1170459, 3202851, -3619755},
      {1, -65, 1777, -26417, 229787, -1163195, 3145715, -3454803},
      {1, -65, 1777, -26417, 229803, -1163723, 3151459, -3475395},
      {1, -65, 1777, -26417, 229803, -1163659, 3150115, -3468483},
      {1, -65, 1777, -26417, 229819, -1164251, 3157203, -3495987},
      {1, -65, 1777, -26417, 229819, -1164219, 3156563, -3492819},
      {1, -65, 1777, -26417, 229819, -1164155, 3155219, -3485907},
      {1, -65, 1777, -26417, 229835, -1164747, 3162307, -3513411},
      {1, -65, 1777, -26417, 229835, -1164683, 3160963, -3506499},
      {1, -65, 1777, -26417, 229835, -1164651, 3160259, -3502627},
      {1, -65, 1777, -26409, 229451, -1157979, 3110211, -3365307},
      {1, -65, 1777, -26409, 229451, -1157979, 3110275, -3365883},
      {1, -65, 1777, -26409, 229451, -1157947, 3109571, -3362139},
      {1, -65, 1777, -26409, 229467, -1158475, 3115315, -3382731},
      {1, -65, 1777, -26409, 229467, -1158443, 3114675, -3379563},
      {1, -65, 1777, -26409, 229483, -1159003, 3121059, -3403323},
      {1, -65, 1777, -26409, 229483, -1158971, 3120419, -3400155},
      {1, -65, 1777, -26409, 229483, -1158907, 3119075, -3393243},
      {1, -65, 1777, -26409, 229499, -1159467, 3125523, -3417579},
      {1, -65, 1777, -26409, 229499, -1159403, 3124179, -3410667},
      {1, -65, 1777, -26401, 229115, -1152731, 3074131, -3273219},
      {1, -65, 1777, -26401, 229115, -1152699, 3073491, -3270051},
      {1, -65, 1777, -26401, 229131, -1153195, 3078531, -3286899},
      {1, -65, 1777, -26401, 229147, -1153723, 3084275, -3307491},
      {1, -65, 1777, -26401, 229147, -1153691, 3083635, -3304323},
      {1, -65, 1777, -26401, 229163, -1154187, 3088739, -3321747},
      {1, -65, 1777, -26393, 228811, -1148443, 3047491, -3211659},
      {1, -65, 1777, -26393, 228811, -1148411, 3046851, -3208491},
      {1, -65, 1777, -26393, 228827, -1148939, 3052595, -3229083},
      {1, -65, 1777, -26385, 228491, -1143659, 3015811, -3133251}};

```

A // MatrixForm

```
( 1 -65 1777 -26433 230475 -1174123 3221699 -3650067
 1 -65 1777 -26433 230491 -1174715 3228787 -3677571
 1 -65 1777 -26433 230491 -1174683 3228083 -3673699
 1 -65 1777 -26425 230123 -1168411 3181155 -3543723
 1 -65 1777 -26425 230139 -1168971 3187603 -3568059
 1 -65 1777 -26425 230139 -1168939 3186899 -3564315
 1 -65 1777 -26425 230155 -1169499 3193347 -3588651
 1 -65 1777 -26425 230155 -1169435 3191939 -3581035
 1 -65 1777 -26425 230155 -1169435 3192003 -3581739
 1 -65 1777 -26425 230171 -1169995 3198451 -3606075
 1 -65 1777 -26425 230171 -1169963 3197747 -3602331
 1 -65 1777 -26425 230171 -1169931 3197043 -3598459
 1 -65 1777 -26425 230187 -1170459 3202851 -3619755
 1 -65 1777 -26417 229787 -1163195 3145715 -3454803
 1 -65 1777 -26417 229803 -1163723 3151459 -3475395
 1 -65 1777 -26417 229803 -1163659 3150115 -3468483
 1 -65 1777 -26417 229819 -1164251 3157203 -3495987
 1 -65 1777 -26417 229819 -1164219 3156563 -3492819
 1 -65 1777 -26417 229819 -1164155 3155219 -3485907
 1 -65 1777 -26417 229835 -1164747 3162307 -3513411
 1 -65 1777 -26417 229835 -1164683 3160963 -3506499
 1 -65 1777 -26417 229835 -1164651 3160259 -3502627
 1 -65 1777 -26409 229451 -1157979 3110211 -3365307
 1 -65 1777 -26409 229451 -1157979 3110275 -3365883
 1 -65 1777 -26409 229451 -1157947 3109571 -3362139
 1 -65 1777 -26409 229467 -1158475 3115315 -3382731
 1 -65 1777 -26409 229467 -1158443 3114675 -3379563
 1 -65 1777 -26409 229483 -1159003 3121059 -3403323
 1 -65 1777 -26409 229483 -1158971 3120419 -3400155
 1 -65 1777 -26409 229483 -1158907 3119075 -3393243
 1 -65 1777 -26409 229499 -1159467 3125523 -3417579
 1 -65 1777 -26409 229499 -1159403 3124179 -3410667
 1 -65 1777 -26401 229115 -1152731 3074131 -3273219
 1 -65 1777 -26401 229115 -1152699 3073491 -3270051
 1 -65 1777 -26401 229131 -1153195 3078531 -3286899
 1 -65 1777 -26401 229147 -1153723 3084275 -3307491
 1 -65 1777 -26401 229147 -1153691 3083635 -3304323
 1 -65 1777 -26401 229163 -1154187 3088739 -3321747
 1 -65 1777 -26393 228811 -1148443 3047491 -3211659
 1 -65 1777 -26393 228811 -1148411 3046851 -3208491
 1 -65 1777 -26393 228827 -1148939 3052595 -3229083
 1 -65 1777 -26385 228491 -1143659 3015811 -3133251)
```

Dimensions[A]

```
{42, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3185, 87073, -1295065, 11288315, -57479435, 157688563, -178912619}
```

Array[c, 8].Transpose[A]

```
{c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230475 c[5] -
 1174123 c[6] + 3221699 c[7] - 3650067 c[8], c[1] - 65 c[2] + 1777 c[3] -
```

$$\begin{aligned}
& 26\,433\,c[4] + 230\,491\,c[5] - 1\,174\,715\,c[6] + 3\,228\,787\,c[7] - 3\,677\,571\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,433\,c[4] + 230\,491\,c[5] - 1\,174\,683\,c[6] + \\
& 3\,228\,083\,c[7] - 3\,673\,699\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,123\,c[5] - 1\,168\,411\,c[6] + 3\,181\,155\,c[7] - 3\,543\,723\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,139\,c[5] - 1\,168\,971\,c[6] + \\
& 3\,187\,603\,c[7] - 3\,568\,059\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,139\,c[5] - 1\,168\,939\,c[6] + 3\,186\,899\,c[7] - 3\,564\,315\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,499\,c[6] + \\
& 3\,193\,347\,c[7] - 3\,588\,651\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,155\,c[5] - 1\,169\,435\,c[6] + 3\,191\,939\,c[7] - 3\,581\,035\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,435\,c[6] + \\
& 3\,192\,003\,c[7] - 3\,581\,739\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,169\,995\,c[6] + 3\,198\,451\,c[7] - 3\,606\,075\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,963\,c[6] + \\
& 3\,197\,747\,c[7] - 3\,602\,331\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,169\,931\,c[6] + 3\,197\,043\,c[7] - 3\,598\,459\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,187\,c[5] - 1\,170\,459\,c[6] + \\
& 3\,202\,851\,c[7] - 3\,619\,755\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,787\,c[5] - 1\,163\,195\,c[6] + 3\,145\,715\,c[7] - 3\,454\,803\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,723\,c[6] + \\
& 3\,151\,459\,c[7] - 3\,475\,395\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,659\,c[6] + 3\,150\,115\,c[7] - 3\,468\,483\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& 3\,157\,203\,c[7] - 3\,495\,987\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,563\,c[7] - 3\,492\,819\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,155\,c[6] + \\
& 3\,155\,219\,c[7] - 3\,485\,907\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,747\,c[6] + 3\,162\,307\,c[7] - 3\,513\,411\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,683\,c[6] + \\
& 3\,160\,963\,c[7] - 3\,506\,499\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,651\,c[6] + 3\,160\,259\,c[7] - 3\,502\,627\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,979\,c[6] + \\
& 3\,110\,211\,c[7] - 3\,365\,307\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,451\,c[5] - 1\,157\,979\,c[6] + 3\,110\,275\,c[7] - 3\,365\,883\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,947\,c[6] + \\
& 3\,109\,571\,c[7] - 3\,362\,139\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,315\,c[7] - 3\,382\,731\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,443\,c[6] + \\
& 3\,114\,675\,c[7] - 3\,379\,563\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,159\,003\,c[6] + 3\,121\,059\,c[7] - 3\,403\,323\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,971\,c[6] + \\
& 3\,120\,419\,c[7] - 3\,400\,155\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,907\,c[6] + 3\,119\,075\,c[7] - 3\,393\,243\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,467\,c[6] + \\
& 3\,125\,523\,c[7] - 3\,417\,579\,c[8], \, c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,499\,c[5] - 1\,159\,403\,c[6] + 3\,124\,179\,c[7] - 3\,410\,667\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,115\,c[5] - 1\,152\,731\,c[6] +
\end{aligned}$$

```

3 074 131 c[7] - 3 273 219 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 115 c[5] - 1 152 699 c[6] + 3 073 491 c[7] - 3 270 051 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 195 c[6] +
3 078 531 c[7] - 3 286 899 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 723 c[6] + 3 084 275 c[7] - 3 307 491 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 691 c[6] +
3 083 635 c[7] - 3 304 323 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 163 c[5] - 1 154 187 c[6] + 3 088 739 c[7] - 3 321 747 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 811 c[5] - 1 148 443 c[6] +
3 047 491 c[7] - 3 211 659 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 811 c[5] - 1 148 411 c[6] + 3 046 851 c[7] - 3 208 491 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 827 c[5] - 1 148 939 c[6] +
3 052 595 c[7] - 3 229 083 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 491 c[5] - 1 143 659 c[6] + 3 015 811 c[7] - 3 133 251 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 065 c[4] +
11 288 315 c[5] - 57 479 435 c[6] + 157 688 563 c[7] - 178 912 619 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 065 c[4] +
11 288 315 c[5] - 57 479 435 c[6] + 157 688 563 c[7] - 178 912 619 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 475 c[5] - 1 174 123 c[6] +
3 221 699 c[7] - 3 650 067 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 491 c[5] - 1 174 715 c[6] + 3 228 787 c[7] - 3 677 571 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 491 c[5] - 1 174 683 c[6] +
3 228 083 c[7] - 3 673 699 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 123 c[5] - 1 168 411 c[6] + 3 181 155 c[7] - 3 543 723 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 139 c[5] - 1 168 971 c[6] +
3 187 603 c[7] - 3 568 059 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 139 c[5] - 1 168 939 c[6] + 3 186 899 c[7] - 3 564 315 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 155 c[5] - 1 169 499 c[6] +
3 193 347 c[7] - 3 588 651 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 155 c[5] - 1 169 435 c[6] + 3 191 939 c[7] - 3 581 035 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 155 c[5] - 1 169 435 c[6] +
3 192 003 c[7] - 3 581 739 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 171 c[5] - 1 169 995 c[6] + 3 198 451 c[7] - 3 606 075 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 171 c[5] - 1 169 963 c[6] +
3 197 747 c[7] - 3 602 331 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 171 c[5] - 1 169 931 c[6] + 3 197 043 c[7] - 3 598 459 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 187 c[5] - 1 170 459 c[6] +
3 202 851 c[7] - 3 619 755 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 787 c[5] - 1 163 195 c[6] + 3 145 715 c[7] - 3 454 803 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 803 c[5] - 1 163 723 c[6] +
3 151 459 c[7] - 3 475 395 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 803 c[5] - 1 163 659 c[6] + 3 150 115 c[7] - 3 468 483 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 819 c[5] - 1 164 251 c[6] +

```



```

3 157 203 c[7] - 3 495 987 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 819 c[5] - 1 164 219 c[6] + 3 156 563 c[7] - 3 492 819 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 819 c[5] - 1 164 155 c[6] +
3 155 219 c[7] - 3 485 907 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 835 c[5] - 1 164 747 c[6] + 3 162 307 c[7] - 3 513 411 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 835 c[5] -
1 164 683 c[6] + 3 160 963 c[7] - 3 506 499 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 835 c[5] - 1 164 651 c[6] +
3 160 259 c[7] - 3 502 627 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 451 c[5] - 1 157 979 c[6] + 3 110 211 c[7] - 3 365 307 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 451 c[5] - 1 157 979 c[6] +
3 110 275 c[7] - 3 365 883 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 451 c[5] - 1 157 947 c[6] + 3 109 571 c[7] - 3 362 139 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 467 c[5] - 1 158 475 c[6] +
3 115 315 c[7] - 3 382 731 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 467 c[5] - 1 158 443 c[6] + 3 114 675 c[7] - 3 379 563 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 159 003 c[6] +
3 121 059 c[7] - 3 403 323 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 483 c[5] - 1 158 971 c[6] + 3 120 419 c[7] - 3 400 155 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 158 907 c[6] +
3 119 075 c[7] - 3 393 243 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 467 c[6] + 3 125 523 c[7] - 3 417 579 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 403 c[6] +
3 124 179 c[7] - 3 410 667 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 115 c[5] - 1 152 731 c[6] + 3 074 131 c[7] - 3 273 219 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 115 c[5] - 1 152 699 c[6] +
3 073 491 c[7] - 3 270 051 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 131 c[5] - 1 153 195 c[6] + 3 078 531 c[7] - 3 286 899 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 147 c[5] - 1 153 723 c[6] +
3 084 275 c[7] - 3 307 491 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 691 c[6] + 3 083 635 c[7] - 3 304 323 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 187 c[6] +
3 088 739 c[7] - 3 321 747 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 811 c[5] - 1 148 443 c[6] + 3 047 491 c[7] - 3 211 659 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 811 c[5] - 1 148 411 c[6] +
3 046 851 c[7] - 3 208 491 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 827 c[5] - 1 148 939 c[6] + 3 052 595 c[7] - 3 229 083 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 491 c[5] - 1 143 659 c[6] +
3 015 811 c[7] - 3 133 251 c[8] ≥ 0, Array[c, 8], Integers]]

{0, 0, 0, 0, -1 704 397, -620 000, -127 433, -20 664}

GCD[0, 0, 0, 0, -1 704 397, -620 000, -127 433, -20 664]

1

cert.g

-196 810 818

```

```
{0, 0, 0, 0, -1704397, -620000, -127433, -20664}.Reverse[gpart[listdim17[[101]]]]
-196810818
```

```
cert.Transpose[A]
```

```
{9577246, 14444446, 4306270, 37236126, 38356894, 30863710, 31984478,
14353118, 20744862, 21865630, 14372446, 4234270, 4253598, 54776158,
48403742, 37164126, 42031326, 38284894, 27045278, 31912478, 20672862,
10534686, 68569438, 72316190, 64823006, 58450590, 54704158, 52078174,
48331742, 37092126, 38212894, 26973278, 82363038, 78616606, 64751006,
58378590, 54632158, 44513310, 64679006, 60932574, 54560158, 60860574}
```

```
chi = listdim17[[102]]
```

```
 $(-13 + x)^2 (-9 + x)^{13} (5 + x)^{32} (64 - 17x + x^2)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{3471, -2022, 408, -34, 1}, {3487, -2022, 408, -34, 1},
{3503, -2022, 408, -34, 1}, {3367, -2014, 408, -34, 1}, {3383, -2014, 408, -34, 1},
{3399, -2014, 408, -34, 1}, {3415, -2014, 408, -34, 1}, {3263, -2006, 408, -34, 1},
{3279, -2006, 408, -34, 1}, {3295, -2006, 408, -34, 1}, {3311, -2006, 408, -34, 1},
{3159, -1998, 408, -34, 1}, {3175, -1998, 408, -34, 1}, {3191, -1998, 408, -34, 1},
{3207, -1998, 408, -34, 1}, {3223, -1998, 408, -34, 1}, {3087, -1990, 408, -34, 1},
{3103, -1990, 408, -34, 1}, {3119, -1990, 408, -34, 1}, {3135, -1990, 408, -34, 1},
{3015, -1982, 408, -34, 1}, {3031, -1982, 408, -34, 1}, {3047, -1982, 408, -34, 1},
{2943, -1974, 408, -34, 1}, {2959, -1974, 408, -34, 1}, {2871, -1966, 408, -34, 1}}
```

```
A = {{3471, -2022, 408, -34, 1}, {3487, -2022, 408, -34, 1},
{3503, -2022, 408, -34, 1}, {3367, -2014, 408, -34, 1},
{3383, -2014, 408, -34, 1}, {3399, -2014, 408, -34, 1},
{3415, -2014, 408, -34, 1}, {3263, -2006, 408, -34, 1},
{3279, -2006, 408, -34, 1}, {3295, -2006, 408, -34, 1},
{3311, -2006, 408, -34, 1}, {3159, -1998, 408, -34, 1},
{3175, -1998, 408, -34, 1}, {3191, -1998, 408, -34, 1},
{3207, -1998, 408, -34, 1}, {3223, -1998, 408, -34, 1},
{3087, -1990, 408, -34, 1}, {3103, -1990, 408, -34, 1},
{3119, -1990, 408, -34, 1}, {3135, -1990, 408, -34, 1},
{3015, -1982, 408, -34, 1}, {3031, -1982, 408, -34, 1},
{3047, -1982, 408, -34, 1}, {2943, -1974, 408, -34, 1},
{2959, -1974, 408, -34, 1}, {2871, -1966, 408, -34, 1}};
```

A // MatrixForm

$$\begin{pmatrix} 3471 & -2022 & 408 & -34 & 1 \\ 3487 & -2022 & 408 & -34 & 1 \\ 3503 & -2022 & 408 & -34 & 1 \\ 3367 & -2014 & 408 & -34 & 1 \\ 3383 & -2014 & 408 & -34 & 1 \\ 3399 & -2014 & 408 & -34 & 1 \\ 3415 & -2014 & 408 & -34 & 1 \\ 3263 & -2006 & 408 & -34 & 1 \\ 3279 & -2006 & 408 & -34 & 1 \\ 3295 & -2006 & 408 & -34 & 1 \\ 3311 & -2006 & 408 & -34 & 1 \\ 3159 & -1998 & 408 & -34 & 1 \\ 3175 & -1998 & 408 & -34 & 1 \\ 3191 & -1998 & 408 & -34 & 1 \\ 3207 & -1998 & 408 & -34 & 1 \\ 3223 & -1998 & 408 & -34 & 1 \\ 3087 & -1990 & 408 & -34 & 1 \\ 3103 & -1990 & 408 & -34 & 1 \\ 3119 & -1990 & 408 & -34 & 1 \\ 3135 & -1990 & 408 & -34 & 1 \\ 3015 & -1982 & 408 & -34 & 1 \\ 3031 & -1982 & 408 & -34 & 1 \\ 3047 & -1982 & 408 & -34 & 1 \\ 2943 & -1974 & 408 & -34 & 1 \\ 2959 & -1974 & 408 & -34 & 1 \\ 2871 & -1966 & 408 & -34 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{169 831, -98 926, 19 992, -1666, 49}

Array[c, 5].Transpose[A]

```
{ 3471 c[1] - 2022 c[2] + 408 c[3] - 34 c[4] + c[5],
  3487 c[1] - 2022 c[2] + 408 c[3] - 34 c[4] + c[5],
  3503 c[1] - 2022 c[2] + 408 c[3] - 34 c[4] + c[5],
  3367 c[1] - 2014 c[2] + 408 c[3] - 34 c[4] + c[5],
  3383 c[1] - 2014 c[2] + 408 c[3] - 34 c[4] + c[5],
  3399 c[1] - 2014 c[2] + 408 c[3] - 34 c[4] + c[5],
  3415 c[1] - 2014 c[2] + 408 c[3] - 34 c[4] + c[5],
  3263 c[1] - 2006 c[2] + 408 c[3] - 34 c[4] + c[5],
  3279 c[1] - 2006 c[2] + 408 c[3] - 34 c[4] + c[5],
  3295 c[1] - 2006 c[2] + 408 c[3] - 34 c[4] + c[5],
  3311 c[1] - 2006 c[2] + 408 c[3] - 34 c[4] + c[5],
  3159 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5],
  3175 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5],
  3191 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5],
  3207 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5],
  3223 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5],
  3087 c[1] - 1990 c[2] + 408 c[3] - 34 c[4] + c[5],
  3103 c[1] - 1990 c[2] + 408 c[3] - 34 c[4] + c[5],
  3119 c[1] - 1990 c[2] + 408 c[3] - 34 c[4] + c[5],
  3135 c[1] - 1990 c[2] + 408 c[3] - 34 c[4] + c[5],
  3015 c[1] - 1982 c[2] + 408 c[3] - 34 c[4] + c[5],
  3031 c[1] - 1982 c[2] + 408 c[3] - 34 c[4] + c[5],
  3047 c[1] - 1982 c[2] + 408 c[3] - 34 c[4] + c[5],
  2943 c[1] - 1974 c[2] + 408 c[3] - 34 c[4] + c[5],
  2959 c[1] - 1974 c[2] + 408 c[3] - 34 c[4] + c[5],
  2871 c[1] - 1966 c[2] + 408 c[3] - 34 c[4] + c[5]}
```

Array[c, 5].g

```
169 831 c[1] - 98 926 c[2] + 19 992 c[3] - 1666 c[4] + 49 c[5]
```

```

cert = Flatten[Array[c, 5] /.
  FindInstance[169 831 c[1] - 98 926 c[2] + 19 992 c[3] - 1666 c[4] + 49 c[5] < 0 &&
    3471 c[1] - 2022 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3487 c[1] - 2022 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3503 c[1] - 2022 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3367 c[1] - 2014 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3383 c[1] - 2014 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3399 c[1] - 2014 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3415 c[1] - 2014 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3263 c[1] - 2006 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3279 c[1] - 2006 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3295 c[1] - 2006 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3311 c[1] - 2006 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3159 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3175 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3191 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3207 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3223 c[1] - 1998 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3087 c[1] - 1990 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3103 c[1] - 1990 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3119 c[1] - 1990 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3135 c[1] - 1990 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3015 c[1] - 1982 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3031 c[1] - 1982 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    3047 c[1] - 1982 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    2943 c[1] - 1974 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    2959 c[1] - 1974 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0 &&
    2871 c[1] - 1966 c[2] + 408 c[3] - 34 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{c[1], c[2], c[3], c[4], c[5]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[103]]
```

$$(-11 + x)^2 (-9 + x)^9 (5 + x)^{32} \\ (588\,752 - 400\,449\,x + 111\,817\,x^2 - 16\,406\,x^3 + 1334\,x^4 - 57\,x^5 + x^6)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -72, 2236, -39 088, 420 254, -2 841 864, 11 783 884, -27 334 656, 27 081 945},
      {1, -72, 2236, -39 088, 420 254, -2 841 832, 11 782 956, -27 325 728, 27 053 433},

```

```

{1, -72, 2236, -39 088, 420 270, -2 842 472, 11 792 332, -27 385 376, 27 192 649},
{1, -72, 2236, -39 088, 420 270, -2 842 440, 11 791 468, -27 377 728, 27 170 473},
{1, -72, 2236, -39 088, 420 270, -2 842 440, 11 791 532, -27 378 880, 27 175 401},
{1, -72, 2236, -39 080, 419 862, -2 834 264, 11 710 940, -26 987 704, 26 426 961},
{1, -72, 2236, -39 080, 419 862, -2 834 232, 11 710 076, -26 980 056, 26 404 785},
{1, -72, 2236, -39 080, 419 862, -2 834 200, 11 709 148, -26 971 128, 26 376 273},
{1, -72, 2236, -39 080, 419 878, -2 834 904, 11 720 444, -27 049 784, 26 577 441},
{1, -72, 2236, -39 080, 419 878, -2 834 872, 11 719 516, -27 040 856, 26 548 929},
{1, -72, 2236, -39 080, 419 878, -2 834 872, 11 719 580, -27 042 136, 26 555 265},
{1, -72, 2236, -39 080, 419 878, -2 834 840, 11 718 652, -27 033 208, 26 526 753},
{1, -72, 2236, -39 080, 419 878, -2 834 840, 11 718 716, -27 034 488, 26 533 089},
{1, -72, 2236, -39 080, 419 878, -2 834 808, 11 717 660, -27 023 128, 26 493 313},
{1, -72, 2236, -39 080, 419 878, -2 834 808, 11 717 788, -27 025 560, 26 504 577},
{1, -72, 2236, -39 080, 419 894, -2 835 480, 11 728 092, -27 094 008, 26 670 897},
{1, -72, 2236, -39 080, 419 894, -2 835 480, 11 728 156, -27 095 288, 26 677 233},
{1, -72, 2236, -39 080, 419 894, -2 835 448, 11 727 228, -27 086 360, 26 648 721},
{1, -72, 2236, -39 080, 419 894, -2 835 448, 11 727 292, -27 087 640, 26 655 057},
{1, -72, 2236, -39 080, 419 894, -2 835 416, 11 726 300, -27 077 560, 26 621 617},
{1, -72, 2236, -39 080, 419 910, -2 836 056, 11 735 804, -27 139 512, 26 770 689},
{1, -72, 2236, -39 080, 419 910, -2 836 024, 11 734 876, -27 130 712, 26 743 585},
{1, -72, 2236, -39 080, 419 926, -2 836 632, 11 743 452, -27 183 864, 26 865 553},
{1, -72, 2236, -39 072, 419 470, -2 826 632, 11 637 132, -26 633 104, 25 749 801},
{1, -72, 2236, -39 072, 419 470, -2 826 600, 11 636 268, -26 625 456, 25 727 625},
{1, -72, 2236, -39 072, 419 486, -2 827 272, 11 646 700, -26 696 464, 25 906 617},
{1, -72, 2236, -39 072, 419 486, -2 827 240, 11 645 708, -26 686 256, 25 871 769},
{1, -72, 2236, -39 072, 419 486, -2 827 240, 11 645 772, -26 687 536, 25 878 105},
{1, -72, 2236, -39 072, 419 486, -2 827 208, 11 644 844, -26 678 608, 25 849 593},
{1, -72, 2236, -39 072, 419 486, -2 827 176, 11 643 980, -26 670 960, 25 827 417},
{1, -72, 2236, -39 072, 419 502, -2 827 848, 11 654 348, -26 740 688, 26 000 073},
{1, -72, 2236, -39 072, 419 502, -2 827 848, 11 654 412, -26 741 968, 26 006 409},
{1, -72, 2236, -39 072, 419 502, -2 827 816, 11 653 484, -26 733 040, 25 977 897},
{1, -72, 2236, -39 072, 419 502, -2 827 784, 11 652 556, -26 724 112, 25 949 385},
{1, -72, 2236, -39 072, 419 518, -2 828 488, 11 663 916, -26 804 048, 26 156 889},
{1, -72, 2236, -39 072, 419 518, -2 828 456, 11 662 924, -26 793 840, 26 122 041},
{1, -72, 2236, -39 072, 419 518, -2 828 456, 11 662 988, -26 795 120, 26 128 377},
{1, -72, 2236, -39 072, 419 518, -2 828 456, 11 663 052, -26 796 400, 26 134 713},
{1, -72, 2236, -39 072, 419 518, -2 828 424, 11 662 060, -26 786 192, 26 099 865},
{1, -72, 2236, -39 072, 419 518, -2 828 424, 11 662 124, -26 787 472, 26 106 201},
{1, -72, 2236, -39 072, 419 534, -2 829 064, 11 671 564, -26 848 272, 26 250 345},
{1, -72, 2236, -39 072, 419 534, -2 829 032, 11 670 636, -26 839 344, 26 221 833},
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{1, -72, 2236, -39 064, 419 094, -2 819 608, 11 571 964, -26 332 936, 25 200 945},
{1, -72, 2236, -39 064, 419 110, -2 820 216, 11 580 604, -26 387 368, 25 329 249},
{1, -72, 2236, -39 064, 419 110, -2 820 184, 11 579 676, -26 378 440, 25 300 737},
{1, -72, 2236, -39 064, 419 110, -2 820 152, 11 578 812, -26 370 792, 25 278 561},
{1, -72, 2236, -39 064, 419 126, -2 820 824, 11 589 180, -26 440 520, 25 451 217},

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{1, -72, 2236, -39 064, 419 142, -2 821 432, 11 597 820, -26 494 952, 25 579 521},
{1, -72, 2236, -39 064, 419 142, -2 821 400, 11 596 892, -26 486 024, 25 551 009},
{1, -72, 2236, -39 064, 419 158, -2 822 040, 11 606 396, -26 548 104, 25 701 489},
{1, -72, 2236, -39 064, 419 158, -2 822 040, 11 606 460, -26 549 384, 25 707 825},
{1, -72, 2236, -39 064, 419 158, -2 822 008, 11 605 468, -26 539 176, 25 672 977},
{1, -72, 2236, -39 064, 419 158, -2 821 976, 11 604 540, -26 530 376, 25 645 873},
{1, -72, 2236, -39 064, 419 174, -2 822 648, 11 615 036, -26 602 536, 25 829 793},
{1, -72, 2236, -39 056, 418 718, -2 812 552, 11 505 868, -26 023 840, 24 623 577},
{1, -72, 2236, -39 056, 418 734, -2 813 160, 11 514 508, -26 078 272, 24 751 881},
{1, -72, 2236, -39 056, 418 750, -2 813 768, 11 523 084, -26 131 424, 24 873 849},
{1, -72, 2236, -39 056, 418 750, -2 813 768, 11 523 148, -26 132 704, 24 880 185},
{1, -72, 2236, -39 056, 418 766, -2 814 408, 11 532 652, -26 194 784, 25 030 665},
{1, -72, 2236, -39 056, 418 766, -2 814 376, 11 531 660, -26 184 576, 24 995 817},
{1, -72, 2236, -39 056, 418 766, -2 814 376, 11 531 724, -26 185 856, 25 002 153},
{1, -72, 2236, -39 056, 418 782, -2 815 016, 11 541 292, -26 249 216, 25 158 969},
{1, -72, 2236, -39 048, 418 342, -2 805 528, 11 440 700, -25 723 672, 24 074 721},
{1, -72, 2236, -39 048, 418 358, -2 806 104, 11 448 412, -25 769 176, 24 174 513},
{1, -72, 2236, -39 048, 418 374, -2 806 744, 11 457 916, -25 831 256, 24 324 993}};
```

A // MatrixForm

```
( 1 -72 2236 -39 088 420 254 -2 841 864 11 783 884 -27 334 656 27 081 945 )
1 -72 2236 -39 088 420 254 -2 841 832 11 782 956 -27 325 728 27 053 433
1 -72 2236 -39 088 420 270 -2 842 472 11 792 332 -27 385 376 27 192 649
1 -72 2236 -39 088 420 270 -2 842 440 11 791 468 -27 377 728 27 170 473
1 -72 2236 -39 088 420 270 -2 842 440 11 791 532 -27 378 880 27 175 401
1 -72 2236 -39 080 419 862 -2 834 264 11 710 940 -26 987 704 26 426 961
1 -72 2236 -39 080 419 862 -2 834 232 11 710 076 -26 980 056 26 404 785
1 -72 2236 -39 080 419 862 -2 834 200 11 709 148 -26 971 128 26 376 273
1 -72 2236 -39 080 419 878 -2 834 904 11 720 444 -27 049 784 26 577 441
1 -72 2236 -39 080 419 878 -2 834 872 11 719 516 -27 040 856 26 548 929
1 -72 2236 -39 080 419 878 -2 834 872 11 719 580 -27 042 136 26 555 265
1 -72 2236 -39 080 419 878 -2 834 840 11 718 652 -27 033 208 26 526 753
1 -72 2236 -39 080 419 878 -2 834 840 11 718 716 -27 034 488 26 533 089
1 -72 2236 -39 080 419 878 -2 834 808 11 717 660 -27 023 128 26 493 313
1 -72 2236 -39 080 419 878 -2 834 808 11 717 788 -27 025 560 26 504 577
1 -72 2236 -39 080 419 894 -2 835 480 11 728 092 -27 094 008 26 670 897
1 -72 2236 -39 080 419 894 -2 835 480 11 728 156 -27 095 288 26 677 233
1 -72 2236 -39 080 419 894 -2 835 448 11 727 228 -27 086 360 26 648 721
1 -72 2236 -39 080 419 894 -2 835 448 11 727 292 -27 087 640 26 655 057
1 -72 2236 -39 080 419 894 -2 835 416 11 726 300 -27 077 560 26 621 617
1 -72 2236 -39 080 419 910 -2 836 056 11 735 804 -27 139 512 26 770 689
1 -72 2236 -39 080 419 910 -2 836 024 11 734 876 -27 130 712 26 743 585
1 -72 2236 -39 080 419 926 -2 836 632 11 743 452 -27 183 864 26 865 553
1 -72 2236 -39 072 419 470 -2 826 632 11 637 132 -26 633 104 25 749 801
1 -72 2236 -39 072 419 470 -2 826 600 11 636 268 -26 625 456 25 727 625
1 -72 2236 -39 072 419 486 -2 827 272 11 646 700 -26 696 464 25 906 617
1 -72 2236 -39 072 419 486 -2 827 240 11 645 708 -26 686 256 25 871 769
1 -72 2236 -39 072 419 486 -2 827 240 11 645 772 -26 687 536 25 878 105
1 -72 2236 -39 072 419 486 -2 827 208 11 644 844 -26 678 608 25 849 593 )
```

```

1 -72 2236 -39072 419486 -2827176 11643980 -26670960 25827417
1 -72 2236 -39072 419502 -2827848 11654348 -26740688 26000073
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1 -72 2236 -39056 418782 -2815016 11541292 -26249216 25158969
1 -72 2236 -39048 418342 -2805528 11440700 -25723672 24074721
1 -72 2236 -39048 418358 -2806104 11448412 -25769176 24174513
1 -72 2236 -39048 418374 -2806744 11457916 -25831256 24324993

```

Dimensions[A]

{70, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```

{49, -3528, 109564, -1915160, 20586358,
 -139155960, 576675036, -1336564392, 1322524161}

```

Array[c, 9].Transpose[A]

```

{c[1] - 72 c[2] + 2236 c[3] - 39088 c[4] + 420254 c[5] -
 2841864 c[6] + 11783884 c[7] - 27334656 c[8] + 27081945 c[9],
 c[1] - 72 c[2] + 2236 c[3] - 39088 c[4] + 420254 c[5] - 2841832 c[6] +

```


$$\begin{aligned}
& 11\,782\,956\,c[7] - 27\,325\,728\,c[8] + 27\,053\,433\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,270\,c[5] - 2\,842\,472\,c[6] + \\
& 11\,792\,332\,c[7] - 27\,385\,376\,c[8] + 27\,192\,649\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,270\,c[5] - 2\,842\,440\,c[6] + \\
& 11\,791\,468\,c[7] - 27\,377\,728\,c[8] + 27\,170\,473\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,088\,c[4] + 420\,270\,c[5] - 2\,842\,440\,c[6] + \\
& 11\,791\,532\,c[7] - 27\,378\,880\,c[8] + 27\,175\,401\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,862\,c[5] - 2\,834\,264\,c[6] + \\
& 11\,710\,940\,c[7] - 26\,987\,704\,c[8] + 26\,426\,961\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,862\,c[5] - 2\,834\,232\,c[6] + 11\,710\,076\,c[7] - \\
& 26\,980\,056\,c[8] + 26\,404\,785\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + \\
& 419\,862\,c[5] - 2\,834\,200\,c[6] + 11\,709\,148\,c[7] - 26\,971\,128\,c[8] + 26\,376\,273\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,878\,c[5] - 2\,834\,904\,c[6] + 11\,720\,444\,c[7] - \\
& 27\,049\,784\,c[8] + 26\,577\,441\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + \\
& 419\,878\,c[5] - 2\,834\,872\,c[6] + 11\,719\,516\,c[7] - 27\,040\,856\,c[8] + 26\,548\,929\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,878\,c[5] - 2\,834\,872\,c[6] + 11\,719\,580\,c[7] - \\
& 27\,042\,136\,c[8] + 26\,555\,265\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + \\
& 419\,878\,c[5] - 2\,834\,840\,c[6] + 11\,718\,652\,c[7] - 27\,033\,208\,c[8] + 26\,526\,753\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,878\,c[5] - 2\,834\,840\,c[6] + 11\,718\,716\,c[7] - \\
& 27\,034\,488\,c[8] + 26\,533\,089\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + \\
& 419\,878\,c[5] - 2\,834\,808\,c[6] + 11\,717\,660\,c[7] - 27\,023\,128\,c[8] + 26\,493\,313\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,878\,c[5] - 2\,834\,808\,c[6] + 11\,717\,788\,c[7] - \\
& 27\,025\,560\,c[8] + 26\,504\,577\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + \\
& 419\,894\,c[5] - 2\,835\,480\,c[6] + 11\,728\,092\,c[7] - 27\,094\,008\,c[8] + 26\,670\,897\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,894\,c[5] - 2\,835\,480\,c[6] + 11\,728\,156\,c[7] - \\
& 27\,095\,288\,c[8] + 26\,677\,233\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + \\
& 419\,894\,c[5] - 2\,835\,448\,c[6] + 11\,727\,228\,c[7] - 27\,086\,360\,c[8] + 26\,648\,721\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,894\,c[5] - 2\,835\,448\,c[6] + 11\,727\,292\,c[7] - \\
& 27\,087\,640\,c[8] + 26\,655\,057\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + \\
& 419\,894\,c[5] - 2\,835\,416\,c[6] + 11\,726\,300\,c[7] - 27\,077\,560\,c[8] + 26\,621\,617\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,910\,c[5] - 2\,836\,056\,c[6] + 11\,735\,804\,c[7] - \\
& 27\,139\,512\,c[8] + 26\,770\,689\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + \\
& 419\,910\,c[5] - 2\,836\,024\,c[6] + 11\,734\,876\,c[7] - 27\,130\,712\,c[8] + 26\,743\,585\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,926\,c[5] - 2\,836\,632\,c[6] + 11\,743\,452\,c[7] - \\
& 27\,183\,864\,c[8] + 26\,865\,553\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,470\,c[5] - 2\,826\,632\,c[6] + 11\,637\,132\,c[7] - 26\,633\,104\,c[8] + 25\,749\,801\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,470\,c[5] - 2\,826\,600\,c[6] + 11\,636\,268\,c[7] - \\
& 26\,625\,456\,c[8] + 25\,727\,625\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,486\,c[5] - 2\,827\,272\,c[6] + 11\,646\,700\,c[7] - 26\,696\,464\,c[8] + 25\,906\,617\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,486\,c[5] - 2\,827\,240\,c[6] + 11\,645\,708\,c[7] - \\
& 26\,686\,256\,c[8] + 25\,871\,769\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,486\,c[5] - 2\,827\,240\,c[6] + 11\,645\,772\,c[7] - 26\,687\,536\,c[8] + 25\,878\,105\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,486\,c[5] - 2\,827\,208\,c[6] + 11\,644\,844\,c[7] - \\
& 26\,678\,608\,c[8] + 25\,849\,593\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,486\,c[5] - 2\,827\,176\,c[6] + 11\,643\,980\,c[7] - 26\,670\,960\,c[8] + 25\,827\,417\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,502\,c[5] - 2\,827\,848\,c[6] + 11\,654\,348\,c[7] - \\
& 26\,740\,688\,c[8] + 26\,000\,073\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 419\,502\,c[5] - 2\,827\,848\,c[6] + 11\,654\,412\,c[7] - 26\,741\,968\,c[8] + 26\,006\,409\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,502\,c[5] - 2\,827\,816\,c[6] + 11\,653\,484\,c[7] - \\
& 26\,733\,040\,c[8] + 25\,977\,897\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,502\,c[5] - 2\,827\,784\,c[6] + 11\,652\,556\,c[7] - 26\,724\,112\,c[8] + 25\,949\,385\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,518\,c[5] - 2\,828\,488\,c[6] + 11\,663\,916\,c[7] - \\
& 26\,804\,048\,c[8] + 26\,156\,889\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,518\,c[5] - 2\,828\,456\,c[6] + 11\,662\,924\,c[7] - 26\,793\,840\,c[8] + 26\,122\,041\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,518\,c[5] - 2\,828\,456\,c[6] + 11\,662\,988\,c[7] - \\
& 26\,795\,120\,c[8] + 26\,128\,377\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,518\,c[5] - 2\,828\,456\,c[6] + 11\,663\,052\,c[7] - 26\,796\,400\,c[8] + 26\,134\,713\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,518\,c[5] - 2\,828\,424\,c[6] + 11\,662\,060\,c[7] - \\
& 26\,786\,192\,c[8] + 26\,099\,865\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,518\,c[5] - 2\,828\,424\,c[6] + 11\,662\,124\,c[7] - 26\,787\,472\,c[8] + 26\,106\,201\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,064\,c[6] + 11\,671\,564\,c[7] - \\
& 26\,848\,272\,c[8] + 26\,250\,345\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,534\,c[5] - 2\,829\,032\,c[6] + 11\,670\,636\,c[7] - 26\,839\,344\,c[8] + 26\,221\,833\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,000\,c[6] + 11\,669\,708\,c[7] - \\
& 26\,830\,544\,c[8] + 26\,194\,729\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,550\,c[5] - 2\,829\,640\,c[6] + 11\,679\,212\,c[7] - 26\,892\,496\,c[8] + 26\,343\,801\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,094\,c[5] - 2\,819\,608\,c[6] + 11\,571\,964\,c[7] - \\
& 26\,332\,936\,c[8] + 25\,200\,945\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,110\,c[5] - 2\,820\,216\,c[6] + 11\,580\,604\,c[7] - 26\,387\,368\,c[8] + 25\,329\,249\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,110\,c[5] - 2\,820\,184\,c[6] + 11\,579\,676\,c[7] - \\
& 26\,378\,440\,c[8] + 25\,300\,737\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,110\,c[5] - 2\,820\,152\,c[6] + 11\,578\,812\,c[7] - 26\,370\,792\,c[8] + 25\,278\,561\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,824\,c[6] + 11\,589\,180\,c[7] - \\
& 26\,440\,520\,c[8] + 25\,451\,217\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,126\,c[5] - 2\,820\,792\,c[6] + 11\,588\,252\,c[7] - 26\,431\,592\,c[8] + 25\,422\,705\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,792\,c[6] + 11\,588\,316\,c[7] - \\
& 26\,432\,872\,c[8] + 25\,429\,041\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,126\,c[5] - 2\,820\,760\,c[6] + 11\,587\,388\,c[7] - 26\,423\,944\,c[8] + 25\,400\,529\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,432\,c[6] + 11\,597\,820\,c[7] - \\
& 26\,494\,952\,c[8] + 25\,579\,521\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,142\,c[5] - 2\,821\,400\,c[6] + 11\,596\,892\,c[7] - 26\,486\,024\,c[8] + 25\,551\,009\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,040\,c[6] + 11\,606\,396\,c[7] - \\
& 26\,548\,104\,c[8] + 25\,701\,489\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,158\,c[5] - 2\,822\,040\,c[6] + 11\,606\,460\,c[7] - 26\,549\,384\,c[8] + 25\,707\,825\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,008\,c[6] + 11\,605\,468\,c[7] - \\
& 26\,539\,176\,c[8] + 25\,672\,977\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,158\,c[5] - 2\,821\,976\,c[6] + 11\,604\,540\,c[7] - 26\,530\,376\,c[8] + 25\,645\,873\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,174\,c[5] - 2\,822\,648\,c[6] + 11\,615\,036\,c[7] - \\
& 26\,602\,536\,c[8] + 25\,829\,793\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + \\
& 418\,718\,c[5] - 2\,812\,552\,c[6] + 11\,505\,868\,c[7] - 26\,023\,840\,c[8] + 24\,623\,577\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,734\,c[5] - 2\,813\,160\,c[6] + 11\,514\,508\,c[7] - \\
& 26\,078\,272\,c[8] + 24\,751\,881\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + \\
& 418\,750\,c[5] - 2\,813\,768\,c[6] + 11\,523\,084\,c[7] - 26\,131\,424\,c[8] + 24\,873\,849\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,750\,c[5] - 2\,813\,768\,c[6] + 11\,523\,148\,c[7] -
\end{aligned}$$

```

26 132 704 c[8] + 24 880 185 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] +
418 766 c[5] - 2 814 408 c[6] + 11 532 652 c[7] - 26 194 784 c[8] + 25 030 665 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 376 c[6] + 11 531 660 c[7] -
26 184 576 c[8] + 24 995 817 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] +
418 766 c[5] - 2 814 376 c[6] + 11 531 724 c[7] - 26 185 856 c[8] + 25 002 153 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 782 c[5] - 2 815 016 c[6] + 11 541 292 c[7] -
26 249 216 c[8] + 25 158 969 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] +
418 342 c[5] - 2 805 528 c[6] + 11 440 700 c[7] - 25 723 672 c[8] + 24 074 721 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 358 c[5] - 2 806 104 c[6] + 11 448 412 c[7] -
25 769 176 c[8] + 24 174 513 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] +
418 374 c[5] - 2 806 744 c[6] + 11 457 916 c[7] - 25 831 256 c[8] + 24 324 993 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3528 c[2] + 109 564 c[3] - 1 915 160 c[4] + 20 586 358 c[5] -
139 155 960 c[6] + 576 675 036 c[7] - 1 336 564 392 c[8] + 1 322 524 161 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3528 c[2] + 109 564 c[3] - 1 915 160 c[4] + 20 586 358 c[5] -
139 155 960 c[6] + 576 675 036 c[7] - 1 336 564 392 c[8] + 1 322 524 161 c[9] < 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 088 c[4] + 420 254 c[5] - 2 841 864 c[6] +
11 783 884 c[7] - 27 334 656 c[8] + 27 081 945 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 088 c[4] + 420 254 c[5] - 2 841 832 c[6] +
11 782 956 c[7] - 27 325 728 c[8] + 27 053 433 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 088 c[4] + 420 270 c[5] - 2 842 472 c[6] +
11 792 332 c[7] - 27 385 376 c[8] + 27 192 649 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 088 c[4] + 420 270 c[5] - 2 842 440 c[6] +
11 791 468 c[7] - 27 377 728 c[8] + 27 170 473 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 088 c[4] + 420 270 c[5] - 2 842 440 c[6] +
11 791 532 c[7] - 27 378 880 c[8] + 27 175 401 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 862 c[5] - 2 834 264 c[6] +
11 710 940 c[7] - 26 987 704 c[8] + 26 426 961 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 862 c[5] - 2 834 232 c[6] +
11 710 076 c[7] - 26 980 056 c[8] + 26 404 785 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 862 c[5] - 2 834 200 c[6] +
11 709 148 c[7] - 26 971 128 c[8] + 26 376 273 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 878 c[5] - 2 834 904 c[6] +
11 720 444 c[7] - 27 049 784 c[8] + 26 577 441 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 878 c[5] - 2 834 872 c[6] +
11 719 516 c[7] - 27 040 856 c[8] + 26 548 929 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 878 c[5] - 2 834 872 c[6] +
11 719 580 c[7] - 27 042 136 c[8] + 26 555 265 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 878 c[5] - 2 834 840 c[6] +
11 718 652 c[7] - 27 033 208 c[8] + 26 526 753 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 878 c[5] - 2 834 840 c[6] +
11 718 716 c[7] - 27 034 488 c[8] + 26 533 089 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 878 c[5] - 2 834 808 c[6] +
11 717 660 c[7] - 27 023 128 c[8] + 26 493 313 c[9] ≥ 0 &&

```

$$\begin{aligned}
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,878 c[5] - 2\,834\,808 c[6] + \\
& \quad 11\,717\,788 c[7] - 27\,025\,560 c[8] + 26\,504\,577 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,480 c[6] + \\
& \quad 11\,728\,092 c[7] - 27\,094\,008 c[8] + 26\,670\,897 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,480 c[6] + \\
& \quad 11\,728\,156 c[7] - 27\,095\,288 c[8] + 26\,677\,233 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,448 c[6] + \\
& \quad 11\,727\,228 c[7] - 27\,086\,360 c[8] + 26\,648\,721 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,448 c[6] + \\
& \quad 11\,727\,292 c[7] - 27\,087\,640 c[8] + 26\,655\,057 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,416 c[6] + \\
& \quad 11\,726\,300 c[7] - 27\,077\,560 c[8] + 26\,621\,617 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,910 c[5] - 2\,836\,056 c[6] + \\
& \quad 11\,735\,804 c[7] - 27\,139\,512 c[8] + 26\,770\,689 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,910 c[5] - 2\,836\,024 c[6] + \\
& \quad 11\,734\,876 c[7] - 27\,130\,712 c[8] + 26\,743\,585 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,926 c[5] - 2\,836\,632 c[6] + \\
& \quad 11\,743\,452 c[7] - 27\,183\,864 c[8] + 26\,865\,553 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,470 c[5] - 2\,826\,632 c[6] + \\
& \quad 11\,637\,132 c[7] - 26\,633\,104 c[8] + 25\,749\,801 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,470 c[5] - 2\,826\,600 c[6] + \\
& \quad 11\,636\,268 c[7] - 26\,625\,456 c[8] + 25\,727\,625 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,272 c[6] + \\
& \quad 11\,646\,700 c[7] - 26\,696\,464 c[8] + 25\,906\,617 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,240 c[6] + \\
& \quad 11\,645\,708 c[7] - 26\,686\,256 c[8] + 25\,871\,769 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,240 c[6] + \\
& \quad 11\,645\,772 c[7] - 26\,687\,536 c[8] + 25\,878\,105 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,208 c[6] + \\
& \quad 11\,644\,844 c[7] - 26\,678\,608 c[8] + 25\,849\,593 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,176 c[6] + \\
& \quad 11\,643\,980 c[7] - 26\,670\,960 c[8] + 25\,827\,417 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,502 c[5] - 2\,827\,848 c[6] + \\
& \quad 11\,654\,348 c[7] - 26\,740\,688 c[8] + 26\,000\,073 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,502 c[5] - 2\,827\,848 c[6] + \\
& \quad 11\,654\,412 c[7] - 26\,741\,968 c[8] + 26\,006\,409 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,502 c[5] - 2\,827\,816 c[6] + \\
& \quad 11\,653\,484 c[7] - 26\,733\,040 c[8] + 25\,977\,897 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,502 c[5] - 2\,827\,784 c[6] + \\
& \quad 11\,652\,556 c[7] - 26\,724\,112 c[8] + 25\,949\,385 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,488 c[6] + \\
& \quad 11\,663\,916 c[7] - 26\,804\,048 c[8] + 26\,156\,889 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,456 c[6] + \\
& \quad 11\,662\,924 c[7] - 26\,793\,840 c[8] + 26\,122\,041 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,456 c[6] + \\
& \quad 11\,662\,988 c[7] - 26\,795\,120 c[8] + 26\,128\,377 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,456 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 11\,663\,052\,c[7] - 26\,796\,400\,c[8] + 26\,134\,713\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,518\,c[5] - 2\,828\,424\,c[6] + \\
& 11\,662\,060\,c[7] - 26\,786\,192\,c[8] + 26\,099\,865\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,518\,c[5] - 2\,828\,424\,c[6] + \\
& 11\,662\,124\,c[7] - 26\,787\,472\,c[8] + 26\,106\,201\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,064\,c[6] + \\
& 11\,671\,564\,c[7] - 26\,848\,272\,c[8] + 26\,250\,345\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,032\,c[6] + \\
& 11\,670\,636\,c[7] - 26\,839\,344\,c[8] + 26\,221\,833\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,000\,c[6] + \\
& 11\,669\,708\,c[7] - 26\,830\,544\,c[8] + 26\,194\,729\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,640\,c[6] + \\
& 11\,679\,212\,c[7] - 26\,892\,496\,c[8] + 26\,343\,801\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,094\,c[5] - 2\,819\,608\,c[6] + \\
& 11\,571\,964\,c[7] - 26\,332\,936\,c[8] + 25\,200\,945\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,110\,c[5] - 2\,820\,216\,c[6] + \\
& 11\,580\,604\,c[7] - 26\,387\,368\,c[8] + 25\,329\,249\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,110\,c[5] - 2\,820\,184\,c[6] + \\
& 11\,579\,676\,c[7] - 26\,378\,440\,c[8] + 25\,300\,737\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,110\,c[5] - 2\,820\,152\,c[6] + \\
& 11\,578\,812\,c[7] - 26\,370\,792\,c[8] + 25\,278\,561\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,824\,c[6] + \\
& 11\,589\,180\,c[7] - 26\,440\,520\,c[8] + 25\,451\,217\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,792\,c[6] + \\
& 11\,588\,252\,c[7] - 26\,431\,592\,c[8] + 25\,422\,705\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,792\,c[6] + \\
& 11\,588\,316\,c[7] - 26\,432\,872\,c[8] + 25\,429\,041\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,760\,c[6] + \\
& 11\,587\,388\,c[7] - 26\,423\,944\,c[8] + 25\,400\,529\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,432\,c[6] + \\
& 11\,597\,820\,c[7] - 26\,494\,952\,c[8] + 25\,579\,521\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,400\,c[6] + \\
& 11\,596\,892\,c[7] - 26\,486\,024\,c[8] + 25\,551\,009\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,040\,c[6] + \\
& 11\,606\,396\,c[7] - 26\,548\,104\,c[8] + 25\,701\,489\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,040\,c[6] + \\
& 11\,606\,460\,c[7] - 26\,549\,384\,c[8] + 25\,707\,825\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,008\,c[6] + \\
& 11\,605\,468\,c[7] - 26\,539\,176\,c[8] + 25\,672\,977\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,821\,976\,c[6] + \\
& 11\,604\,540\,c[7] - 26\,530\,376\,c[8] + 25\,645\,873\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,174\,c[5] - 2\,822\,648\,c[6] + \\
& 11\,615\,036\,c[7] - 26\,602\,536\,c[8] + 25\,829\,793\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,718\,c[5] - 2\,812\,552\,c[6] + \\
& 11\,505\,868\,c[7] - 26\,023\,840\,c[8] + 24\,623\,577\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,734\,c[5] - 2\,813\,160\,c[6] + \\
& 11\,514\,508\,c[7] - 26\,078\,272\,c[8] + 24\,751\,881\,c[9] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 750 c[5] - 2 813 768 c[6] +
  11 523 084 c[7] - 26 131 424 c[8] + 24 873 849 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 750 c[5] - 2 813 768 c[6] +
  11 523 148 c[7] - 26 132 704 c[8] + 24 880 185 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 408 c[6] +
  11 532 652 c[7] - 26 194 784 c[8] + 25 030 665 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 376 c[6] +
  11 531 660 c[7] - 26 184 576 c[8] + 24 995 817 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 376 c[6] +
  11 531 724 c[7] - 26 185 856 c[8] + 25 002 153 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 782 c[5] - 2 815 016 c[6] +
  11 541 292 c[7] - 26 249 216 c[8] + 25 158 969 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 342 c[5] - 2 805 528 c[6] +
  11 440 700 c[7] - 25 723 672 c[8] + 24 074 721 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 358 c[5] - 2 806 104 c[6] +
  11 448 412 c[7] - 25 769 176 c[8] + 24 174 513 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 374 c[5] - 2 806 744 c[6] +
  11 457 916 c[7] - 25 831 256 c[8] + 24 324 993 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 2 880 320, 1 487 377, 443 235, 102 448}

```

```
GCD[0, 0, 0, 0, 0, 2 880 320, 1 487 377, 443 235, 102 448]
```

```
1
```

```
cert.g
```

```
-2 672 728 620
```

```
{0, 0, 0, 0, 0, 2 880 320, 1 487 377, 443 235, 102 448}.Reverse[gpart[listdim17[[103]]]]
-2 672 728 620
```

```
cert.Transpose[A]
```

```

{415 164 988, 163 254 076, 89 815 516, 14 866 460, 104 315 612, 489 837 988, 414 888 932,
 162 978 020, 682 810 436, 430 899 524, 607 861 380, 355 950 468, 532 912 324, 14 590 404,
 281 001 412, 371 961 060, 548 922 916, 297 012 004, 473 973 860, 132 613 796, 238 073 540,
 73 675 332, 14 736 868, 489 561 932, 414 612 876, 859 496 236, 430 623 468, 607 585 324,
 355 674 412, 280 725 356, 548 646 860, 725 608 716, 473 697 804, 221 786 892,
 918 581 164, 489 708 396, 666 670 252, 843 632 108, 414 759 340, 591 721 196,
 607 731 788, 355 820 876, 191 422 668, 296 882 412, 607 309 268, 725 332 660,
 473 421 748, 398 472 692, 666 394 196, 414 483 284, 591 445 140, 339 534 228,
 784 417 588, 532 506 676, 725 479 124, 902 440 980, 473 568 212, 309 170 004,
 843 502 516, 473 145 692, 591 169 084, 532 230 620, 709 192 476, 902 164 924,
 473 292 156, 650 254 012, 1 020 188 316, 590 893 028, 457 005 508, 649 977 956}

```

```
chi = listdim17[[104]]
```

$$(-11+x)^2 (-9+x)^{10} (5+x)^{32} (87-20x+x^2) (-752+255x-28x^2+x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -63, 1669, -24075, 203971, -1013661, 2731959, -3074841},
      {1, -63, 1669, -24067, 203651, -1008973, 2702199, -3005937},
      {1, -63, 1669, -24067, 203651, -1008973, 2702199, -3005809},
      {1, -63, 1669, -24067, 203667, -1009437, 2706535, -3018785},
      {1, -63, 1669, -24067, 203667, -1009405, 2705959, -3016321},
      {1, -63, 1669, -24059, 203331, -1004285, 2672439, -2937033},
      {1, -63, 1669, -24059, 203331, -1004253, 2671799, -2933865},
      {1, -63, 1669, -24059, 203331, -1004253, 2671863, -2934441},
      {1, -63, 1669, -24059, 203347, -1004717, 2676199, -2947417},
      {1, -63, 1669, -24059, 203347, -1004717, 2676263, -2947993},
      {1, -63, 1669, -24059, 203347, -1004685, 2675623, -2944953},
      {1, -63, 1669, -24059, 203363, -1005149, 2680023, -2958505},
      {1, -63, 1669, -24059, 203363, -1005117, 2679447, -2956041},
      {1, -63, 1669, -24051, 203011, -999597, 2642679, -2868129},
      {1, -63, 1669, -24051, 203011, -999565, 2642039, -2864961},
      {1, -63, 1669, -24051, 203011, -999565, 2642103, -2865537},
      {1, -63, 1669, -24051, 203011, -999533, 2641463, -2862369},
      {1, -63, 1669, -24051, 203011, -999533, 2641527, -2862945},
      {1, -63, 1669, -24051, 203027, -999997, 2645863, -2876049},
      {1, -63, 1669, -24051, 203027, -999997, 2645927, -2876625},
      {1, -63, 1669, -24051, 203027, -999965, 2645287, -2873457},
      {1, -63, 1669, -24051, 203043, -1000461, 2650263, -2889601},
      {1, -63, 1669, -24051, 203043, -1000429, 2649623, -2886433},
      {1, -63, 1669, -24051, 203043, -1000429, 2649687, -2887137},
      {1, -63, 1669, -24051, 203043, -1000429, 2649687, -2887009},
      {1, -63, 1669, -24051, 203043, -1000397, 2649047, -2883969},
      {1, -63, 1669, -24051, 203059, -1000861, 2653447, -2897521},
      {1, -63, 1669, -24051, 203059, -1000861, 2653511, -2898225},
      {1, -63, 1669, -24051, 203075, -1001325, 2657847, -2911073},
      {1, -63, 1669, -24043, 202691, -994845, 2611639, -2792889},
      {1, -63, 1669, -24043, 202707, -995309, 2616103, -2807145},
      {1, -63, 1669, -24043, 202707, -995277, 2615463, -2803977},
      {1, -63, 1669, -24043, 202723, -995741, 2619927, -2818233},
      {1, -63, 1669, -24043, 202723, -995709, 2619287, -2815065},
      {1, -63, 1669, -24043, 202723, -995709, 2619351, -2815641},
      {1, -63, 1669, -24043, 202739, -996173, 2623751, -2829321},
      {1, -63, 1669, -24043, 202739, -996141, 2623111, -2826153},
      {1, -63, 1669, -24043, 202755, -996605, 2627511, -2839705},
      {1, -63, 1669, -24035, 202419, -991453, 2593351, -2757249},
      {1, -63, 1669, -24035, 202419, -991421, 2592711, -2754081},
      {1, -63, 1669, -24035, 202419, -991421, 2592775, -2754657},
      {1, -63, 1669, -24035, 202435, -991885, 2597175, -2768337},
```

```
{1, -63, 1669, -24 035, 202 435, -991 853, 2 596 535, -2 765 169},  
{1, -63, 1669, -24 035, 202 451, -992 317, 2 600 935, -2 778 721},  
{1, -63, 1669, -24 027, 202 131, -987 629, 2 571 239, -2 710 521},  
{1, -63, 1669, -24 027, 202 131, -987 597, 2 570 599, -2 707 353},  
{1, -63, 1669, -24 027, 202 147, -988 061, 2 575 063, -2 721 609},  
{1, -63, 1669, -24 019, 201 827, -983 309, 2 544 023, -2 646 369}};
```

```
A // MatrixForm
```



```

1 -63 1669 -24 075 203 971 -1 013 661 2 731 959 -3 074 841
1 -63 1669 -24 067 203 651 -1 008 973 2 702 199 -3 005 937
1 -63 1669 -24 067 203 651 -1 008 973 2 702 199 -3 005 809
1 -63 1669 -24 067 203 667 -1 009 437 2 706 535 -3 018 785
1 -63 1669 -24 067 203 667 -1 009 405 2 705 959 -3 016 321
1 -63 1669 -24 059 203 331 -1 004 285 2 672 439 -2 937 033
1 -63 1669 -24 059 203 331 -1 004 253 2 671 799 -2 933 865
1 -63 1669 -24 059 203 331 -1 004 253 2 671 863 -2 934 441
1 -63 1669 -24 059 203 347 -1 004 717 2 676 199 -2 947 417
1 -63 1669 -24 059 203 347 -1 004 717 2 676 263 -2 947 993
1 -63 1669 -24 059 203 347 -1 004 685 2 675 623 -2 944 953
1 -63 1669 -24 059 203 363 -1 005 149 2 680 023 -2 958 505
1 -63 1669 -24 059 203 363 -1 005 117 2 679 447 -2 956 041
1 -63 1669 -24 051 203 011 -999 597 2 642 679 -2 868 129
1 -63 1669 -24 051 203 011 -999 565 2 642 039 -2 864 961
1 -63 1669 -24 051 203 011 -999 565 2 642 103 -2 865 537
1 -63 1669 -24 051 203 011 -999 533 2 641 463 -2 862 369
1 -63 1669 -24 051 203 011 -999 533 2 641 527 -2 862 945
1 -63 1669 -24 051 203 027 -999 997 2 645 863 -2 876 049
1 -63 1669 -24 051 203 027 -999 997 2 645 927 -2 876 625
1 -63 1669 -24 051 203 027 -999 965 2 645 287 -2 873 457
1 -63 1669 -24 051 203 043 -1 000 461 2 650 263 -2 889 601
1 -63 1669 -24 051 203 043 -1 000 429 2 649 623 -2 886 433
1 -63 1669 -24 051 203 043 -1 000 429 2 649 687 -2 887 137
1 -63 1669 -24 051 203 043 -1 000 429 2 649 687 -2 887 009
1 -63 1669 -24 051 203 043 -1 000 397 2 649 047 -2 883 969
1 -63 1669 -24 051 203 059 -1 000 861 2 653 447 -2 897 521
1 -63 1669 -24 051 203 059 -1 000 861 2 653 511 -2 898 225
1 -63 1669 -24 051 203 075 -1 001 325 2 657 847 -2 911 073
1 -63 1669 -24 043 202 691 -994 845 2 611 639 -2 792 889
1 -63 1669 -24 043 202 707 -995 309 2 616 103 -2 807 145
1 -63 1669 -24 043 202 707 -995 277 2 615 463 -2 803 977
1 -63 1669 -24 043 202 723 -995 741 2 619 927 -2 818 233
1 -63 1669 -24 043 202 723 -995 709 2 619 287 -2 815 065
1 -63 1669 -24 043 202 723 -995 709 2 619 351 -2 815 641
1 -63 1669 -24 043 202 739 -996 173 2 623 751 -2 829 321
1 -63 1669 -24 043 202 739 -996 141 2 623 111 -2 826 153
1 -63 1669 -24 043 202 755 -996 605 2 627 511 -2 839 705
1 -63 1669 -24 035 202 419 -991 453 2 593 351 -2 757 249
1 -63 1669 -24 035 202 419 -991 421 2 592 711 -2 754 081
1 -63 1669 -24 035 202 419 -991 421 2 592 775 -2 754 657
1 -63 1669 -24 035 202 435 -991 885 2 597 175 -2 768 337
1 -63 1669 -24 035 202 435 -991 853 2 596 535 -2 765 169
1 -63 1669 -24 035 202 451 -992 317 2 600 935 -2 778 721
1 -63 1669 -24 027 202 131 -987 629 2 571 239 -2 710 521
1 -63 1669 -24 027 202 131 -987 597 2 570 599 -2 707 353
1 -63 1669 -24 027 202 147 -988 061 2 575 063 -2 721 609
1 -63 1669 -24 019 201 827 -983 309 2 544 023 -2 646 369

```

Dimensions[A]

{48, 8}

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse
{49, -3087, 81781, -1179131, 9974179, -49388349, 132182647, -146965497}
```

```
Array[c, 8].Transpose[A]
```

```
{c[1] - 63 c[2] + 1669 c[3] - 24075 c[4] + 203971 c[5] -
  1013661 c[6] + 2731959 c[7] - 3074841 c[8], c[1] - 63 c[2] + 1669 c[3] -
  24067 c[4] + 203651 c[5] - 1008973 c[6] + 2702199 c[7] - 3005937 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203651 c[5] - 1008973 c[6] +
  2702199 c[7] - 3005809 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
  203667 c[5] - 1009437 c[6] + 2706535 c[7] - 3018785 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203667 c[5] - 1009405 c[6] +
  2705959 c[7] - 3016321 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203331 c[5] - 1004285 c[6] + 2672439 c[7] - 2937033 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203331 c[5] - 1004253 c[6] +
  2671799 c[7] - 2933865 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203331 c[5] - 1004253 c[6] + 2671863 c[7] - 2934441 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203347 c[5] - 1004717 c[6] +
  2676199 c[7] - 2947417 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203347 c[5] - 1004717 c[6] + 2676263 c[7] - 2947993 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203347 c[5] - 1004685 c[6] +
  2675623 c[7] - 2944953 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203363 c[5] - 1005149 c[6] + 2680023 c[7] - 2958505 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203363 c[5] - 1005117 c[6] +
  2679447 c[7] - 2956041 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203011 c[5] - 999597 c[6] + 2642679 c[7] - 2868129 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203011 c[5] - 999565 c[6] +
  2642039 c[7] - 2864961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203011 c[5] - 999565 c[6] + 2642103 c[7] - 2865537 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203011 c[5] - 999533 c[6] +
  2641463 c[7] - 2862369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203011 c[5] - 999533 c[6] + 2641527 c[7] - 2862945 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203027 c[5] - 999997 c[6] +
  2645863 c[7] - 2876049 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203027 c[5] - 999997 c[6] + 2645927 c[7] - 2876625 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203027 c[5] - 999965 c[6] +
  2645287 c[7] - 2873457 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203043 c[5] - 1000461 c[6] + 2650263 c[7] - 2889601 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203043 c[5] - 1000429 c[6] +
  2649623 c[7] - 2886433 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203043 c[5] - 1000429 c[6] + 2649687 c[7] - 2887137 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203043 c[5] - 1000429 c[6] +
  2649687 c[7] - 2887009 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203043 c[5] - 1000397 c[6] + 2649047 c[7] - 2883969 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203059 c[5] - 1000861 c[6] +
  2653447 c[7] - 2897521 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203059 c[5] - 1000861 c[6] + 2653511 c[7] - 2898225 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001325 c[6] +
```

```

2 657 847 c[7] - 2 911 073 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 691 c[5] - 994 845 c[6] + 2 611 639 c[7] - 2 792 889 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 707 c[5] - 995 309 c[6] +
2 616 103 c[7] - 2 807 145 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 707 c[5] - 995 277 c[6] + 2 615 463 c[7] - 2 803 977 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 723 c[5] - 995 741 c[6] +
2 619 927 c[7] - 2 818 233 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 723 c[5] - 995 709 c[6] + 2 619 287 c[7] - 2 815 065 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 723 c[5] - 995 709 c[6] +
2 619 351 c[7] - 2 815 641 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 739 c[5] - 996 173 c[6] + 2 623 751 c[7] - 2 829 321 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 141 c[6] +
2 623 111 c[7] - 2 826 153 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
202 755 c[5] - 996 605 c[6] + 2 627 511 c[7] - 2 839 705 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 419 c[5] - 991 453 c[6] +
2 593 351 c[7] - 2 757 249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 419 c[5] - 991 421 c[6] + 2 592 711 c[7] - 2 754 081 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 419 c[5] - 991 421 c[6] +
2 592 775 c[7] - 2 754 657 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 435 c[5] - 991 885 c[6] + 2 597 175 c[7] - 2 768 337 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 435 c[5] - 991 853 c[6] +
2 596 535 c[7] - 2 765 169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 451 c[5] - 992 317 c[6] + 2 600 935 c[7] - 2 778 721 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 629 c[6] +
2 571 239 c[7] - 2 710 521 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 131 c[5] - 987 597 c[6] + 2 570 599 c[7] - 2 707 353 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 061 c[6] +
2 575 063 c[7] - 2 721 609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 827 c[5] - 983 309 c[6] + 2 544 023 c[7] - 2 646 369 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
9 974 179 c[5] - 49 388 349 c[6] + 132 182 647 c[7] - 146 965 497 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
9 974 179 c[5] - 49 388 349 c[6] + 132 182 647 c[7] - 146 965 497 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 075 c[4] + 203 971 c[5] - 1 013 661 c[6] +
2 731 959 c[7] - 3 074 841 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 651 c[5] - 1 008 973 c[6] + 2 702 199 c[7] - 3 005 937 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] - 1 008 973 c[6] +
2 702 199 c[7] - 3 005 809 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 667 c[5] - 1 009 437 c[6] + 2 706 535 c[7] - 3 018 785 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 667 c[5] - 1 009 405 c[6] +
2 705 959 c[7] - 3 016 321 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 331 c[5] - 1 004 285 c[6] + 2 672 439 c[7] - 2 937 033 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 331 c[5] - 1 004 253 c[6] +

```

$$\begin{aligned}
& 2\,671\,799\,c[7] - 2\,933\,865\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,253\,c[6] + 2\,671\,863\,c[7] - 2\,934\,441\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,717\,c[6] + \\
& 2\,676\,199\,c[7] - 2\,947\,417\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,717\,c[6] + 2\,676\,263\,c[7] - 2\,947\,993\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,685\,c[6] + \\
& 2\,675\,623\,c[7] - 2\,944\,953\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,149\,c[6] + 2\,680\,023\,c[7] - 2\,958\,505\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,117\,c[6] + \\
& 2\,679\,447\,c[7] - 2\,956\,041\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,597\,c[6] + 2\,642\,679\,c[7] - 2\,868\,129\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,565\,c[6] + \\
& 2\,642\,039\,c[7] - 2\,864\,961\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,565\,c[6] + 2\,642\,103\,c[7] - 2\,865\,537\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,533\,c[6] + \\
& 2\,641\,463\,c[7] - 2\,862\,369\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,533\,c[6] + 2\,641\,527\,c[7] - 2\,862\,945\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,997\,c[6] + \\
& 2\,645\,863\,c[7] - 2\,876\,049\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,997\,c[6] + 2\,645\,927\,c[7] - 2\,876\,625\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,965\,c[6] + \\
& 2\,645\,287\,c[7] - 2\,873\,457\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,461\,c[6] + 2\,650\,263\,c[7] - 2\,889\,601\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - \\
& 1\,000\,429\,c[6] + 2\,649\,623\,c[7] - 2\,886\,433\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,429\,c[6] + \\
& 2\,649\,687\,c[7] - 2\,887\,137\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,429\,c[6] + 2\,649\,687\,c[7] - 2\,887\,009\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,397\,c[6] + \\
& 2\,649\,047\,c[7] - 2\,883\,969\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,861\,c[6] + 2\,653\,447\,c[7] - 2\,897\,521\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,861\,c[6] + \\
& 2\,653\,511\,c[7] - 2\,898\,225\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,847\,c[7] - 2\,911\,073\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,845\,c[6] + \\
& 2\,611\,639\,c[7] - 2\,792\,889\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,309\,c[6] + 2\,616\,103\,c[7] - 2\,807\,145\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,277\,c[6] + \\
& 2\,615\,463\,c[7] - 2\,803\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,741\,c[6] + 2\,619\,927\,c[7] - 2\,818\,233\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] + \\
& 2\,619\,287\,c[7] - 2\,815\,065\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,351\,c[7] - 2\,815\,641\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& 2\,623\,751\,c[7] - 2\,829\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,111\,c[7] - 2\,826\,153\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] +
\end{aligned}$$

```

2 627 511 c[7] - 2 839 705 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 419 c[5] - 991 453 c[6] + 2 593 351 c[7] - 2 757 249 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 419 c[5] - 991 421 c[6] +
2 592 711 c[7] - 2 754 081 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 419 c[5] - 991 421 c[6] + 2 592 775 c[7] - 2 754 657 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 435 c[5] - 991 885 c[6] +
2 597 175 c[7] - 2 768 337 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 435 c[5] - 991 853 c[6] + 2 596 535 c[7] - 2 765 169 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 317 c[6] +
2 600 935 c[7] - 2 778 721 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 131 c[5] - 987 629 c[6] + 2 571 239 c[7] - 2 710 521 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 597 c[6] +
2 570 599 c[7] - 2 707 353 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 147 c[5] - 988 061 c[6] + 2 575 063 c[7] - 2 721 609 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 309 c[6] +
2 544 023 c[7] - 2 646 369 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, 0, 0, 262 016, 152 699, 49 290}

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cert.g
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-308 984 461
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cert.Transpose[A]
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244 965 075, 226 346 771, 293 154 643, 127 287 171, 194 095 043, 169 167 619,
175 476 739, 235 975 491, 118 297 587, 93 370 163, 619 683, 467 857 331,
325 252 003, 392 059 875, 249 454 547, 316 262 419, 297 644 115, 173 657 091,
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chi = listdim17[[105]]
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(-11 + x)2 (-9 + x)10 (5 + x)32 (-65 392 + 37 225 x - 8288 x2 + 902 x3 - 48 x4 + x5)
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CoefficientList[feasibleinterlacingpolylist[chi], x]
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1	-63	1669	-24 051	203 059	-1 000 893	2 654 215	-2 901 969
1	-63	1669	-24 051	203 059	-1 000 861	2 653 511	-2 898 225
1	-63	1669	-24 051	203 059	-1 000 861	2 653 575	-2 898 801
1	-63	1669	-24 051	203 059	-1 000 829	2 652 871	-2 895 057
1	-63	1669	-24 051	203 059	-1 000 797	2 652 231	-2 891 889
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1	-63	1669	-24 043	202 691	-994 717	2 609 271	-2 781 945
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1 -63 1669 -24 019 201 811 -982 781 2 538 279 -2 625 777

```

Dimensions[A]

{144, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81 781, -1 179 131, 9 974 179, -49 386 941, 132 159 991, -146 884 601}

Array[c, 8].Transpose[A]

```

{c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] -
  1 008 941 c[6] + 2 701 687 c[7] - 3 003 921 c[8], c[1] - 63 c[2] + 1669 c[3] -
  24 067 c[4] + 203 667 c[5] - 1 009 405 c[6] + 2 706 023 c[7] - 3 017 025 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 667 c[5] - 1 009 405 c[6] +
  2 706 087 c[7] - 3 017 601 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 667 c[5] - 1 009 373 c[6] + 2 705 447 c[7] - 3 014 433 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 683 c[5] - 1 009 837 c[6] +
  2 709 847 c[7] - 3 028 113 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +

```

$$\begin{aligned}
& 203\,331\,c[5] - 1\,004\,253\,c[6] + 2\,671\,991\,c[7] - 2\,935\,593\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,221\,c[6] + \\
& 2\,671\,223\,c[7] - 2\,931\,273\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,221\,c[6] + 2\,671\,287\,c[7] - 2\,931\,849\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,221\,c[6] + \\
& 2\,671\,351\,c[7] - 2\,932\,425\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,189\,c[6] + 2\,670\,647\,c[7] - 2\,928\,681\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,749\,c[6] + \\
& 2\,676\,967\,c[7] - 2\,951\,865\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,717\,c[6] + 2\,676\,263\,c[7] - 2\,948\,121\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,717\,c[6] + \\
& 2\,676\,327\,c[7] - 2\,948\,697\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,717\,c[6] + 2\,676\,391\,c[7] - 2\,949\,273\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,685\,c[6] + \\
& 2\,675\,623\,c[7] - 2\,944\,953\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,685\,c[6] + 2\,675\,687\,c[7] - 2\,945\,529\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,685\,c[6] + \\
& 2\,675\,751\,c[7] - 2\,946\,105\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,653\,c[6] + 2\,674\,983\,c[7] - 2\,941\,785\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,653\,c[6] + \\
& 2\,675\,047\,c[7] - 2\,942\,361\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,181\,c[6] + 2\,680\,727\,c[7] - 2\,962\,377\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,149\,c[6] + \\
& 2\,680\,087\,c[7] - 2\,959\,209\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,149\,c[6] + 2\,680\,151\,c[7] - 2\,959\,785\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,117\,c[6] + \\
& 2\,679\,447\,c[7] - 2\,956\,041\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,117\,c[6] + 2\,679\,511\,c[7] - 2\,956\,617\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,379\,c[5] - 1\,005\,581\,c[6] + \\
& 2\,683\,911\,c[7] - 2\,970\,297\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,037\,c[6] + 2\,636\,487\,c[7] - 2\,846\,097\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,005\,c[6] + \\
& 2\,635\,847\,c[7] - 2\,842\,929\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,533\,c[6] + 2\,641\,527\,c[7] - 2\,862\,945\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,501\,c[6] + \\
& 2\,640\,759\,c[7] - 2\,858\,625\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,501\,c[6] + 2\,640\,823\,c[7] - 2\,859\,201\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,501\,c[6] + \\
& 2\,640\,887\,c[7] - 2\,859\,777\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,501\,c[6] + 2\,640\,951\,c[7] - 2\,860\,353\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,469\,c[6] + \\
& 2\,640\,183\,c[7] - 2\,856\,033\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,469\,c[6] + 2\,640\,247\,c[7] - 2\,856\,609\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,469\,c[6] + \\
& 2\,640\,311\,c[7] - 2\,857\,185\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 1\,000\,029\,c[6] + 2\,646\,503\,c[7] - 2\,879\,217\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 1\,000\,029\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,646\,567\,c[7] - 2\,879\,793\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,997\,c[6] + 2\,645\,863\,c[7] - 2\,876\,049\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,997\,c[6] + \\
& 2\,645\,927\,c[7] - 2\,876\,625\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,997\,c[6] + 2\,645\,991\,c[7] - 2\,877\,201\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,965\,c[6] + \\
& 2\,645\,223\,c[7] - 2\,872\,881\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,965\,c[6] + 2\,645\,287\,c[7] - 2\,873\,457\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,965\,c[6] + \\
& 2\,645\,351\,c[7] - 2\,874\,033\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,965\,c[6] + 2\,645\,415\,c[7] - 2\,874\,609\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,933\,c[6] + \\
& 2\,644\,583\,c[7] - 2\,869\,713\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,933\,c[6] + 2\,644\,647\,c[7] - 2\,870\,289\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,933\,c[6] + \\
& 2\,644\,711\,c[7] - 2\,870\,865\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,901\,c[6] + 2\,644\,071\,c[7] - 2\,867\,697\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,493\,c[6] + \\
& 2\,650\,967\,c[7] - 2\,893\,473\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,493\,c[6] + 2\,651\,031\,c[7] - 2\,894\,049\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,461\,c[6] + \\
& 2\,650\,327\,c[7] - 2\,890\,305\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,461\,c[6] + 2\,650\,391\,c[7] - 2\,890\,881\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,461\,c[6] + \\
& 2\,650\,455\,c[7] - 2\,891\,457\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,429\,c[6] + 2\,649\,687\,c[7] - 2\,887\,137\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,429\,c[6] + \\
& 2\,649\,751\,c[7] - 2\,887\,713\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,429\,c[6] + 2\,649\,815\,c[7] - 2\,888\,289\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,397\,c[6] + \\
& 2\,649\,047\,c[7] - 2\,883\,969\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,397\,c[6] + 2\,649\,111\,c[7] - 2\,884\,545\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,365\,c[6] + \\
& 2\,648\,407\,c[7] - 2\,880\,801\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,365\,c[6] + 2\,648\,471\,c[7] - 2\,881\,377\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,925\,c[6] + \\
& 2\,654\,791\,c[7] - 2\,904\,561\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,893\,c[6] + 2\,654\,151\,c[7] - 2\,901\,393\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& 2\,654\,215\,c[7] - 2\,901\,969\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,861\,c[6] + 2\,653\,511\,c[7] - 2\,898\,225\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,861\,c[6] + \\
& 2\,653\,575\,c[7] - 2\,898\,801\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,829\,c[6] + 2\,652\,871\,c[7] - 2\,895\,057\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,797\,c[6] + \\
& 2\,652\,231\,c[7] - 2\,891\,889\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,975\,c[7] - 2\,912\,481\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,675 c[5] - 994\,285 c[6] + \\
& \quad 2\,605\,383 c[7] - 2\,770\,281 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,691 c[5] - 994\,813 c[6] + 2\,610\,999 c[7] - 2\,789\,721 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,781 c[6] + \\
& \quad 2\,610\,359 c[7] - 2\,786\,553 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,691 c[5] - 994\,781 c[6] + 2\,610\,423 c[7] - 2\,787\,129 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,749 c[6] + \\
& \quad 2\,609\,783 c[7] - 2\,783\,961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,691 c[5] - 994\,749 c[6] + 2\,609\,847 c[7] - 2\,784\,537 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,717 c[6] + \\
& \quad 2\,609\,271 c[7] - 2\,781\,945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,277 c[6] + 2\,615\,463 c[7] - 2\,803\,977 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,245 c[6] + \\
& \quad 2\,614\,823 c[7] - 2\,800\,809 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,245 c[6] + 2\,614\,887 c[7] - 2\,801\,385 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,213 c[6] + \\
& \quad 2\,614\,183 c[7] - 2\,797\,641 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,213 c[6] + 2\,614\,247 c[7] - 2\,798\,217 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,213 c[6] + \\
& \quad 2\,614\,311 c[7] - 2\,798\,793 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,181 c[6] + 2\,613\,607 c[7] - 2\,795\,049 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,181 c[6] + \\
& \quad 2\,613\,671 c[7] - 2\,795\,625 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,741 c[6] + 2\,619\,927 c[7] - 2\,818\,233 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,709 c[6] + \\
& \quad 2\,619\,287 c[7] - 2\,815\,065 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,709 c[6] + 2\,619\,351 c[7] - 2\,815\,641 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,677 c[6] + \\
& \quad 2\,618\,647 c[7] - 2\,811\,897 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,677 c[6] + 2\,618\,711 c[7] - 2\,812\,473 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,677 c[6] + \\
& \quad 2\,618\,775 c[7] - 2\,813\,049 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,645 c[6] + 2\,618\,007 c[7] - 2\,808\,729 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,645 c[6] + \\
& \quad 2\,618\,071 c[7] - 2\,809\,305 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,613 c[6] + 2\,617\,431 c[7] - 2\,806\,137 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,205 c[6] + \\
& \quad 2\,624\,391 c[7] - 2\,832\,489 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,173 c[6] + 2\,623\,751 c[7] - 2\,829\,321 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,173 c[6] + \\
& \quad 2\,623\,815 c[7] - 2\,829\,897 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,141 c[6] + 2\,623\,111 c[7] - 2\,826\,153 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,141 c[6] + \\
& \quad 2\,623\,175 c[7] - 2\,826\,729 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,109 c[6] + 2\,622\,471 c[7] - 2\,822\,985 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,109 c[6] + \\
& \quad 2\,622\,535 c[7] - 2\,823\,561 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,831\,c[7] - 2\,819\,817\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,669\,c[6] + \\
& 2\,628\,855\,c[7] - 2\,846\,745\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,215\,c[7] - 2\,843\,577\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,279\,c[7] - 2\,844\,153\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,575\,c[7] - 2\,840\,409\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,639\,c[7] - 2\,840\,985\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,935\,c[7] - 2\,837\,241\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,541\,c[6] + \\
& 2\,626\,295\,c[7] - 2\,834\,073\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,069\,c[6] + 2\,632\,039\,c[7] - 2\,854\,665\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 990\,029\,c[6] + \\
& 2\,579\,319\,c[7] - 2\,711\,313\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,493\,c[6] + 2\,583\,783\,c[7] - 2\,725\,569\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,461\,c[6] + \\
& 2\,583\,143\,c[7] - 2\,722\,401\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,207\,c[7] - 2\,722\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,429\,c[6] + \\
& 2\,582\,631\,c[7] - 2\,720\,385\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,957\,c[6] + 2\,588\,247\,c[7] - 2\,739\,825\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,925\,c[6] + \\
& 2\,587\,607\,c[7] - 2\,736\,657\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,925\,c[6] + 2\,587\,671\,c[7] - 2\,737\,233\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,893\,c[6] + \\
& 2\,587\,031\,c[7] - 2\,734\,065\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,893\,c[6] + 2\,587\,095\,c[7] - 2\,734\,641\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,421\,c[6] + \\
& 2\,592\,711\,c[7] - 2\,754\,081\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,071\,c[7] - 2\,750\,913\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,135\,c[7] - 2\,751\,489\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,431\,c[7] - 2\,747\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,495\,c[7] - 2\,748\,321\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,175\,c[7] - 2\,768\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,535\,c[7] - 2\,765\,169\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,599\,c[7] - 2\,765\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,821\,c[6] + \\
& 2\,595\,895\,c[7] - 2\,762\,001\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,789\,c[6] + 2\,595\,255\,c[7] - 2\,758\,833\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,639\,c[7] - 2\,782\,593\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,999\,c[7] - 2\,779\,425\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] +
\end{aligned}$$

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2 606 743 c[7] - 2 800 017 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 467 c[5] - 992 813 c[6] + 2 606 103 c[7] - 2 796 849 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 173 c[6] +
2 556 567 c[7] - 2 661 417 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 099 c[5] - 986 637 c[6] + 2 561 031 c[7] - 2 675 673 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 605 c[6] +
2 560 391 c[7] - 2 672 505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 099 c[5] - 986 605 c[6] + 2 560 455 c[7] - 2 673 081 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 101 c[6] +
2 565 495 c[7] - 2 689 929 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 069 c[6] + 2 564 855 c[7] - 2 686 761 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 037 c[6] +
2 564 215 c[7] - 2 683 593 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 131 c[5] - 987 565 c[6] + 2 569 959 c[7] - 2 704 185 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 533 c[6] +
2 569 319 c[7] - 2 701 017 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 147 c[5] - 988 061 c[6] + 2 575 063 c[7] - 2 721 609 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 317 c[6] +
2 533 815 c[7] - 2 611 521 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 781 c[6] + 2 538 279 c[7] - 2 625 777 c[8] }

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Array[c, 8].g

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49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
9 974 179 c[5] - 49 386 941 c[6] + 132 159 991 c[7] - 146 884 601 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
9 974 179 c[5] - 49 386 941 c[6] + 132 159 991 c[7] - 146 884 601 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] - 1 008 941 c[6] +
2 701 687 c[7] - 3 003 921 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 667 c[5] - 1 009 405 c[6] + 2 706 023 c[7] - 3 017 025 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 667 c[5] - 1 009 405 c[6] +
2 706 087 c[7] - 3 017 601 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 667 c[5] - 1 009 373 c[6] + 2 705 447 c[7] - 3 014 433 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 683 c[5] - 1 009 837 c[6] +
2 709 847 c[7] - 3 028 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 331 c[5] - 1 004 253 c[6] + 2 671 991 c[7] - 2 935 593 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 331 c[5] - 1 004 221 c[6] +
2 671 223 c[7] - 2 931 273 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 331 c[5] - 1 004 221 c[6] + 2 671 287 c[7] - 2 931 849 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 331 c[5] - 1 004 221 c[6] +
2 671 351 c[7] - 2 932 425 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 331 c[5] - 1 004 189 c[6] + 2 670 647 c[7] - 2 928 681 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 347 c[5] - 1 004 749 c[6] +
2 676 967 c[7] - 2 951 865 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 347 c[5] - 1 004 717 c[6] + 2 676 263 c[7] - 2 948 121 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 347 c[5] - 1 004 717 c[6] +

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$$\begin{aligned}
& 2\,676\,327\,c[7] - 2\,948\,697\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,717\,c[6] + 2\,676\,391\,c[7] - 2\,949\,273\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,685\,c[6] + \\
& 2\,675\,623\,c[7] - 2\,944\,953\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,685\,c[6] + 2\,675\,687\,c[7] - 2\,945\,529\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,685\,c[6] + \\
& 2\,675\,751\,c[7] - 2\,946\,105\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,653\,c[6] + 2\,674\,983\,c[7] - 2\,941\,785\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,653\,c[6] + \\
& 2\,675\,047\,c[7] - 2\,942\,361\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,181\,c[6] + 2\,680\,727\,c[7] - 2\,962\,377\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,149\,c[6] + \\
& 2\,680\,087\,c[7] - 2\,959\,209\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,149\,c[6] + 2\,680\,151\,c[7] - 2\,959\,785\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,117\,c[6] + \\
& 2\,679\,447\,c[7] - 2\,956\,041\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,117\,c[6] + 2\,679\,511\,c[7] - 2\,956\,617\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,379\,c[5] - 1\,005\,581\,c[6] + \\
& 2\,683\,911\,c[7] - 2\,970\,297\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 202\,995\,c[5] - 999\,037\,c[6] + 2\,636\,487\,c[7] - 2\,846\,097\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - 999\,005\,c[6] + \\
& 2\,635\,847\,c[7] - 2\,842\,929\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,533\,c[6] + 2\,641\,527\,c[7] - 2\,862\,945\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,501\,c[6] + \\
& 2\,640\,759\,c[7] - 2\,858\,625\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,501\,c[6] + 2\,640\,823\,c[7] - 2\,859\,201\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,501\,c[6] + \\
& 2\,640\,887\,c[7] - 2\,859\,777\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,501\,c[6] + 2\,640\,951\,c[7] - 2\,860\,353\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,469\,c[6] + \\
& 2\,640\,183\,c[7] - 2\,856\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,469\,c[6] + 2\,640\,247\,c[7] - 2\,856\,609\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,469\,c[6] + \\
& 2\,640\,311\,c[7] - 2\,857\,185\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 1\,000\,029\,c[6] + 2\,646\,503\,c[7] - 2\,879\,217\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 1\,000\,029\,c[6] + \\
& 2\,646\,567\,c[7] - 2\,879\,793\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,997\,c[6] + 2\,645\,863\,c[7] - 2\,876\,049\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,997\,c[6] + \\
& 2\,645\,927\,c[7] - 2\,876\,625\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,997\,c[6] + 2\,645\,991\,c[7] - 2\,877\,201\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,965\,c[6] + \\
& 2\,645\,223\,c[7] - 2\,872\,881\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,965\,c[6] + 2\,645\,287\,c[7] - 2\,873\,457\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,965\,c[6] + \\
& 2\,645\,351\,c[7] - 2\,874\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,027\,c[5] - 999\,965\,c[6] + 2\,645\,415\,c[7] - 2\,874\,609\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& \quad 2\,644\,583 c[7] - 2\,869\,713 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,933 c[6] + 2\,644\,647 c[7] - 2\,870\,289 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& \quad 2\,644\,711 c[7] - 2\,870\,865 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,901 c[6] + 2\,644\,071 c[7] - 2\,867\,697 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - \\
& \quad 1\,000\,493 c[6] + 2\,650\,967 c[7] - 2\,893\,473 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,493 c[6] + \\
& \quad 2\,651\,031 c[7] - 2\,894\,049 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,327 c[7] - 2\,890\,305 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,461 c[6] + \\
& \quad 2\,650\,391 c[7] - 2\,890\,881 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,455 c[7] - 2\,891\,457 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& \quad 2\,649\,687 c[7] - 2\,887\,137 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,751 c[7] - 2\,887\,713 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& \quad 2\,649\,815 c[7] - 2\,888\,289 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,397 c[6] + 2\,649\,047 c[7] - 2\,883\,969 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] + \\
& \quad 2\,649\,111 c[7] - 2\,884\,545 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,365 c[6] + 2\,648\,407 c[7] - 2\,880\,801 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,365 c[6] + \\
& \quad 2\,648\,471 c[7] - 2\,881\,377 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,925 c[6] + 2\,654\,791 c[7] - 2\,904\,561 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,893 c[6] + \\
& \quad 2\,654\,151 c[7] - 2\,901\,393 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,893 c[6] + 2\,654\,215 c[7] - 2\,901\,969 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,861 c[6] + \\
& \quad 2\,653\,511 c[7] - 2\,898\,225 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,861 c[6] + 2\,653\,575 c[7] - 2\,898\,801 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,829 c[6] + \\
& \quad 2\,652\,871 c[7] - 2\,895\,057 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,797 c[6] + 2\,652\,231 c[7] - 2\,891\,889 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,075 c[5] - 1\,001\,325 c[6] + \\
& \quad 2\,657\,975 c[7] - 2\,912\,481 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,675 c[5] - 994\,285 c[6] + 2\,605\,383 c[7] - 2\,770\,281 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,813 c[6] + \\
& \quad 2\,610\,999 c[7] - 2\,789\,721 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,691 c[5] - 994\,781 c[6] + 2\,610\,359 c[7] - 2\,786\,553 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,781 c[6] + \\
& \quad 2\,610\,423 c[7] - 2\,787\,129 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,691 c[5] - 994\,749 c[6] + 2\,609\,783 c[7] - 2\,783\,961 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,749 c[6] + \\
& \quad 2\,609\,847 c[7] - 2\,784\,537 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,691 c[5] - 994\,717 c[6] + 2\,609\,271 c[7] - 2\,781\,945 c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,277 c[6] + \\
& \quad 2\,615\,463 c[7] - 2\,803\,977 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,245 c[6] + 2\,614\,823 c[7] - 2\,800\,809 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,245 c[6] + \\
& \quad 2\,614\,887 c[7] - 2\,801\,385 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,213 c[6] + 2\,614\,183 c[7] - 2\,797\,641 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,213 c[6] + \\
& \quad 2\,614\,247 c[7] - 2\,798\,217 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,213 c[6] + 2\,614\,311 c[7] - 2\,798\,793 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,181 c[6] + \\
& \quad 2\,613\,607 c[7] - 2\,795\,049 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,181 c[6] + 2\,613\,671 c[7] - 2\,795\,625 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,741 c[6] + \\
& \quad 2\,619\,927 c[7] - 2\,818\,233 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,709 c[6] + 2\,619\,287 c[7] - 2\,815\,065 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,709 c[6] + \\
& \quad 2\,619\,351 c[7] - 2\,815\,641 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,677 c[6] + 2\,618\,647 c[7] - 2\,811\,897 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,677 c[6] + \\
& \quad 2\,618\,711 c[7] - 2\,812\,473 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,677 c[6] + 2\,618\,775 c[7] - 2\,813\,049 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,645 c[6] + \\
& \quad 2\,618\,007 c[7] - 2\,808\,729 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,645 c[6] + 2\,618\,071 c[7] - 2\,809\,305 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,613 c[6] + \\
& \quad 2\,617\,431 c[7] - 2\,806\,137 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,205 c[6] + 2\,624\,391 c[7] - 2\,832\,489 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,173 c[6] + \\
& \quad 2\,623\,751 c[7] - 2\,829\,321 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,173 c[6] + 2\,623\,815 c[7] - 2\,829\,897 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,141 c[6] + \\
& \quad 2\,623\,111 c[7] - 2\,826\,153 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,141 c[6] + 2\,623\,175 c[7] - 2\,826\,729 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,109 c[6] + \\
& \quad 2\,622\,471 c[7] - 2\,822\,985 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,109 c[6] + 2\,622\,535 c[7] - 2\,823\,561 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,077 c[6] + \\
& \quad 2\,621\,831 c[7] - 2\,819\,817 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,669 c[6] + 2\,628\,855 c[7] - 2\,846\,745 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,637 c[6] + \\
& \quad 2\,628\,215 c[7] - 2\,843\,577 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,637 c[6] + 2\,628\,279 c[7] - 2\,844\,153 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,605 c[6] + \\
& \quad 2\,627\,575 c[7] - 2\,840\,409 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,605 c[6] + 2\,627\,639 c[7] - 2\,840\,985 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,573 c[6] + \\
& \quad 2\,626\,935 c[7] - 2\,837\,241 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,295\,c[7] - 2\,834\,073\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& \quad 2\,632\,039\,c[7] - 2\,854\,665\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,371\,c[5] - 990\,029\,c[6] + 2\,579\,319\,c[7] - 2\,711\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,493\,c[6] + \\
& \quad 2\,583\,783\,c[7] - 2\,725\,569\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,143\,c[7] - 2\,722\,401\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,461\,c[6] + \\
& \quad 2\,583\,207\,c[7] - 2\,722\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,387\,c[5] - 990\,429\,c[6] + 2\,582\,631\,c[7] - 2\,720\,385\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,957\,c[6] + \\
& \quad 2\,588\,247\,c[7] - 2\,739\,825\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,403\,c[5] - 990\,925\,c[6] + 2\,587\,607\,c[7] - 2\,736\,657\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,925\,c[6] + \\
& \quad 2\,587\,671\,c[7] - 2\,737\,233\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,403\,c[5] - 990\,893\,c[6] + 2\,587\,031\,c[7] - 2\,734\,065\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,893\,c[6] + \\
& \quad 2\,587\,095\,c[7] - 2\,734\,641\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,419\,c[5] - 991\,421\,c[6] + 2\,592\,711\,c[7] - 2\,754\,081\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& \quad 2\,592\,071\,c[7] - 2\,750\,913\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,135\,c[7] - 2\,751\,489\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& \quad 2\,591\,431\,c[7] - 2\,747\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,495\,c[7] - 2\,748\,321\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& \quad 2\,597\,175\,c[7] - 2\,768\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,535\,c[7] - 2\,765\,169\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& \quad 2\,596\,599\,c[7] - 2\,765\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
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& \quad 2\,606\,103\,c[7] - 2\,796\,849\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,083\,c[5] - 986\,173\,c[6] + 2\,556\,567\,c[7] - 2\,661\,417\,c[8] \geq 0 \&\& \\
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& \quad 2\,561\,031\,c[7] - 2\,675\,673\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
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& \quad 2\,560\,455\,c[7] - 2\,673\,081\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
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\end{aligned}$$

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2 564 855 c[7] - 2 686 761 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 037 c[6] + 2 564 215 c[7] - 2 683 593 c[8] ≥ 0 &&
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201 795 c[5] - 982 317 c[6] + 2 533 815 c[7] - 2 611 521 c[8] ≥ 0 &&
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cert.g
-200 444 503

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-200 444 503

cert.Transpose[A]
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```



```
{1, -63, 1669, -24 027, 202 115, -987 037, 2 564 215, -2 683 593},
{1, -63, 1669, -24 027, 202 115, -987 005, 2 563 575, -2 680 425},
{1, -63, 1669, -24 019, 201 779, -981 821, 2 528 711, -2 594 097},
{1, -63, 1669, -24 019, 201 779, -981 789, 2 528 135, -2 591 505},
{1, -63, 1669, -24 019, 201 795, -982 285, 2 533 175, -2 608 353},
{1, -63, 1669, -24 019, 201 795, -982 253, 2 532 535, -2 605 185},
{1, -63, 1669, -24 011, 201 475, -977 501, 2 501 495, -2 529 945}};
```

```
A // MatrixForm
```

```
( 1 -63 1669 -24 067 203 651 -1 008 909 2 701 175 -3 001 905 )
1 -63 1669 -24 067 203 667 -1 009 405 2 706 215 -3 018 753
1 -63 1669 -24 067 203 667 -1 009 373 2 705 575 -3 015 585
1 -63 1669 -24 067 203 683 -1 009 837 2 709 975 -3 029 265
1 -63 1669 -24 059 203 315 -1 003 693 2 665 735 -2 912 985
1 -63 1669 -24 059 203 331 -1 004 189 2 670 775 -2 929 833
1 -63 1669 -24 059 203 331 -1 004 157 2 670 135 -2 926 665
1 -63 1669 -24 059 203 347 -1 004 717 2 676 455 -2 949 849
1 -63 1669 -24 059 203 347 -1 004 685 2 675 751 -2 946 105
1 -63 1669 -24 059 203 347 -1 004 685 2 675 815 -2 946 681
1 -63 1669 -24 059 203 347 -1 004 685 2 675 879 -2 947 257
1 -63 1669 -24 059 203 347 -1 004 653 2 675 111 -2 942 937
1 -63 1669 -24 059 203 347 -1 004 653 2 675 175 -2 943 513
1 -63 1669 -24 059 203 347 -1 004 621 2 674 535 -2 940 345
1 -63 1669 -24 059 203 363 -1 005 181 2 680 791 -2 962 953
1 -63 1669 -24 059 203 363 -1 005 181 2 680 855 -2 963 529
1 -63 1669 -24 059 203 363 -1 005 149 2 680 087 -2 959 209
1 -63 1669 -24 059 203 363 -1 005 149 2 680 151 -2 959 785
1 -63 1669 -24 059 203 363 -1 005 149 2 680 215 -2 960 361
1 -63 1669 -24 059 203 363 -1 005 149 2 680 279 -2 960 937
1 -63 1669 -24 059 203 363 -1 005 117 2 679 511 -2 956 617
1 -63 1669 -24 059 203 363 -1 005 117 2 679 575 -2 957 193
1 -63 1669 -24 059 203 363 -1 005 085 2 678 935 -2 954 025
1 -63 1669 -24 059 203 379 -1 005 613 2 684 551 -2 973 465
1 -63 1669 -24 059 203 379 -1 005 581 2 683 911 -2 970 297
1 -63 1669 -24 059 203 379 -1 005 581 2 683 975 -2 970 873
1 -63 1669 -24 059 203 379 -1 005 549 2 683 335 -2 967 705
1 -63 1669 -24 059 203 395 -1 006 013 2 687 735 -2 981 385
1 -63 1669 -24 051 202 979 -998 477 2 630 295 -2 824 065
1 -63 1669 -24 051 202 995 -998 973 2 635 271 -2 840 337
1 -63 1669 -24 051 202 995 -998 941 2 634 695 -2 837 745
1 -63 1669 -24 051 203 011 -999 469 2 640 311 -2 857 185
1 -63 1669 -24 051 203 011 -999 437 2 639 671 -2 854 017
1 -63 1669 -24 051 203 011 -999 437 2 639 735 -2 854 593
1 -63 1669 -24 051 203 011 -999 405 2 639 095 -2 851 425
1 -63 1669 -24 051 203 027 -999 965 2 645 287 -2 873 457
1 -63 1669 -24 051 203 027 -999 965 2 645 351 -2 874 033
1 -63 1669 -24 051 203 027 -999 933 2 644 583 -2 869 713
1 -63 1669 -24 051 203 027 -999 933 2 644 647 -2 870 289
1 -63 1669 -24 051 203 027 -999 933 2 644 711 -2 870 865
1 -63 1669 -24 051 203 027 -999 933 2 644 775 -2 871 441
1 -63 1669 -24 051 203 027 -999 901 2 644 071 -2 867 697
1 -63 1669 -24 051 203 027 -999 901 2 644 135 -2 868 273
1 -63 1669 -24 051 203 027 -999 869 2 643 495 -2 865 105
1 -63 1669 -24 051 203 043 -1 000 461 2 650 327 -2 890 305 )
```

1	-63	1669	-24 051	203 043	-1 000 429	2 649 687	-2 887 137
1	-63	1669	-24 051	203 043	-1 000 429	2 649 751	-2 887 713
1	-63	1669	-24 051	203 043	-1 000 429	2 649 815	-2 888 289
1	-63	1669	-24 051	203 043	-1 000 397	2 649 047	-2 883 969
1	-63	1669	-24 051	203 043	-1 000 397	2 649 111	-2 884 545
1	-63	1669	-24 051	203 043	-1 000 397	2 649 175	-2 885 121
1	-63	1669	-24 051	203 043	-1 000 397	2 649 239	-2 885 697
1	-63	1669	-24 051	203 043	-1 000 365	2 648 471	-2 881 377
1	-63	1669	-24 051	203 043	-1 000 365	2 648 535	-2 881 953
1	-63	1669	-24 051	203 043	-1 000 333	2 647 895	-2 878 785
1	-63	1669	-24 051	203 059	-1 000 925	2 654 791	-2 904 561
1	-63	1669	-24 051	203 059	-1 000 893	2 654 151	-2 901 393
1	-63	1669	-24 051	203 059	-1 000 893	2 654 215	-2 901 969
1	-63	1669	-24 051	203 059	-1 000 861	2 653 511	-2 898 225
1	-63	1669	-24 051	203 059	-1 000 861	2 653 575	-2 898 801
1	-63	1669	-24 051	203 059	-1 000 861	2 653 639	-2 899 377
1	-63	1669	-24 051	203 059	-1 000 829	2 652 871	-2 895 057
1	-63	1669	-24 051	203 059	-1 000 829	2 652 935	-2 895 633
1	-63	1669	-24 051	203 059	-1 000 797	2 652 295	-2 892 465
1	-63	1669	-24 051	203 075	-1 001 357	2 658 615	-2 915 649
1	-63	1669	-24 051	203 075	-1 001 357	2 658 679	-2 916 225
1	-63	1669	-24 051	203 075	-1 001 325	2 657 975	-2 912 481
1	-63	1669	-24 051	203 075	-1 001 325	2 658 039	-2 913 057
1	-63	1669	-24 051	203 075	-1 001 293	2 657 335	-2 909 313
1	-63	1669	-24 051	203 075	-1 001 261	2 656 695	-2 906 145
1	-63	1669	-24 051	203 091	-1 001 789	2 662 439	-2 926 737
1	-63	1669	-24 043	202 675	-994 189	2 603 655	-2 762 505
1	-63	1669	-24 043	202 691	-994 717	2 609 143	-2 780 793
1	-63	1669	-24 043	202 691	-994 717	2 609 207	-2 781 369
1	-63	1669	-24 043	202 691	-994 685	2 608 631	-2 778 777
1	-63	1669	-24 043	202 691	-994 653	2 608 055	-2 776 185
1	-63	1669	-24 043	202 707	-995 213	2 614 183	-2 797 641
1	-63	1669	-24 043	202 707	-995 213	2 614 247	-2 798 217
1	-63	1669	-24 043	202 707	-995 181	2 613 543	-2 794 473
1	-63	1669	-24 043	202 707	-995 181	2 613 607	-2 795 049
1	-63	1669	-24 043	202 707	-995 181	2 613 671	-2 795 625
1	-63	1669	-24 043	202 707	-995 149	2 613 031	-2 792 457
1	-63	1669	-24 043	202 707	-995 149	2 613 095	-2 793 033
1	-63	1669	-24 043	202 707	-995 117	2 612 455	-2 789 865
1	-63	1669	-24 043	202 723	-995 677	2 618 647	-2 811 897
1	-63	1669	-24 043	202 723	-995 677	2 618 711	-2 812 473
1	-63	1669	-24 043	202 723	-995 645	2 618 007	-2 808 729
1	-63	1669	-24 043	202 723	-995 645	2 618 071	-2 809 305
1	-63	1669	-24 043	202 723	-995 645	2 618 135	-2 809 881
1	-63	1669	-24 043	202 723	-995 613	2 617 431	-2 806 137
1	-63	1669	-24 043	202 723	-995 613	2 617 495	-2 806 713
1	-63	1669	-24 043	202 723	-995 581	2 616 855	-2 803 545
1	-63	1669	-24 043	202 739	-996 141	2 623 111	-2 826 153
1	-63	1669	-24 043	202 739	-996 109	2 622 471	-2 822 985
1	-63	1669	-24 043	202 739	-996 109	2 622 535	-2 823 561
1	-63	1669	-24 043	202 739	-996 109	2 622 599	-2 824 137
1	-63	1669	-24 043	202 739	-996 077	2 621 831	-2 819 817
1	-63	1669	-24 043	202 739	-996 077	2 621 895	-2 820 393
1	-63	1669	-24 043	202 739	-996 045	2 621 255	-2 817 225
1	-63	1669	-24 043	202 755	-996 605	2 627 575	-2 840 409

```

1 -63 1669 -24 043 202 755 -996 573 2 626 935 -2 837 241
1 -63 1669 -24 043 202 755 -996 573 2 626 999 -2 837 817
1 -63 1669 -24 043 202 755 -996 541 2 626 295 -2 834 073
1 -63 1669 -24 043 202 755 -996 509 2 625 655 -2 830 905
1 -63 1669 -24 043 202 771 -997 069 2 632 039 -2 854 665
1 -63 1669 -24 043 202 771 -997 037 2 631 399 -2 851 497
1 -63 1669 -24 035 202 371 -989 997 2 578 679 -2 708 145
1 -63 1669 -24 035 202 371 -989 965 2 578 103 -2 705 553
1 -63 1669 -24 035 202 387 -990 461 2 583 143 -2 722 401
1 -63 1669 -24 035 202 387 -990 429 2 582 503 -2 719 233
1 -63 1669 -24 035 202 387 -990 429 2 582 567 -2 719 809
1 -63 1669 -24 035 202 387 -990 397 2 581 991 -2 717 217
1 -63 1669 -24 035 202 387 -990 365 2 581 415 -2 714 625
1 -63 1669 -24 035 202 403 -990 925 2 587 607 -2 736 657
1 -63 1669 -24 035 202 403 -990 893 2 586 967 -2 733 489
1 -63 1669 -24 035 202 403 -990 893 2 587 031 -2 734 065
1 -63 1669 -24 035 202 403 -990 861 2 586 391 -2 730 897
1 -63 1669 -24 035 202 403 -990 861 2 586 455 -2 731 473
1 -63 1669 -24 035 202 403 -990 829 2 585 815 -2 728 305
1 -63 1669 -24 035 202 419 -991 357 2 591 431 -2 747 745
1 -63 1669 -24 035 202 419 -991 357 2 591 495 -2 748 321
1 -63 1669 -24 035 202 419 -991 325 2 590 791 -2 744 577
1 -63 1669 -24 035 202 419 -991 325 2 590 855 -2 745 153
1 -63 1669 -24 035 202 419 -991 293 2 590 215 -2 741 985
1 -63 1669 -24 035 202 435 -991 821 2 595 895 -2 762 001
1 -63 1669 -24 035 202 435 -991 789 2 595 255 -2 758 833
1 -63 1669 -24 035 202 435 -991 757 2 594 615 -2 755 665
1 -63 1669 -24 035 202 451 -992 285 2 600 359 -2 776 257
1 -63 1669 -24 027 202 067 -985 677 2 551 463 -2 643 993
1 -63 1669 -24 027 202 083 -986 141 2 555 927 -2 658 249
1 -63 1669 -24 027 202 083 -986 109 2 555 351 -2 655 657
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1 -63 1669 -24 027 202 099 -986 605 2 560 391 -2 672 505
1 -63 1669 -24 027 202 099 -986 573 2 559 751 -2 669 337
1 -63 1669 -24 027 202 099 -986 573 2 559 815 -2 669 913
1 -63 1669 -24 027 202 099 -986 541 2 559 175 -2 666 745
1 -63 1669 -24 027 202 115 -987 037 2 564 215 -2 683 593
1 -63 1669 -24 027 202 115 -987 005 2 563 575 -2 680 425
1 -63 1669 -24 019 201 779 -981 821 2 528 711 -2 594 097
1 -63 1669 -24 019 201 779 -981 789 2 528 135 -2 591 505
1 -63 1669 -24 019 201 795 -982 285 2 533 175 -2 608 353
1 -63 1669 -24 019 201 795 -982 253 2 532 535 -2 605 185
1 -63 1669 -24 011 201 475 -977 501 2 501 495 -2 529 945

```

Dimensions[A]

{143, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1179131, 9974179, -49385533, 132137335, -146803705}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] -
1 008 909 c[6] + 2 701 175 c[7] - 3 001 905 c[8], c[1] - 63 c[2] + 1669 c[3] -

$$\begin{aligned}
& 24\,067\,c[4] + 203\,667\,c[5] - 1\,009\,405\,c[6] + 2\,706\,215\,c[7] - 3\,018\,753\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + 203\,667\,c[5] - 1\,009\,373\,c[6] + \\
& 2\,705\,575\,c[7] - 3\,015\,585\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,067\,c[4] + \\
& 203\,683\,c[5] - 1\,009\,837\,c[6] + 2\,709\,975\,c[7] - 3\,029\,265\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,315\,c[5] - 1\,003\,693\,c[6] + \\
& 2\,665\,735\,c[7] - 2\,912\,985\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,331\,c[5] - 1\,004\,189\,c[6] + 2\,670\,775\,c[7] - 2\,929\,833\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,331\,c[5] - 1\,004\,157\,c[6] + \\
& 2\,670\,135\,c[7] - 2\,926\,665\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,717\,c[6] + 2\,676\,455\,c[7] - 2\,949\,849\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,685\,c[6] + \\
& 2\,675\,751\,c[7] - 2\,946\,105\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,685\,c[6] + 2\,675\,815\,c[7] - 2\,946\,681\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,685\,c[6] + \\
& 2\,675\,879\,c[7] - 2\,947\,257\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,653\,c[6] + 2\,675\,111\,c[7] - 2\,942\,937\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,347\,c[5] - 1\,004\,653\,c[6] + \\
& 2\,675\,175\,c[7] - 2\,943\,513\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,347\,c[5] - 1\,004\,621\,c[6] + 2\,674\,535\,c[7] - 2\,940\,345\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,181\,c[6] + \\
& 2\,680\,791\,c[7] - 2\,962\,953\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,181\,c[6] + 2\,680\,855\,c[7] - 2\,963\,529\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,149\,c[6] + \\
& 2\,680\,087\,c[7] - 2\,959\,209\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,149\,c[6] + 2\,680\,151\,c[7] - 2\,959\,785\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,149\,c[6] + \\
& 2\,680\,215\,c[7] - 2\,960\,361\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,149\,c[6] + 2\,680\,279\,c[7] - 2\,960\,937\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,117\,c[6] + \\
& 2\,679\,511\,c[7] - 2\,956\,617\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,363\,c[5] - 1\,005\,117\,c[6] + 2\,679\,575\,c[7] - 2\,957\,193\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,363\,c[5] - 1\,005\,085\,c[6] + \\
& 2\,678\,935\,c[7] - 2\,954\,025\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,379\,c[5] - 1\,005\,613\,c[6] + 2\,684\,551\,c[7] - 2\,973\,465\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,379\,c[5] - 1\,005\,581\,c[6] + \\
& 2\,683\,911\,c[7] - 2\,970\,297\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,379\,c[5] - 1\,005\,581\,c[6] + 2\,683\,975\,c[7] - 2\,970\,873\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + 203\,379\,c[5] - 1\,005\,549\,c[6] + \\
& 2\,683\,335\,c[7] - 2\,967\,705\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,059\,c[4] + \\
& 203\,395\,c[5] - 1\,006\,013\,c[6] + 2\,687\,735\,c[7] - 2\,981\,385\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,979\,c[5] - 998\,477\,c[6] + 2\,630\,295\,c[7] - \\
& 2\,824\,065\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 202\,995\,c[5] - \\
& 998\,973\,c[6] + 2\,635\,271\,c[7] - 2\,840\,337\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - \\
& 24\,051\,c[4] + 202\,995\,c[5] - 998\,941\,c[6] + 2\,634\,695\,c[7] - 2\,837\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,011\,c[5] - 999\,469\,c[6] + \\
& 2\,640\,311\,c[7] - 2\,857\,185\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,011\,c[5] - 999\,437\,c[6] + 2\,639\,671\,c[7] - 2\,854\,017\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,437 c[6] + \\
& 2\,639\,735 c[7] - 2\,854\,593 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,011 c[5] - 999\,405 c[6] + 2\,639\,095 c[7] - 2\,851\,425 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,965 c[6] + \\
& 2\,645\,287 c[7] - 2\,873\,457 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,965 c[6] + 2\,645\,351 c[7] - 2\,874\,033 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& 2\,644\,583 c[7] - 2\,869\,713 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,933 c[6] + 2\,644\,647 c[7] - 2\,870\,289 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& 2\,644\,711 c[7] - 2\,870\,865 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,933 c[6] + 2\,644\,775 c[7] - 2\,871\,441 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,901 c[6] + \\
& 2\,644\,071 c[7] - 2\,867\,697 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,901 c[6] + 2\,644\,135 c[7] - 2\,868\,273 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,869 c[6] + \\
& 2\,643\,495 c[7] - 2\,865\,105 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,327 c[7] - 2\,890\,305 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& 2\,649\,687 c[7] - 2\,887\,137 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,751 c[7] - 2\,887\,713 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& 2\,649\,815 c[7] - 2\,888\,289 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,397 c[6] + 2\,649\,047 c[7] - 2\,883\,969 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] + \\
& 2\,649\,111 c[7] - 2\,884\,545 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,397 c[6] + 2\,649\,175 c[7] - 2\,885\,121 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] + \\
& 2\,649\,239 c[7] - 2\,885\,697 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,365 c[6] + 2\,648\,471 c[7] - 2\,881\,377 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,365 c[6] + \\
& 2\,648\,535 c[7] - 2\,881\,953 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,333 c[6] + 2\,647\,895 c[7] - 2\,878\,785 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,925 c[6] + \\
& 2\,654\,791 c[7] - 2\,904\,561 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,893 c[6] + 2\,654\,151 c[7] - 2\,901\,393 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,893 c[6] + \\
& 2\,654\,215 c[7] - 2\,901\,969 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,861 c[6] + 2\,653\,511 c[7] - 2\,898\,225 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,861 c[6] + \\
& 2\,653\,575 c[7] - 2\,898\,801 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,861 c[6] + 2\,653\,639 c[7] - 2\,899\,377 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,829 c[6] + \\
& 2\,652\,871 c[7] - 2\,895\,057 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,829 c[6] + 2\,652\,935 c[7] - 2\,895\,633 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,797 c[6] + \\
& 2\,652\,295 c[7] - 2\,892\,465 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 203\,075\,c[5] - 1\,001\,357\,c[6] + 2\,658\,615\,c[7] - 2\,915\,649\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,357\,c[6] + \\
& 2\,658\,679\,c[7] - 2\,916\,225\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,975\,c[7] - 2\,912\,481\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& 2\,658\,039\,c[7] - 2\,913\,057\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,293\,c[6] + 2\,657\,335\,c[7] - 2\,909\,313\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,261\,c[6] + \\
& 2\,656\,695\,c[7] - 2\,906\,145\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,789\,c[6] + 2\,662\,439\,c[7] - 2\,926\,737\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,675\,c[5] - 994\,189\,c[6] + \\
& 2\,603\,655\,c[7] - 2\,762\,505\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,717\,c[6] + 2\,609\,143\,c[7] - 2\,780\,793\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,717\,c[6] + \\
& 2\,609\,207\,c[7] - 2\,781\,369\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,685\,c[6] + 2\,608\,631\,c[7] - 2\,778\,777\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,653\,c[6] + \\
& 2\,608\,055\,c[7] - 2\,776\,185\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,183\,c[7] - 2\,797\,641\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,213\,c[6] + \\
& 2\,614\,247\,c[7] - 2\,798\,217\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,181\,c[6] + 2\,613\,543\,c[7] - 2\,794\,473\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& 2\,613\,607\,c[7] - 2\,795\,049\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,181\,c[6] + 2\,613\,671\,c[7] - 2\,795\,625\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,149\,c[6] + \\
& 2\,613\,031\,c[7] - 2\,792\,457\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,149\,c[6] + 2\,613\,095\,c[7] - 2\,793\,033\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,117\,c[6] + \\
& 2\,612\,455\,c[7] - 2\,789\,865\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,647\,c[7] - 2\,811\,897\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,711\,c[7] - 2\,812\,473\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,007\,c[7] - 2\,808\,729\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] + \\
& 2\,618\,071\,c[7] - 2\,809\,305\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,135\,c[7] - 2\,809\,881\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,613\,c[6] + \\
& 2\,617\,431\,c[7] - 2\,806\,137\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,613\,c[6] + 2\,617\,495\,c[7] - 2\,806\,713\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,581\,c[6] + \\
& 2\,616\,855\,c[7] - 2\,803\,545\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,111\,c[7] - 2\,826\,153\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& 2\,622\,471\,c[7] - 2\,822\,985\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,535\,c[7] - 2\,823\,561\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] +
\end{aligned}$$

$2\,622\,599\,c[7] - 2\,824\,137\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,831\,c[7] - 2\,819\,817\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,077\,c[6] +$
 $2\,621\,895\,c[7] - 2\,820\,393\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,739\,c[5] - 996\,045\,c[6] + 2\,621\,255\,c[7] - 2\,817\,225\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] +$
 $2\,627\,575\,c[7] - 2\,840\,409\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,935\,c[7] - 2\,837\,241\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] +$
 $2\,626\,999\,c[7] - 2\,837\,817\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,295\,c[7] - 2\,834\,073\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,509\,c[6] +$
 $2\,625\,655\,c[7] - 2\,830\,905\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +$
 $202\,771\,c[5] - 997\,069\,c[6] + 2\,632\,039\,c[7] - 2\,854\,665\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,037\,c[6] +$
 $2\,631\,399\,c[7] - 2\,851\,497\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,371\,c[5] - 989\,997\,c[6] + 2\,578\,679\,c[7] - 2\,708\,145\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 989\,965\,c[6] +$
 $2\,578\,103\,c[7] - 2\,705\,553\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,143\,c[7] - 2\,722\,401\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,429\,c[6] +$
 $2\,582\,503\,c[7] - 2\,719\,233\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,387\,c[5] - 990\,429\,c[6] + 2\,582\,567\,c[7] - 2\,719\,809\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,397\,c[6] +$
 $2\,581\,991\,c[7] - 2\,717\,217\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,387\,c[5] - 990\,365\,c[6] + 2\,581\,415\,c[7] - 2\,714\,625\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,925\,c[6] +$
 $2\,587\,607\,c[7] - 2\,736\,657\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,403\,c[5] - 990\,893\,c[6] + 2\,586\,967\,c[7] - 2\,733\,489\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,893\,c[6] +$
 $2\,587\,031\,c[7] - 2\,734\,065\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,403\,c[5] - 990\,861\,c[6] + 2\,586\,391\,c[7] - 2\,730\,897\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,861\,c[6] +$
 $2\,586\,455\,c[7] - 2\,731\,473\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,403\,c[5] - 990\,829\,c[6] + 2\,585\,815\,c[7] - 2\,728\,305\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] +$
 $2\,591\,431\,c[7] - 2\,747\,745\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,495\,c[7] - 2\,748\,321\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,325\,c[6] +$
 $2\,590\,791\,c[7] - 2\,744\,577\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,419\,c[5] - 991\,325\,c[6] + 2\,590\,855\,c[7] - 2\,745\,153\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,293\,c[6] +$
 $2\,590\,215\,c[7] - 2\,741\,985\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,895\,c[7] - 2\,762\,001\,c[8],$
 $c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,789\,c[6] +$
 $2\,595\,255\,c[7] - 2\,758\,833\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +$
 $202\,435\,c[5] - 991\,757\,c[6] + 2\,594\,615\,c[7] - 2\,755\,665\,c[8],$

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c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 285 c[6] +
  2 600 359 c[7] - 2 776 257 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 067 c[5] - 985 677 c[6] + 2 551 463 c[7] - 2 643 993 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 141 c[6] +
  2 555 927 c[7] - 2 658 249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 083 c[5] - 986 109 c[6] + 2 555 351 c[7] - 2 655 657 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 077 c[6] +
  2 554 775 c[7] - 2 653 065 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 099 c[5] - 986 605 c[6] + 2 560 391 c[7] - 2 672 505 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 573 c[6] +
  2 559 751 c[7] - 2 669 337 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 099 c[5] - 986 573 c[6] + 2 559 815 c[7] - 2 669 913 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 541 c[6] +
  2 559 175 c[7] - 2 666 745 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 115 c[5] - 987 037 c[6] + 2 564 215 c[7] - 2 683 593 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 005 c[6] +
  2 563 575 c[7] - 2 680 425 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 779 c[5] - 981 821 c[6] + 2 528 711 c[7] - 2 594 097 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 779 c[5] - 981 789 c[6] +
  2 528 135 c[7] - 2 591 505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 795 c[5] - 982 285 c[6] + 2 533 175 c[7] - 2 608 353 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 253 c[6] +
  2 532 535 c[7] - 2 605 185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 475 c[5] - 977 501 c[6] + 2 501 495 c[7] - 2 529 945 c[8] }

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Array[c, 8].g

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49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
  9 974 179 c[5] - 49 385 533 c[6] + 132 137 335 c[7] - 146 803 705 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 179 131 c[4] +
  9 974 179 c[5] - 49 385 533 c[6] + 132 137 335 c[7] - 146 803 705 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] - 1 008 909 c[6] +
  2 701 175 c[7] - 3 001 905 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 667 c[5] - 1 009 405 c[6] + 2 706 215 c[7] - 3 018 753 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 667 c[5] - 1 009 373 c[6] +
  2 705 575 c[7] - 3 015 585 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 683 c[5] - 1 009 837 c[6] + 2 709 975 c[7] - 3 029 265 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 315 c[5] - 1 003 693 c[6] +
  2 665 735 c[7] - 2 912 985 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 331 c[5] - 1 004 189 c[6] + 2 670 775 c[7] - 2 929 833 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 331 c[5] - 1 004 157 c[6] +
  2 670 135 c[7] - 2 926 665 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 347 c[5] - 1 004 717 c[6] + 2 676 455 c[7] - 2 949 849 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 347 c[5] - 1 004 685 c[6] +
  2 675 751 c[7] - 2 946 105 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 347 c[5] - 1 004 685 c[6] + 2 675 815 c[7] - 2 946 681 c[8] ≥ 0 &&

```


$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,685 c[6] + \\
& \quad 2\,675\,879 c[7] - 2\,947\,257 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,347 c[5] - 1\,004\,653 c[6] + 2\,675\,111 c[7] - 2\,942\,937 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,653 c[6] + \\
& \quad 2\,675\,175 c[7] - 2\,943\,513 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,347 c[5] - 1\,004\,621 c[6] + 2\,674\,535 c[7] - 2\,940\,345 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,181 c[6] + \\
& \quad 2\,680\,791 c[7] - 2\,962\,953 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,181 c[6] + 2\,680\,855 c[7] - 2\,963\,529 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,149 c[6] + \\
& \quad 2\,680\,087 c[7] - 2\,959\,209 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,149 c[6] + 2\,680\,151 c[7] - 2\,959\,785 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,149 c[6] + \\
& \quad 2\,680\,215 c[7] - 2\,960\,361 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,149 c[6] + 2\,680\,279 c[7] - 2\,960\,937 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,117 c[6] + \\
& \quad 2\,679\,511 c[7] - 2\,956\,617 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,117 c[6] + 2\,679\,575 c[7] - 2\,957\,193 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,085 c[6] + \\
& \quad 2\,678\,935 c[7] - 2\,954\,025 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,379 c[5] - 1\,005\,613 c[6] + 2\,684\,551 c[7] - 2\,973\,465 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,379 c[5] - 1\,005\,581 c[6] + \\
& \quad 2\,683\,911 c[7] - 2\,970\,297 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,379 c[5] - 1\,005\,581 c[6] + 2\,683\,975 c[7] - 2\,970\,873 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,379 c[5] - 1\,005\,549 c[6] + \\
& \quad 2\,683\,335 c[7] - 2\,967\,705 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,395 c[5] - 1\,006\,013 c[6] + 2\,687\,735 c[7] - 2\,981\,385 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,979 c[5] - 998\,477 c[6] + \\
& \quad 2\,630\,295 c[7] - 2\,824\,065 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 202\,995 c[5] - 998\,973 c[6] + 2\,635\,271 c[7] - 2\,840\,337 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,995 c[5] - 998\,941 c[6] + \\
& \quad 2\,634\,695 c[7] - 2\,837\,745 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,469 c[6] + 2\,640\,311 c[7] - 2\,857\,185 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,437 c[6] + \\
& \quad 2\,639\,671 c[7] - 2\,854\,017 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,437 c[6] + 2\,639\,735 c[7] - 2\,854\,593 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,405 c[6] + \\
& \quad 2\,639\,095 c[7] - 2\,851\,425 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,965 c[6] + 2\,645\,287 c[7] - 2\,873\,457 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,965 c[6] + \\
& \quad 2\,645\,351 c[7] - 2\,874\,033 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,933 c[6] + 2\,644\,583 c[7] - 2\,869\,713 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& \quad 2\,644\,647 c[7] - 2\,870\,289 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,933 c[6] + 2\,644\,711 c[7] - 2\,870\,865 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& \quad 2\,644\,775 c[7] - 2\,871\,441 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 203\,027\,c[5] - 999\,901\,c[6] + 2\,644\,071\,c[7] - 2\,867\,697\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,027\,c[5] - 999\,901\,c[6] + \\
& \quad 2\,644\,135\,c[7] - 2\,868\,273\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,027\,c[5] - 999\,869\,c[6] + 2\,643\,495\,c[7] - 2\,865\,105\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,461\,c[6] + \\
& \quad 2\,650\,327\,c[7] - 2\,890\,305\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,429\,c[6] + 2\,649\,687\,c[7] - 2\,887\,137\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,429\,c[6] + \\
& \quad 2\,649\,751\,c[7] - 2\,887\,713\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,429\,c[6] + 2\,649\,815\,c[7] - 2\,888\,289\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,397\,c[6] + \\
& \quad 2\,649\,047\,c[7] - 2\,883\,969\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,397\,c[6] + 2\,649\,111\,c[7] - 2\,884\,545\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,397\,c[6] + \\
& \quad 2\,649\,175\,c[7] - 2\,885\,121\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,397\,c[6] + 2\,649\,239\,c[7] - 2\,885\,697\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,365\,c[6] + \\
& \quad 2\,648\,471\,c[7] - 2\,881\,377\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,365\,c[6] + 2\,648\,535\,c[7] - 2\,881\,953\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,333\,c[6] + \\
& \quad 2\,647\,895\,c[7] - 2\,878\,785\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,925\,c[6] + 2\,654\,791\,c[7] - 2\,904\,561\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& \quad 2\,654\,151\,c[7] - 2\,901\,393\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,893\,c[6] + 2\,654\,215\,c[7] - 2\,901\,969\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,861\,c[6] + \\
& \quad 2\,653\,511\,c[7] - 2\,898\,225\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,861\,c[6] + 2\,653\,575\,c[7] - 2\,898\,801\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,861\,c[6] + \\
& \quad 2\,653\,639\,c[7] - 2\,899\,377\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,829\,c[6] + 2\,652\,871\,c[7] - 2\,895\,057\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,829\,c[6] + \\
& \quad 2\,652\,935\,c[7] - 2\,895\,633\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,797\,c[6] + 2\,652\,295\,c[7] - 2\,892\,465\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,357\,c[6] + \\
& \quad 2\,658\,615\,c[7] - 2\,915\,649\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,357\,c[6] + 2\,658\,679\,c[7] - 2\,916\,225\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& \quad 2\,657\,975\,c[7] - 2\,912\,481\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,658\,039\,c[7] - 2\,913\,057\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,293\,c[6] + \\
& \quad 2\,657\,335\,c[7] - 2\,909\,313\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,261\,c[6] + 2\,656\,695\,c[7] - 2\,906\,145\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,789\,c[6] + \\
& \quad 2\,662\,439\,c[7] - 2\,926\,737\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,675\,c[5] - 994\,189\,c[6] + 2\,603\,655\,c[7] - 2\,762\,505\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,717\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,609\,143\,c[7] - 2\,780\,793\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,717\,c[6] + 2\,609\,207\,c[7] - 2\,781\,369\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,685\,c[6] + \\
& 2\,608\,631\,c[7] - 2\,778\,777\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,653\,c[6] + 2\,608\,055\,c[7] - 2\,776\,185\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,213\,c[6] + \\
& 2\,614\,183\,c[7] - 2\,797\,641\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,247\,c[7] - 2\,798\,217\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& 2\,613\,543\,c[7] - 2\,794\,473\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,181\,c[6] + 2\,613\,607\,c[7] - 2\,795\,049\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& 2\,613\,671\,c[7] - 2\,795\,625\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,149\,c[6] + 2\,613\,031\,c[7] - 2\,792\,457\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,149\,c[6] + \\
& 2\,613\,095\,c[7] - 2\,793\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,117\,c[6] + 2\,612\,455\,c[7] - 2\,789\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,647\,c[7] - 2\,811\,897\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,711\,c[7] - 2\,812\,473\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] + \\
& 2\,618\,007\,c[7] - 2\,808\,729\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,071\,c[7] - 2\,809\,305\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] + \\
& 2\,618\,135\,c[7] - 2\,809\,881\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,613\,c[6] + 2\,617\,431\,c[7] - 2\,806\,137\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,613\,c[6] + \\
& 2\,617\,495\,c[7] - 2\,806\,713\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,581\,c[6] + 2\,616\,855\,c[7] - 2\,803\,545\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& 2\,623\,111\,c[7] - 2\,826\,153\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,471\,c[7] - 2\,822\,985\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& 2\,622\,535\,c[7] - 2\,823\,561\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,599\,c[7] - 2\,824\,137\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,077\,c[6] + \\
& 2\,621\,831\,c[7] - 2\,819\,817\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,895\,c[7] - 2\,820\,393\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,045\,c[6] + \\
& 2\,621\,255\,c[7] - 2\,817\,225\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,575\,c[7] - 2\,840\,409\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,935\,c[7] - 2\,837\,241\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,999\,c[7] - 2\,837\,817\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,541\,c[6] + \\
& 2\,626\,295\,c[7] - 2\,834\,073\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,509\,c[6] + 2\,625\,655\,c[7] - 2\,830\,905\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] + \\
& \quad 2\,632\,039 c[7] - 2\,854\,665 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,037 c[6] + 2\,631\,399 c[7] - 2\,851\,497 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,371 c[5] - 989\,997 c[6] + \\
& \quad 2\,578\,679 c[7] - 2\,708\,145 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,371 c[5] - 989\,965 c[6] + 2\,578\,103 c[7] - 2\,705\,553 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,387 c[5] - 990\,461 c[6] + \\
& \quad 2\,583\,143 c[7] - 2\,722\,401 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,387 c[5] - 990\,429 c[6] + 2\,582\,503 c[7] - 2\,719\,233 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,387 c[5] - 990\,429 c[6] + \\
& \quad 2\,582\,567 c[7] - 2\,719\,809 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,387 c[5] - 990\,397 c[6] + 2\,581\,991 c[7] - 2\,717\,217 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,387 c[5] - 990\,365 c[6] + \\
& \quad 2\,581\,415 c[7] - 2\,714\,625 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,925 c[6] + 2\,587\,607 c[7] - 2\,736\,657 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,893 c[6] + \\
& \quad 2\,586\,967 c[7] - 2\,733\,489 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,893 c[6] + 2\,587\,031 c[7] - 2\,734\,065 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,861 c[6] + \\
& \quad 2\,586\,391 c[7] - 2\,730\,897 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,861 c[6] + 2\,586\,455 c[7] - 2\,731\,473 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,829 c[6] + \\
& \quad 2\,585\,815 c[7] - 2\,728\,305 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,357 c[6] + 2\,591\,431 c[7] - 2\,747\,745 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,357 c[6] + \\
& \quad 2\,591\,495 c[7] - 2\,748\,321 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,325 c[6] + 2\,590\,791 c[7] - 2\,744\,577 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,325 c[6] + \\
& \quad 2\,590\,855 c[7] - 2\,745\,153 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,293 c[6] + 2\,590\,215 c[7] - 2\,741\,985 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,821 c[6] + \\
& \quad 2\,595\,895 c[7] - 2\,762\,001 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,789 c[6] + 2\,595\,255 c[7] - 2\,758\,833 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,757 c[6] + \\
& \quad 2\,594\,615 c[7] - 2\,755\,665 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,285 c[6] + 2\,600\,359 c[7] - 2\,776\,257 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,067 c[5] - 985\,677 c[6] + \\
& \quad 2\,551\,463 c[7] - 2\,643\,993 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,141 c[6] + 2\,555\,927 c[7] - 2\,658\,249 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,109 c[6] + \\
& \quad 2\,555\,351 c[7] - 2\,655\,657 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,077 c[6] + 2\,554\,775 c[7] - 2\,653\,065 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,605 c[6] + \\
& \quad 2\,560\,391 c[7] - 2\,672\,505 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,573 c[6] + 2\,559\,751 c[7] - 2\,669\,337 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,573 c[6] + \\
& \quad 2\,559\,815 c[7] - 2\,669\,913 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] +
\end{aligned}$$

```

202 099 c[5] - 986 541 c[6] + 2 559 175 c[7] - 2 666 745 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 037 c[6] +
2 564 215 c[7] - 2 683 593 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 005 c[6] + 2 563 575 c[7] - 2 680 425 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 779 c[5] - 981 821 c[6] +
2 528 711 c[7] - 2 594 097 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 779 c[5] - 981 789 c[6] + 2 528 135 c[7] - 2 591 505 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 285 c[6] +
2 533 175 c[7] - 2 608 353 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 795 c[5] - 982 253 c[6] + 2 532 535 c[7] - 2 605 185 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 501 c[6] +
2 501 495 c[7] - 2 529 945 c[8] ≥ 0, Array[c, 8], Integers]]
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GCD[0, 0, 0, 0, -6 215 064, -2 516 920, -598 732, -114 475]
1

cert.g
-221 843 441

{0, 0, 0, 0, -6 215 064, -2 516 920, -598 732, -114 475}.
Reverse[gpart[listdim17[[106]]]]
-221 843 441

cert.Transpose[A]
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182 408 703, 67 161 439, 94 780 191, 122 398 943, 150 017 695, 34 770 431, 62 389 183,
2 379 423, 94 787 247, 34 777 487, 62 396 239, 2 386 479, 2 393 535, 2 310 119, 34 708 183,
2 317 175, 94 724 999, 34 715 239, 62 333 991, 2 324 231, 127 123 063, 154 741 815,
39 494 551, 67 113 303, 94 732 055, 122 350 807, 34 722 295, 62 341 047, 2 331 287,
187 139 879, 127 130 119, 154 748 871, 182 367 623, 67 120 359, 94 739 111, 122 357 863,
149 976 615, 34 729 351, 62 348 103, 2 338 343, 214 765 687, 154 755 927, 182 374 679,
94 746 167, 122 364 919, 149 983 671, 34 736 407, 62 355 159, 2 345 399, 182 381 735,
210 000 487, 122 371 975, 149 990 727, 62 362 215, 2 352 455, 149 997 783, 2 276 095,
39 446 415, 67 065 167, 34 674 159, 2 283 151, 99 463 231, 127 081 983, 39 453 471,
67 072 223, 94 690 975, 34 681 215, 62 299 967, 2 290 207, 127 089 039, 154 707 791,
67 079 279, 94 698 031, 122 316 783, 34 688 271, 62 307 023, 2 297 263, 154 714 847,
94 705 087, 122 323 839, 149 942 591, 34 695 327, 62 314 079, 2 304 319, 182 340 655,
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39 405 335, 99 422 151, 39 412 391, 67 031 143, 34 640 135, 2 249 127, 127 047 959,
67 038 199, 94 656 951, 34 647 191, 62 265 943, 2 256 183, 94 664 007, 122 282 759,
34 654 247, 62 272 999, 2 263 239, 122 289 815, 62 280 055, 2 270 295, 149 915 623,
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2 222 159, 62 238 975, 2 229 215, 34 572 087, 2 181 079, 62 197 895, 2 188 135, 2 147 055}

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chi = listdim17[[107]]
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(-11 + x) (-9 + x)10 (5 + x)32 (719 024 - 474 835 x + 128 393 x2 - 18 210 x3 + 1430 x4 - 59 x5 + x6)
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CoefficientList[feasibleinterlacingpolylist[chi], x]
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{1, -74, 2362, -42 386, 466 380, -3 209 022, 13 402 614, -30 765 798, 29 218 563},
{1, -74, 2362, -42 386, 466 396, -3 209 694, 13 413 110, -30 838 086, 29 403 891}};

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A // MatrixForm

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( 1 -74 2362 -42 426 468 388 -3 249 038 13 798 310 -32 707 182 32 998 779 )

```

1	-74	2362	-42 426	468 404	-3 249 710	13 808 806	-32 779 470	33 184 107
1	-74	2362	-42 426	468 404	-3 249 678	13 807 750	-32 767 982	33 142 923
1	-74	2362	-42 418	467 964	-3 240 126	13 705 494	-32 228 422	32 020 659
1	-74	2362	-42 418	467 980	-3 240 830	13 716 982	-32 310 790	32 239 683
1	-74	2362	-42 418	467 980	-3 240 798	13 715 926	-32 299 430	32 199 651
1	-74	2362	-42 418	467 980	-3 240 798	13 715 990	-32 300 710	32 205 987
1	-74	2362	-42 418	467 996	-3 241 534	13 728 470	-32 393 286	32 459 859
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1	-74	2362	-42 418	467 996	-3 241 470	13 726 422	-32 371 718	32 384 979
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1	-74	2362	-42 418	467 996	-3 241 438	13 725 494	-32 362 790	32 356 467
1	-74	2362	-42 418	467 996	-3 241 406	13 724 438	-32 351 302	32 315 283
1	-74	2362	-42 418	468 012	-3 242 142	13 736 918	-32 444 006	32 570 307
1	-74	2362	-42 418	468 012	-3 242 142	13 736 982	-32 445 286	32 576 643
1	-74	2362	-42 418	468 012	-3 242 110	13 735 926	-32 433 798	32 535 459
1	-74	2362	-42 418	468 012	-3 242 110	13 735 990	-32 435 078	32 541 795
1	-74	2362	-42 418	468 012	-3 242 078	13 734 934	-32 423 590	32 500 611
1	-74	2362	-42 410	467 572	-3 232 590	13 634 598	-31 903 038	31 440 555
1	-74	2362	-42 410	467 572	-3 232 558	13 633 606	-31 892 830	31 405 707
1	-74	2362	-42 410	467 572	-3 232 526	13 632 614	-31 882 750	31 372 011
1	-74	2362	-42 410	467 588	-3 233 230	13 644 102	-31 965 246	31 592 187
1	-74	2362	-42 410	467 588	-3 233 230	13 644 166	-31 966 398	31 597 371
1	-74	2362	-42 410	467 588	-3 233 198	13 643 046	-31 953 758	31 551 003
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1	-74	2362	-42 410	467 604	-3 233 838	13 652 614	-32 017 118	31 707 819
1	-74	2362	-42 410	467 604	-3 233 838	13 652 678	-32 018 398	31 714 155
1	-74	2362	-42 410	467 604	-3 233 806	13 651 622	-32 006 910	31 672 971
1	-74	2362	-42 410	467 620	-3 234 574	13 665 094	-32 109 822	31 962 843
1	-74	2362	-42 410	467 620	-3 234 542	13 664 102	-32 099 614	31 927 995
1	-74	2362	-42 410	467 620	-3 234 542	13 664 166	-32 100 894	31 934 331
1	-74	2362	-42 410	467 620	-3 234 510	13 663 110	-32 089 406	31 893 147
1	-74	2362	-42 410	467 620	-3 234 510	13 663 174	-32 090 686	31 899 483
1	-74	2362	-42 402	467 148	-3 223 646	13 540 726	-31 412 790	30 421 251
1	-74	2362	-42 402	467 164	-3 224 286	13 550 166	-31 473 718	30 566 547
1	-74	2362	-42 402	467 164	-3 224 286	13 550 294	-31 476 150	30 578 067
1	-74	2362	-42 402	467 180	-3 224 958	13 560 662	-31 546 006	30 751 875
1	-74	2362	-42 402	467 180	-3 224 958	13 560 726	-31 547 286	30 758 211
1	-74	2362	-42 402	467 180	-3 224 926	13 559 670	-31 535 798	30 717 027
1	-74	2362	-42 402	467 180	-3 224 926	13 559 734	-31 537 078	30 723 363
1	-74	2362	-42 402	467 180	-3 224 926	13 559 798	-31 538 358	30 729 699
1	-74	2362	-42 402	467 180	-3 224 894	13 558 806	-31 528 150	30 694 851
1	-74	2362	-42 402	467 196	-3 225 630	13 571 158	-31 618 294	30 937 203
1	-74	2362	-42 402	467 196	-3 225 630	13 571 222	-31 619 574	30 943 539
1	-74	2362	-42 402	467 196	-3 225 598	13 570 230	-31 609 366	30 908 691


```

1 -74 2362 -42402 467196 -3225598 13570294 -31610646 30915027
1 -74 2362 -42402 467196 -3225566 13569238 -31599158 30873843
1 -74 2362 -42402 467196 -3225566 13569302 -31600438 30880179
1 -74 2362 -42402 467196 -3225534 13568246 -31588950 30838995
1 -74 2362 -42402 467212 -3226302 13581718 -31691862 31128867
1 -74 2362 -42402 467212 -3226270 13580790 -31682934 31100355
1 -74 2362 -42402 467212 -3226238 13579798 -31672726 31065507
1 -74 2362 -42402 467212 -3226206 13578806 -31662518 31030659
1 -74 2362 -42402 467228 -3226974 13592278 -31765430 31320531
1 -74 2362 -42402 467228 -3226910 13590358 -31746294 31257171
1 -74 2362 -42394 466772 -3216686 13477286 -31128046 29917899
1 -74 2362 -42394 466772 -3216686 13477350 -31129326 29924235
1 -74 2362 -42394 466772 -3216654 13476422 -31120398 29895723
1 -74 2362 -42394 466788 -3217358 13487846 -31201614 30109563
1 -74 2362 -42394 466788 -3217326 13486854 -31191406 30074715
1 -74 2362 -42394 466788 -3217326 13486918 -31192686 30081051
1 -74 2362 -42394 466788 -3217294 13485926 -31182478 30046203
1 -74 2362 -42394 466788 -3217294 13485990 -31183758 30052539
1 -74 2362 -42394 466804 -3217998 13497414 -31264974 30266379
1 -74 2362 -42394 466804 -3217966 13496486 -31256046 30237867
1 -74 2362 -42394 466836 -3219310 13517542 -31401902 30614859
1 -74 2362 -42386 466380 -3209054 13403542 -30774726 29247075
1 -74 2362 -42386 466380 -3209022 13402614 -30765798 29218563
1 -74 2362 -42386 466396 -3209694 13413110 -30838086 29403891

```

Dimensions[A]

{81, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```

{49, -3626, 115738, -2078722, 22944620,
-159101502, 675380950, -1600359446, 1615005427}

```

Array[c, 9].Transpose[A]

```

{c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468388 c[5] -
 3249070 c[6] + 13799366 c[7] - 32718670 c[8] + 33039963 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468388 c[5] - 3249038 c[6] +
 13798310 c[7] - 32707182 c[8] + 32998779 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468404 c[5] - 3249710 c[6] +
 13808806 c[7] - 32779470 c[8] + 33184107 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42426 c[4] + 468404 c[5] - 3249678 c[6] +
 13807750 c[7] - 32767982 c[8] + 33142923 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467964 c[5] - 3240126 c[6] +
 13705494 c[7] - 32228422 c[8] + 32020659 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467980 c[5] - 3240830 c[6] +
 13716982 c[7] - 32310790 c[8] + 32239683 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467980 c[5] - 3240798 c[6] + 13715926 c[7] -
 32299430 c[8] + 32199651 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +
 467980 c[5] - 3240798 c[6] + 13715990 c[7] - 32300710 c[8] + 32205987 c[9],
c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] + 467996 c[5] - 3241534 c[6] + 13728470 c[7] -
 32393286 c[8] + 32459859 c[9], c[1] - 74 c[2] + 2362 c[3] - 42418 c[4] +
 467996 c[5] - 3241502 c[6] + 13727478 c[7] - 32383206 c[8] + 32426163 c[9],

```

$c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,996 c[5] - 3\,241\,470 c[6] + 13\,726\,422 c[7] -$
 $32\,371\,718 c[8] + 32\,384\,979 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] +$
 $467\,996 c[5] - 3\,241\,470 c[6] + 13\,726\,486 c[7] - 32\,372\,998 c[8] + 32\,391\,315 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,996 c[5] - 3\,241\,438 c[6] + 13\,725\,366 c[7] -$
 $32\,360\,230 c[8] + 32\,343\,795 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] +$
 $467\,996 c[5] - 3\,241\,438 c[6] + 13\,725\,430 c[7] - 32\,361\,510 c[8] + 32\,350\,131 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 467\,996 c[5] - 3\,241\,438 c[6] + 13\,725\,494 c[7] -$
 $32\,362\,790 c[8] + 32\,356\,467 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] +$
 $467\,996 c[5] - 3\,241\,406 c[6] + 13\,724\,438 c[7] - 32\,351\,302 c[8] + 32\,315\,283 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 468\,012 c[5] - 3\,242\,142 c[6] + 13\,736\,918 c[7] -$
 $32\,444\,006 c[8] + 32\,570\,307 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] +$
 $468\,012 c[5] - 3\,242\,142 c[6] + 13\,736\,982 c[7] - 32\,445\,286 c[8] + 32\,576\,643 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 468\,012 c[5] - 3\,242\,110 c[6] + 13\,735\,926 c[7] -$
 $32\,433\,798 c[8] + 32\,535\,459 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] +$
 $468\,012 c[5] - 3\,242\,110 c[6] + 13\,735\,990 c[7] - 32\,435\,078 c[8] + 32\,541\,795 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,418 c[4] + 468\,012 c[5] - 3\,242\,078 c[6] + 13\,734\,934 c[7] -$
 $32\,423\,590 c[8] + 32\,500\,611 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,572 c[5] - 3\,232\,590 c[6] + 13\,634\,598 c[7] - 31\,903\,038 c[8] + 31\,440\,555 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,572 c[5] - 3\,232\,558 c[6] + 13\,633\,606 c[7] -$
 $31\,892\,830 c[8] + 31\,405\,707 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,572 c[5] - 3\,232\,526 c[6] + 13\,632\,614 c[7] - 31\,882\,750 c[8] + 31\,372\,011 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,230 c[6] + 13\,644\,102 c[7] -$
 $31\,965\,246 c[8] + 31\,592\,187 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,588 c[5] - 3\,233\,230 c[6] + 13\,644\,166 c[7] - 31\,966\,398 c[8] + 31\,597\,371 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,198 c[6] + 13\,643\,046 c[7] -$
 $31\,953\,758 c[8] + 31\,551\,003 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,588 c[5] - 3\,233\,198 c[6] + 13\,643\,110 c[7] - 31\,955\,038 c[8] + 31\,557\,339 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,198 c[6] + 13\,643\,174 c[7] -$
 $31\,956\,318 c[8] + 31\,563\,675 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,588 c[5] - 3\,233\,166 c[6] + 13\,642\,054 c[7] - 31\,943\,550 c[8] + 31\,516\,155 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,588 c[5] - 3\,233\,166 c[6] + 13\,642\,118 c[7] -$
 $31\,944\,830 c[8] + 31\,522\,491 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,604 c[5] - 3\,233\,902 c[6] + 13\,654\,534 c[7] - 32\,036\,254 c[8] + 31\,771\,179 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,604 c[5] - 3\,233\,902 c[6] + 13\,654\,598 c[7] -$
 $32\,037\,534 c[8] + 31\,777\,515 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,604 c[5] - 3\,233\,870 c[6] + 13\,653\,542 c[7] - 32\,026\,046 c[8] + 31\,736\,331 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,604 c[5] - 3\,233\,870 c[6] + 13\,653\,606 c[7] -$
 $32\,027\,326 c[8] + 31\,742\,667 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,604 c[5] - 3\,233\,870 c[6] + 13\,653\,670 c[7] - 32\,028\,606 c[8] + 31\,749\,003 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,604 c[5] - 3\,233\,838 c[6] + 13\,652\,550 c[7] -$
 $32\,015\,838 c[8] + 31\,701\,483 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,604 c[5] - 3\,233\,838 c[6] + 13\,652\,614 c[7] - 32\,017\,118 c[8] + 31\,707\,819 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,604 c[5] - 3\,233\,838 c[6] + 13\,652\,678 c[7] -$
 $32\,018\,398 c[8] + 31\,714\,155 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$
 $467\,604 c[5] - 3\,233\,806 c[6] + 13\,651\,622 c[7] - 32\,006\,910 c[8] + 31\,672\,971 c[9],$
 $c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] + 467\,620 c[5] - 3\,234\,574 c[6] + 13\,665\,094 c[7] -$
 $32\,109\,822 c[8] + 31\,962\,843 c[9], c[1] - 74 c[2] + 2362 c[3] - 42\,410 c[4] +$

$467\,620\,c[5] - 3\,234\,542\,c[6] + 13\,664\,102\,c[7] - 32\,099\,614\,c[8] + 31\,927\,995\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,620\,c[5] - 3\,234\,542\,c[6] + 13\,664\,166\,c[7] -$
 $32\,100\,894\,c[8] + 31\,934\,331\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] +$
 $467\,620\,c[5] - 3\,234\,510\,c[6] + 13\,663\,110\,c[7] - 32\,089\,406\,c[8] + 31\,893\,147\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,620\,c[5] - 3\,234\,510\,c[6] + 13\,663\,174\,c[7] -$
 $32\,090\,686\,c[8] + 31\,899\,483\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,148\,c[5] - 3\,223\,646\,c[6] + 13\,540\,726\,c[7] - 31\,412\,790\,c[8] + 30\,421\,251\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,164\,c[5] - 3\,224\,286\,c[6] + 13\,550\,166\,c[7] -$
 $31\,473\,718\,c[8] + 30\,566\,547\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,164\,c[5] - 3\,224\,286\,c[6] + 13\,550\,294\,c[7] - 31\,476\,150\,c[8] + 30\,578\,067\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,180\,c[5] - 3\,224\,958\,c[6] + 13\,560\,662\,c[7] -$
 $31\,546\,006\,c[8] + 30\,751\,875\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,180\,c[5] - 3\,224\,958\,c[6] + 13\,560\,726\,c[7] - 31\,547\,286\,c[8] + 30\,758\,211\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,180\,c[5] - 3\,224\,926\,c[6] + 13\,559\,670\,c[7] -$
 $31\,535\,798\,c[8] + 30\,717\,027\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,180\,c[5] - 3\,224\,926\,c[6] + 13\,559\,734\,c[7] - 31\,537\,078\,c[8] + 30\,723\,363\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,180\,c[5] - 3\,224\,926\,c[6] + 13\,559\,798\,c[7] -$
 $31\,538\,358\,c[8] + 30\,729\,699\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,180\,c[5] - 3\,224\,894\,c[6] + 13\,558\,806\,c[7] - 31\,528\,150\,c[8] + 30\,694\,851\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,196\,c[5] - 3\,225\,630\,c[6] + 13\,571\,158\,c[7] -$
 $31\,618\,294\,c[8] + 30\,937\,203\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,196\,c[5] - 3\,225\,630\,c[6] + 13\,571\,222\,c[7] - 31\,619\,574\,c[8] + 30\,943\,539\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,196\,c[5] - 3\,225\,598\,c[6] + 13\,570\,230\,c[7] -$
 $31\,609\,366\,c[8] + 30\,908\,691\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,196\,c[5] - 3\,225\,598\,c[6] + 13\,570\,294\,c[7] - 31\,610\,646\,c[8] + 30\,915\,027\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,196\,c[5] - 3\,225\,566\,c[6] + 13\,569\,238\,c[7] -$
 $31\,599\,158\,c[8] + 30\,873\,843\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,196\,c[5] - 3\,225\,566\,c[6] + 13\,569\,302\,c[7] - 31\,600\,438\,c[8] + 30\,880\,179\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,196\,c[5] - 3\,225\,534\,c[6] + 13\,568\,246\,c[7] -$
 $31\,588\,950\,c[8] + 30\,838\,995\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,212\,c[5] - 3\,226\,302\,c[6] + 13\,581\,718\,c[7] - 31\,691\,862\,c[8] + 31\,128\,867\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,212\,c[5] - 3\,226\,270\,c[6] + 13\,580\,790\,c[7] -$
 $31\,682\,934\,c[8] + 31\,100\,355\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,212\,c[5] - 3\,226\,238\,c[6] + 13\,579\,798\,c[7] - 31\,672\,726\,c[8] + 31\,065\,507\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,212\,c[5] - 3\,226\,206\,c[6] + 13\,578\,806\,c[7] -$
 $31\,662\,518\,c[8] + 31\,030\,659\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] +$
 $467\,228\,c[5] - 3\,226\,974\,c[6] + 13\,592\,278\,c[7] - 31\,765\,430\,c[8] + 31\,320\,531\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,402\,c[4] + 467\,228\,c[5] - 3\,226\,910\,c[6] + 13\,590\,358\,c[7] -$
 $31\,746\,294\,c[8] + 31\,257\,171\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,394\,c[4] +$
 $466\,772\,c[5] - 3\,216\,686\,c[6] + 13\,477\,286\,c[7] - 31\,128\,046\,c[8] + 29\,917\,899\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,394\,c[4] + 466\,772\,c[5] - 3\,216\,686\,c[6] + 13\,477\,350\,c[7] -$
 $31\,129\,326\,c[8] + 29\,924\,235\,c[9], c[1] - 74\,c[2] + 2362\,c[3] - 42\,394\,c[4] +$
 $466\,772\,c[5] - 3\,216\,654\,c[6] + 13\,476\,422\,c[7] - 31\,120\,398\,c[8] + 29\,895\,723\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,394\,c[4] + 466\,788\,c[5] - 3\,217\,358\,c[6] +$
 $13\,487\,846\,c[7] - 31\,201\,614\,c[8] + 30\,109\,563\,c[9],$
 $c[1] - 74\,c[2] + 2362\,c[3] - 42\,394\,c[4] + 466\,788\,c[5] - 3\,217\,326\,c[6] +$
 $13\,486\,854\,c[7] - 31\,191\,406\,c[8] + 30\,074\,715\,c[9],$

```

c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 788 c[5] - 3 217 326 c[6] +
13 486 918 c[7] - 31 192 686 c[8] + 30 081 051 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 788 c[5] - 3 217 294 c[6] +
13 485 926 c[7] - 31 182 478 c[8] + 30 046 203 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 788 c[5] - 3 217 294 c[6] +
13 485 990 c[7] - 31 183 758 c[8] + 30 052 539 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 804 c[5] - 3 217 998 c[6] +
13 497 414 c[7] - 31 264 974 c[8] + 30 266 379 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 804 c[5] - 3 217 966 c[6] +
13 496 486 c[7] - 31 256 046 c[8] + 30 237 867 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 836 c[5] - 3 219 310 c[6] +
13 517 542 c[7] - 31 401 902 c[8] + 30 614 859 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 386 c[4] + 466 380 c[5] - 3 209 054 c[6] +
13 403 542 c[7] - 30 774 726 c[8] + 29 247 075 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 386 c[4] + 466 380 c[5] - 3 209 022 c[6] +
13 402 614 c[7] - 30 765 798 c[8] + 29 218 563 c[9] ,
c[1] - 74 c[2] + 2362 c[3] - 42 386 c[4] + 466 396 c[5] - 3 209 694 c[6] +
13 413 110 c[7] - 30 838 086 c[8] + 29 403 891 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3626 c[2] + 115 738 c[3] - 2 078 722 c[4] + 22 944 620 c[5] -
159 101 502 c[6] + 675 380 950 c[7] - 1 600 359 446 c[8] + 1 615 005 427 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3626 c[2] + 115 738 c[3] - 2 078 722 c[4] + 22 944 620 c[5] -
159 101 502 c[6] + 675 380 950 c[7] - 1 600 359 446 c[8] + 1 615 005 427 c[9] < 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 388 c[5] - 3 249 070 c[6] +
13 799 366 c[7] - 32 718 670 c[8] + 33 039 963 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 388 c[5] - 3 249 038 c[6] +
13 798 310 c[7] - 32 707 182 c[8] + 32 998 779 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 404 c[5] - 3 249 710 c[6] +
13 808 806 c[7] - 32 779 470 c[8] + 33 184 107 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 426 c[4] + 468 404 c[5] - 3 249 678 c[6] +
13 807 750 c[7] - 32 767 982 c[8] + 33 142 923 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 964 c[5] - 3 240 126 c[6] +
13 705 494 c[7] - 32 228 422 c[8] + 32 020 659 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 830 c[6] +
13 716 982 c[7] - 32 310 790 c[8] + 32 239 683 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 798 c[6] +
13 715 926 c[7] - 32 299 430 c[8] + 32 199 651 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 980 c[5] - 3 240 798 c[6] +
13 715 990 c[7] - 32 300 710 c[8] + 32 205 987 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 996 c[5] - 3 241 534 c[6] +
13 728 470 c[7] - 32 393 286 c[8] + 32 459 859 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 996 c[5] - 3 241 502 c[6] +
13 727 478 c[7] - 32 383 206 c[8] + 32 426 163 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 418 c[4] + 467 996 c[5] - 3 241 470 c[6] +

```

$$\begin{aligned}
& 13\,726\,422\,c[7] - 32\,371\,718\,c[8] + 32\,384\,979\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,996\,c[5] - 3\,241\,470\,c[6] + \\
& \quad 13\,726\,486\,c[7] - 32\,372\,998\,c[8] + 32\,391\,315\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,996\,c[5] - 3\,241\,438\,c[6] + \\
& \quad 13\,725\,366\,c[7] - 32\,360\,230\,c[8] + 32\,343\,795\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,996\,c[5] - 3\,241\,438\,c[6] + \\
& \quad 13\,725\,430\,c[7] - 32\,361\,510\,c[8] + 32\,350\,131\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,996\,c[5] - 3\,241\,438\,c[6] + \\
& \quad 13\,725\,494\,c[7] - 32\,362\,790\,c[8] + 32\,356\,467\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 467\,996\,c[5] - 3\,241\,406\,c[6] + \\
& \quad 13\,724\,438\,c[7] - 32\,351\,302\,c[8] + 32\,315\,283\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 468\,012\,c[5] - 3\,242\,142\,c[6] + \\
& \quad 13\,736\,918\,c[7] - 32\,444\,006\,c[8] + 32\,570\,307\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 468\,012\,c[5] - 3\,242\,142\,c[6] + \\
& \quad 13\,736\,982\,c[7] - 32\,445\,286\,c[8] + 32\,576\,643\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 468\,012\,c[5] - 3\,242\,110\,c[6] + \\
& \quad 13\,735\,926\,c[7] - 32\,433\,798\,c[8] + 32\,535\,459\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 468\,012\,c[5] - 3\,242\,110\,c[6] + \\
& \quad 13\,735\,990\,c[7] - 32\,435\,078\,c[8] + 32\,541\,795\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,418\,c[4] + 468\,012\,c[5] - 3\,242\,078\,c[6] + \\
& \quad 13\,734\,934\,c[7] - 32\,423\,590\,c[8] + 32\,500\,611\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,590\,c[6] + \\
& \quad 13\,634\,598\,c[7] - 31\,903\,038\,c[8] + 31\,440\,555\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,558\,c[6] + \\
& \quad 13\,633\,606\,c[7] - 31\,892\,830\,c[8] + 31\,405\,707\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,572\,c[5] - 3\,232\,526\,c[6] + \\
& \quad 13\,632\,614\,c[7] - 31\,882\,750\,c[8] + 31\,372\,011\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,230\,c[6] + \\
& \quad 13\,644\,102\,c[7] - 31\,965\,246\,c[8] + 31\,592\,187\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,230\,c[6] + \\
& \quad 13\,644\,166\,c[7] - 31\,966\,398\,c[8] + 31\,597\,371\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,198\,c[6] + \\
& \quad 13\,643\,046\,c[7] - 31\,953\,758\,c[8] + 31\,551\,003\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,198\,c[6] + \\
& \quad 13\,643\,110\,c[7] - 31\,955\,038\,c[8] + 31\,557\,339\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,198\,c[6] + \\
& \quad 13\,643\,174\,c[7] - 31\,956\,318\,c[8] + 31\,563\,675\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,166\,c[6] + \\
& \quad 13\,642\,054\,c[7] - 31\,943\,550\,c[8] + 31\,516\,155\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,588\,c[5] - 3\,233\,166\,c[6] + \\
& \quad 13\,642\,118\,c[7] - 31\,944\,830\,c[8] + 31\,522\,491\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,604\,c[5] - 3\,233\,902\,c[6] + \\
& \quad 13\,654\,534\,c[7] - 32\,036\,254\,c[8] + 31\,771\,179\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,604\,c[5] - 3\,233\,902\,c[6] + \\
& \quad 13\,654\,598\,c[7] - 32\,037\,534\,c[8] + 31\,777\,515\,c[9] \geq 0 \&\& \\
& c[1] - 74\,c[2] + 2362\,c[3] - 42\,410\,c[4] + 467\,604\,c[5] - 3\,233\,870\,c[6] + \\
& \quad 13\,653\,542\,c[7] - 32\,026\,046\,c[8] + 31\,736\,331\,c[9] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467604 c[5] - 3233870 c[6] + \\
& \quad 13653606 c[7] - 32027326 c[8] + 31742667 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467604 c[5] - 3233870 c[6] + \\
& \quad 13653670 c[7] - 32028606 c[8] + 31749003 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467604 c[5] - 3233838 c[6] + \\
& \quad 13652550 c[7] - 32015838 c[8] + 31701483 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467604 c[5] - 3233838 c[6] + \\
& \quad 13652614 c[7] - 32017118 c[8] + 31707819 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467604 c[5] - 3233838 c[6] + \\
& \quad 13652678 c[7] - 32018398 c[8] + 31714155 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467604 c[5] - 3233806 c[6] + \\
& \quad 13651622 c[7] - 32006910 c[8] + 31672971 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467620 c[5] - 3234574 c[6] + \\
& \quad 13665094 c[7] - 32109822 c[8] + 31962843 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467620 c[5] - 3234542 c[6] + \\
& \quad 13664102 c[7] - 32099614 c[8] + 31927995 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467620 c[5] - 3234542 c[6] + \\
& \quad 13664166 c[7] - 32100894 c[8] + 31934331 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467620 c[5] - 3234510 c[6] + \\
& \quad 13663110 c[7] - 32089406 c[8] + 31893147 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42410 c[4] + 467620 c[5] - 3234510 c[6] + \\
& \quad 13663174 c[7] - 32090686 c[8] + 31899483 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467148 c[5] - 3223646 c[6] + \\
& \quad 13540726 c[7] - 31412790 c[8] + 30421251 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467164 c[5] - 3224286 c[6] + \\
& \quad 13550166 c[7] - 31473718 c[8] + 30566547 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467164 c[5] - 3224286 c[6] + \\
& \quad 13550294 c[7] - 31476150 c[8] + 30578067 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3224958 c[6] + \\
& \quad 13560662 c[7] - 31546006 c[8] + 30751875 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3224958 c[6] + \\
& \quad 13560726 c[7] - 31547286 c[8] + 30758211 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3224926 c[6] + \\
& \quad 13559670 c[7] - 31535798 c[8] + 30717027 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3224926 c[6] + \\
& \quad 13559734 c[7] - 31537078 c[8] + 30723363 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3224926 c[6] + \\
& \quad 13559798 c[7] - 31538358 c[8] + 30729699 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467180 c[5] - 3224894 c[6] + \\
& \quad 13558806 c[7] - 31528150 c[8] + 30694851 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467196 c[5] - 3225630 c[6] + \\
& \quad 13571158 c[7] - 31618294 c[8] + 30937203 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467196 c[5] - 3225630 c[6] + \\
& \quad 13571222 c[7] - 31619574 c[8] + 30943539 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467196 c[5] - 3225598 c[6] + \\
& \quad 13570230 c[7] - 31609366 c[8] + 30908691 c[9] \geq 0 \&\& \\
& c[1] - 74 c[2] + 2362 c[3] - 42402 c[4] + 467196 c[5] - 3225598 c[6] +
\end{aligned}$$

```

13 570 294 c[7] - 31 610 646 c[8] + 30 915 027 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 196 c[5] - 3 225 566 c[6] +
13 569 238 c[7] - 31 599 158 c[8] + 30 873 843 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 196 c[5] - 3 225 566 c[6] +
13 569 302 c[7] - 31 600 438 c[8] + 30 880 179 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 196 c[5] - 3 225 534 c[6] +
13 568 246 c[7] - 31 588 950 c[8] + 30 838 995 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 212 c[5] - 3 226 302 c[6] +
13 581 718 c[7] - 31 691 862 c[8] + 31 128 867 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 212 c[5] - 3 226 270 c[6] +
13 580 790 c[7] - 31 682 934 c[8] + 31 100 355 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 212 c[5] - 3 226 238 c[6] +
13 579 798 c[7] - 31 672 726 c[8] + 31 065 507 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 212 c[5] - 3 226 206 c[6] +
13 578 806 c[7] - 31 662 518 c[8] + 31 030 659 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 228 c[5] - 3 226 974 c[6] +
13 592 278 c[7] - 31 765 430 c[8] + 31 320 531 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 402 c[4] + 467 228 c[5] - 3 226 910 c[6] +
13 590 358 c[7] - 31 746 294 c[8] + 31 257 171 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 686 c[6] +
13 477 286 c[7] - 31 128 046 c[8] + 29 917 899 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 686 c[6] +
13 477 350 c[7] - 31 129 326 c[8] + 29 924 235 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 772 c[5] - 3 216 654 c[6] +
13 476 422 c[7] - 31 120 398 c[8] + 29 895 723 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 788 c[5] - 3 217 358 c[6] +
13 487 846 c[7] - 31 201 614 c[8] + 30 109 563 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 788 c[5] - 3 217 326 c[6] +
13 486 854 c[7] - 31 191 406 c[8] + 30 074 715 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 788 c[5] - 3 217 326 c[6] +
13 486 918 c[7] - 31 192 686 c[8] + 30 081 051 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 788 c[5] - 3 217 294 c[6] +
13 485 926 c[7] - 31 182 478 c[8] + 30 046 203 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 788 c[5] - 3 217 294 c[6] +
13 485 990 c[7] - 31 183 758 c[8] + 30 052 539 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 804 c[5] - 3 217 998 c[6] +
13 497 414 c[7] - 31 264 974 c[8] + 30 266 379 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 804 c[5] - 3 217 966 c[6] +
13 496 486 c[7] - 31 256 046 c[8] + 30 237 867 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 394 c[4] + 466 836 c[5] - 3 219 310 c[6] +
13 517 542 c[7] - 31 401 902 c[8] + 30 614 859 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 386 c[4] + 466 380 c[5] - 3 209 054 c[6] +
13 403 542 c[7] - 30 774 726 c[8] + 29 247 075 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 386 c[4] + 466 380 c[5] - 3 209 022 c[6] +
13 402 614 c[7] - 30 765 798 c[8] + 29 218 563 c[9] ≥ 0 &&
c[1] - 74 c[2] + 2362 c[3] - 42 386 c[4] + 466 396 c[5] - 3 209 694 c[6] +
13 413 110 c[7] - 30 838 086 c[8] + 29 403 891 c[9] ≥ 0, Array[c, 9], Integers]]

```

```
{0, 0, 0, 0, 0, 955 948, 429 395, 105 520, 19 167}
```

```
GCD[0, 0, 0, 0, 0, 955 948, 429 395, 105 520, 19 167]
```

```
1
```

```
cert.g
```

```
-2 679 331 257
```

```
{0, 0, 0, 0, 0, 955 948, 429 395, 105 520, 19 167}.Reverse[gpart[listdim17[[107]]]
```

```
-2 679 331 257
```

```
cert.Transpose[A]
```

```
{239 707 631, 239 696 879, 28 581 759, 28 571 007, 675 508 295, 441 972 311, 450 535 383,
464 393 175, 217 010 151, 239 431 015, 239 420 263, 253 278 055, 239 409 511,
253 267 303, 267 125 095, 267 114 343, 28 305 143, 42 162 935, 42 152 183, 56 009 975,
55 999 223, 652 810 815, 666 657 855, 689 078 719, 464 116 559, 469 400 527,
464 105 807, 477 963 599, 491 821 391, 477 952 847, 491 810 639, 239 143 647,
253 001 439, 252 990 687, 266 848 479, 280 706 271, 266 837 727, 280 695 519,
294 553 311, 294 542 559, 41 886 319, 55 733 359, 69 591 151, 69 580 399, 83 438 191,
1 088 611 479, 886 059 431, 905 201 191, 674 944 311, 688 802 103, 688 791 351,
702 649 143, 716 506 935, 730 353 975, 463 829 191, 477 686 983, 491 534 023,
505 391 815, 505 381 063, 519 238 855, 519 228 103, 266 571 863, 294 276 695,
308 123 735, 321 970 775, 69 314 535, 110 866 407, 899 629 855, 913 487 647,
941 192 479, 702 372 527, 716 219 567, 730 077 359, 743 924 399, 757 782 191,
518 962 239, 546 667 071, 138 294 623, 954 762 903, 982 467 735, 771 352 615}
```

```
chi = listdim17[[108]]
```

```
 $(-11 + x)^4 (-9 + x)^8 (-7 + x)^3 (5 + x)^{32} (128 - 23 x + x^2)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-42 273, 27 053, -6642, 786, -45, 1}, {-41 193, 26 861, -6634, 786, -45, 1},
{-41 337, 26 877, -6634, 786, -45, 1}, {-41 481, 26 893, -6634, 786, -45, 1},
{-41 657, 26 909, -6634, 786, -45, 1}, {-40 257, 26 685, -6626, 786, -45, 1},
{-40 401, 26 701, -6626, 786, -45, 1}, {-40 545, 26 717, -6626, 786, -45, 1},
{-40 689, 26 733, -6626, 786, -45, 1}, {-39 609, 26 541, -6618, 786, -45, 1},
{-39 753, 26 557, -6618, 786, -45, 1}, {-39 897, 26 573, -6618, 786, -45, 1},
{-38 961, 26 397, -6610, 786, -45, 1}, {-39 105, 26 413, -6610, 786, -45, 1},
{-38 313, 26 253, -6602, 786, -45, 1}, {-37 521, 26 093, -6594, 786, -45, 1}}
```



```
A = {{-42 273, 27 053, -6642, 786, -45, 1}, {-41 193, 26 861, -6634, 786, -45, 1},
      {-41 337, 26 877, -6634, 786, -45, 1}, {-41 481, 26 893, -6634, 786, -45, 1},
      {-41 657, 26 909, -6634, 786, -45, 1}, {-40 257, 26 685, -6626, 786, -45, 1},
      {-40 401, 26 701, -6626, 786, -45, 1}, {-40 545, 26 717, -6626, 786, -45, 1},
      {-40 689, 26 733, -6626, 786, -45, 1}, {-39 609, 26 541, -6618, 786, -45, 1},
      {-39 753, 26 557, -6618, 786, -45, 1}, {-39 897, 26 573, -6618, 786, -45, 1},
      {-38 961, 26 397, -6610, 786, -45, 1}, {-39 105, 26 413, -6610, 786, -45, 1},
      {-38 313, 26 253, -6602, 786, -45, 1}, {-37 521, 26 093, -6594, 786, -45, 1}};
```

```
A // MatrixForm
```

$$\begin{pmatrix} -42\,273 & 27\,053 & -6642 & 786 & -45 & 1 \\ -41\,193 & 26\,861 & -6634 & 786 & -45 & 1 \\ -41\,337 & 26\,877 & -6634 & 786 & -45 & 1 \\ -41\,481 & 26\,893 & -6634 & 786 & -45 & 1 \\ -41\,657 & 26\,909 & -6634 & 786 & -45 & 1 \\ -40\,257 & 26\,685 & -6626 & 786 & -45 & 1 \\ -40\,401 & 26\,701 & -6626 & 786 & -45 & 1 \\ -40\,545 & 26\,717 & -6626 & 786 & -45 & 1 \\ -40\,689 & 26\,733 & -6626 & 786 & -45 & 1 \\ -39\,609 & 26\,541 & -6618 & 786 & -45 & 1 \\ -39\,753 & 26\,557 & -6618 & 786 & -45 & 1 \\ -39\,897 & 26\,573 & -6618 & 786 & -45 & 1 \\ -38\,961 & 26\,397 & -6610 & 786 & -45 & 1 \\ -39\,105 & 26\,413 & -6610 & 786 & -45 & 1 \\ -38\,313 & 26\,253 & -6602 & 786 & -45 & 1 \\ -37\,521 & 26\,093 & -6594 & 786 & -45 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-2 013 233, 1 314 141, -324 914, 38 514, -2205, 49}
```

```
Array[c, 6].Transpose[A]
```

```
{-42 273 c[1] + 27 053 c[2] - 6642 c[3] + 786 c[4] - 45 c[5] + c[6],
 -41 193 c[1] + 26 861 c[2] - 6634 c[3] + 786 c[4] - 45 c[5] + c[6],
 -41 337 c[1] + 26 877 c[2] - 6634 c[3] + 786 c[4] - 45 c[5] + c[6],
 -41 481 c[1] + 26 893 c[2] - 6634 c[3] + 786 c[4] - 45 c[5] + c[6],
 -41 657 c[1] + 26 909 c[2] - 6634 c[3] + 786 c[4] - 45 c[5] + c[6],
 -40 257 c[1] + 26 685 c[2] - 6626 c[3] + 786 c[4] - 45 c[5] + c[6],
 -40 401 c[1] + 26 701 c[2] - 6626 c[3] + 786 c[4] - 45 c[5] + c[6],
 -40 545 c[1] + 26 717 c[2] - 6626 c[3] + 786 c[4] - 45 c[5] + c[6],
 -40 689 c[1] + 26 733 c[2] - 6626 c[3] + 786 c[4] - 45 c[5] + c[6],
 -39 609 c[1] + 26 541 c[2] - 6618 c[3] + 786 c[4] - 45 c[5] + c[6],
 -39 753 c[1] + 26 557 c[2] - 6618 c[3] + 786 c[4] - 45 c[5] + c[6],
 -39 897 c[1] + 26 573 c[2] - 6618 c[3] + 786 c[4] - 45 c[5] + c[6],
 -38 961 c[1] + 26 397 c[2] - 6610 c[3] + 786 c[4] - 45 c[5] + c[6],
 -39 105 c[1] + 26 413 c[2] - 6610 c[3] + 786 c[4] - 45 c[5] + c[6],
 -38 313 c[1] + 26 253 c[2] - 6602 c[3] + 786 c[4] - 45 c[5] + c[6],
 -37 521 c[1] + 26 093 c[2] - 6594 c[3] + 786 c[4] - 45 c[5] + c[6]}
```

Array[c, 6].g

$-2\,013\,233\,c[1] + 1\,314\,141\,c[2] - 324\,914\,c[3] + 38\,514\,c[4] - 2205\,c[5] + 49\,c[6]$

cert = Flatten[Array[c, 6] /. FindInstance[

$-2\,013\,233\,c[1] + 1\,314\,141\,c[2] - 324\,914\,c[3] + 38\,514\,c[4] - 2205\,c[5] + 49\,c[6] < 0 \&\&$
 $-42\,273\,c[1] + 27\,053\,c[2] - 6642\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-41\,193\,c[1] + 26\,861\,c[2] - 6634\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-41\,337\,c[1] + 26\,877\,c[2] - 6634\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-41\,481\,c[1] + 26\,893\,c[2] - 6634\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-41\,657\,c[1] + 26\,909\,c[2] - 6634\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-40\,257\,c[1] + 26\,685\,c[2] - 6626\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-40\,401\,c[1] + 26\,701\,c[2] - 6626\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-40\,545\,c[1] + 26\,717\,c[2] - 6626\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-40\,689\,c[1] + 26\,733\,c[2] - 6626\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-39\,609\,c[1] + 26\,541\,c[2] - 6618\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-39\,753\,c[1] + 26\,557\,c[2] - 6618\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-39\,897\,c[1] + 26\,573\,c[2] - 6618\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-38\,961\,c[1] + 26\,397\,c[2] - 6610\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-39\,105\,c[1] + 26\,413\,c[2] - 6610\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-38\,313\,c[1] + 26\,253\,c[2] - 6602\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-37\,521\,c[1] + 26\,093\,c[2] - 6594\,c[3] + 786\,c[4] - 45\,c[5] + c[6] \geq 0,$

Array[c, 6], Integers]]

{115408, 1115611, 11040701, 0, 0, 48031592256}

GCD[115408, 1115611, 11040701, 0, 0, 48031592256]

1

Reverse[cert]

{48031592256, 0, 0, 11040701, 1115611, 115408}

cert.g

-3343083

{115408, 1115611, 11040701, 0, 0, 48031592256}.gpart[listdim17[[108]]]

-3343083

cert.Transpose[A]

{1238213, 7149, 1238173, 2469197, 7165, 7109, 1238133, 2469157, 3700181,
2469117, 3700141, 4931165, 4931125, 6162149, 7393133, 8624117}

```
chi = listdim17[[109]]
```

$$(-11 + x) (-9 + x)^9 (5 + x)^{32} \\ (-6487424 + 4997515x - 1630868x^2 + 292299x^3 - 31080x^4 + 1961x^5 - 68x^6 + x^7)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -83, 3028, -63684, 850254, -7466130, 43071204,
      -157198788, 328834553, -299770515}, {1, -83, 3028, -63684,
      850254, -7466098, 43069924, -157179908, 328712953, -299482227},
      {1, -83, 3028, -63684, 850254, -7466066, 43068708, -157162756,
      328606649, -299238291}, {1, -83, 3028, -63676, 849758, -7453402,
      42898244, -155886796, 323570569, -291049803}, {1, -83, 3028, -63676,
      849774, -7454218, 42914724, -156051564, 324386073, -292648059},
      {1, -83, 3028, -63676, 849774, -7454218, 42914724, -156051436,
      324383513, -292635387}, {1, -83, 3028, -63676, 849774,
      -7454218, 42914788, -156053420, 324403929, -292705083},
      {1, -83, 3028, -63676, 849774, -7454186, 42913508, -156034412,
      324279769, -292404123}, {1, -83, 3028, -63676, 849774,
      -7454154, 42912228, -156015276, 324153049, -292090491},
      {1, -83, 3028, -63676, 849790, -7455034, 42931204, -156216204,
      325199017, -294233643}, {1, -83, 3028, -63676, 849790,
      -7455002, 42929988, -156199052, 325092713, -293989707},
      {1, -83, 3028, -63676, 849790, -7454970, 42928772, -156182028,
      324988969, -293758443}, {1, -83, 3028, -63676, 849790,
      -7454970, 42928772, -156181900, 324986409, -293745771},
      {1, -83, 3028, -63676, 849790, -7454938, 42927492, -156162892,
      324862249, -293444811}, {1, -83, 3028, -63668, 849262,
      -7440706, 42726500, -154591700, 318407769, -282547683},
      {1, -83, 3028, -63668, 849278, -7441490, 42741764, -154739316,
      319116969, -283902003}, {1, -83, 3028, -63668, 849294,
      -7442306, 42758244, -154904212, 319935033, -285512931},
      {1, -83, 3028, -63668, 849294, -7442306, 42758244, -154904084,
      319932473, -285500259}, {1, -83, 3028, -63668, 849294,
      -7442306, 42758308, -154906068, 319952889, -285569955},
      {1, -83, 3028, -63668, 849294, -7442274, 42756964, -154885076,
      319808313, -285199299}, {1, -83, 3028, -63668, 849294,
      -7442274, 42757028, -154886932, 319826169, -285256323},
      {1, -83, 3028, -63668, 849294, -7442242, 42755748, -154867924,
      319702009, -284955363}, {1, -83, 3028, -63668, 849310,
      -7443122, 42774852, -155072692, 320786249, -287225235},
      {1, -83, 3028, -63668, 849310, -7443090, 42773508, -155051700,
      320641673, -286854579}, {1, -83, 3028, -63668, 849310,
      -7443090, 42773572, -155053684, 320662089, -286924275},
      {1, -83, 3028, -63668, 849310, -7443090, 42773572, -155053556,
      320659529, -286911603}, {1, -83, 3028, -63668, 849310,
      -7443058, 42772228, -155032564, 320514953, -286540947},
      {1, -83, 3028, -63668, 849310, -7443058, 42772292, -155034548,
```

```

320 535 369, -286 610 643}, {1, -83, 3028, -63 668, 849 310,
-7 443 058, 42 772 292, -155 034 420, 320 532 809, -286 597 971},
{1, -83, 3028, -63 668, 849 310, -7 443 026, 42 771 012, -155 015 412,
320 408 649, -286 297 011}, {1, -83, 3028, -63 668, 849 326,
-7 443 874, 42 788 836, -155 201 172, 321 368 729, -288 265 923},
{1, -83, 3028, -63 668, 849 326, -7 443 842, 42 787 556, -155 182 036,
321 242 009, -287 952 291}, {1, -83, 3028, -63 668, 849 326,
-7 443 842, 42 787 620, -155 184 020, 321 262 425, -288 021 987},
{1, -83, 3028, -63 668, 849 326, -7 443 810, 42 786 340, -155 165 012,
321 138 265, -287 721 027}, {1, -83, 3028, -63 660, 848 814,
-7 430 330, 42 599 268, -153 720 444, 315 248 409, -277 807 563},
{1, -83, 3028, -63 660, 848 830, -7 431 146, 42 615 748, -153 885 212,
316 063 913, -279 405 819}, {1, -83, 3028, -63 660, 848 830,
-7 431 114, 42 614 532, -153 868 060, 315 957 609, -279 161 883},
{1, -83, 3028, -63 660, 848 846, -7 431 962, 42 632 356, -154 053 820,
316 917 689, -281 130 795}, {1, -83, 3028, -63 660, 848 846,
-7 431 930, 42 631 076, -154 034 684, 316 790 969, -280 817 163},
{1, -83, 3028, -63 660, 848 846, -7 431 930, 42 631 140, -154 036 540,
316 808 825, -280 874 187}, {1, -83, 3028, -63 660, 848 846,
-7 431 898, 42 629 796, -154 015 548, 316 664 249, -280 503 531},
{1, -83, 3028, -63 660, 848 846, -7 431 898, 42 629 860, -154 017 532,
316 684 665, -280 573 227}, {1, -83, 3028, -63 660, 848 862,
-7 432 746, 42 647 684, -154 203 292, 317 644 745, -282 542 139},
{1, -83, 3028, -63 660, 848 862, -7 432 714, 42 646 404, -154 184 156,
317 518 025, -282 228 507}, {1, -83, 3028, -63 652, 848 366,
-7 419 986, 42 473 316, -152 868 196, 312 213 209, -273 368 403},
{1, -83, 3028, -63 652, 848 366, -7 419 954, 42 472 100, -152 851 044,
312 106 905, -273 124 467}, {1, -83, 3028, -63 652, 848 382,
-7 420 770, 42 488 644, -153 017 668, 312 940 265, -274 779 747}};

```

```
A // MatrixForm
```

1	-83	3028	-63 684	850 254	-7 466 130	43 071 204	-157 198 788	328 834 553	-299 770 51
1	-83	3028	-63 684	850 254	-7 466 098	43 069 924	-157 179 908	328 712 953	-299 482 22
1	-83	3028	-63 684	850 254	-7 466 066	43 068 708	-157 162 756	328 606 649	-299 238 29
1	-83	3028	-63 676	849 758	-7 453 402	42 898 244	-155 886 796	323 570 569	-291 049 86
1	-83	3028	-63 676	849 774	-7 454 218	42 914 724	-156 051 564	324 386 073	-292 648 05
1	-83	3028	-63 676	849 774	-7 454 218	42 914 724	-156 051 436	324 383 513	-292 635 38
1	-83	3028	-63 676	849 774	-7 454 218	42 914 788	-156 053 420	324 403 929	-292 705 08
1	-83	3028	-63 676	849 774	-7 454 186	42 913 508	-156 034 412	324 279 769	-292 404 12
1	-83	3028	-63 676	849 774	-7 454 154	42 912 228	-156 015 276	324 153 049	-292 090 49
1	-83	3028	-63 676	849 790	-7 455 034	42 931 204	-156 216 204	325 199 017	-294 233 64
1	-83	3028	-63 676	849 790	-7 455 002	42 929 988	-156 199 052	325 092 713	-293 989 76
1	-83	3028	-63 676	849 790	-7 454 970	42 928 772	-156 182 028	324 988 969	-293 758 44
1	-83	3028	-63 676	849 790	-7 454 970	42 928 772	-156 181 900	324 986 409	-293 745 77
1	-83	3028	-63 676	849 790	-7 454 938	42 927 492	-156 162 892	324 862 249	-293 444 81
1	-83	3028	-63 668	849 262	-7 440 706	42 726 500	-154 591 700	318 407 769	-282 547 68
1	-83	3028	-63 668	849 278	-7 441 490	42 741 764	-154 739 316	319 116 969	-283 902 06
1	-83	3028	-63 668	849 294	-7 442 306	42 758 244	-154 904 212	319 935 033	-285 512 93
1	-83	3028	-63 668	849 294	-7 442 306	42 758 244	-154 904 084	319 932 473	-285 500 25
1	-83	3028	-63 668	849 294	-7 442 306	42 758 308	-154 906 068	319 952 889	-285 569 95
1	-83	3028	-63 668	849 294	-7 442 274	42 756 964	-154 885 076	319 808 313	-285 199 29
1	-83	3028	-63 668	849 294	-7 442 274	42 757 028	-154 886 932	319 826 169	-285 256 32
1	-83	3028	-63 668	849 294	-7 442 242	42 755 748	-154 867 924	319 702 009	-284 955 36
1	-83	3028	-63 668	849 310	-7 443 122	42 774 852	-155 072 692	320 786 249	-287 225 23
1	-83	3028	-63 668	849 310	-7 443 090	42 773 508	-155 051 700	320 641 673	-286 854 57
1	-83	3028	-63 668	849 310	-7 443 090	42 773 572	-155 053 684	320 662 089	-286 924 27
1	-83	3028	-63 668	849 310	-7 443 090	42 773 572	-155 053 556	320 659 529	-286 911 66
1	-83	3028	-63 668	849 310	-7 443 058	42 772 228	-155 032 564	320 514 953	-286 540 94
1	-83	3028	-63 668	849 310	-7 443 058	42 772 292	-155 034 548	320 535 369	-286 610 64
1	-83	3028	-63 668	849 310	-7 443 058	42 772 292	-155 034 420	320 532 809	-286 597 97
1	-83	3028	-63 668	849 310	-7 443 026	42 771 012	-155 015 412	320 408 649	-286 297 01
1	-83	3028	-63 668	849 326	-7 443 874	42 788 836	-155 201 172	321 368 729	-288 265 92
1	-83	3028	-63 668	849 326	-7 443 842	42 787 556	-155 182 036	321 242 009	-287 952 29
1	-83	3028	-63 668	849 326	-7 443 842	42 787 620	-155 184 020	321 262 425	-288 021 98
1	-83	3028	-63 668	849 326	-7 443 810	42 786 340	-155 165 012	321 138 265	-287 721 02
1	-83	3028	-63 660	848 814	-7 430 330	42 599 268	-153 720 444	315 248 409	-277 807 56
1	-83	3028	-63 660	848 830	-7 431 146	42 615 748	-153 885 212	316 063 913	-279 405 81
1	-83	3028	-63 660	848 830	-7 431 114	42 614 532	-153 868 060	315 957 609	-279 161 88
1	-83	3028	-63 660	848 846	-7 431 962	42 632 356	-154 053 820	316 917 689	-281 130 79
1	-83	3028	-63 660	848 846	-7 431 930	42 631 076	-154 034 684	316 790 969	-280 817 16
1	-83	3028	-63 660	848 846	-7 431 930	42 631 140	-154 036 540	316 808 825	-280 874 18
1	-83	3028	-63 660	848 846	-7 431 898	42 629 796	-154 015 548	316 664 249	-280 503 53
1	-83	3028	-63 660	848 846	-7 431 898	42 629 860	-154 017 532	316 684 665	-280 573 22
1	-83	3028	-63 660	848 862	-7 432 746	42 647 684	-154 203 292	317 644 745	-282 542 13
1	-83	3028	-63 660	848 862	-7 432 714	42 646 404	-154 184 156	317 518 025	-282 228 56
1	-83	3028	-63 652	848 366	-7 419 986	42 473 316	-152 868 196	312 213 209	-273 368 46
1	-83	3028	-63 652	848 366	-7 419 954	42 472 100	-152 851 044	312 106 905	-273 124 46
1	-83	3028	-63 652	848 382	-7 420 770	42 488 644	-153 017 668	312 940 265	-274 779 74

Dimensions[A]

{47, 10}

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse
```

```
{49, -4067, 148372, -3120364, 41653838, -365636794,  
 2107911524, -7684295356, 16042134537, -14575180347}
```

```
Array[c, 10].Transpose[A]
```

```
{c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850254 c[5] - 7466130 c[6] +  
 43071204 c[7] - 157198788 c[8] + 328834553 c[9] - 299770515 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850254 c[5] - 7466098 c[6] +  
 43069924 c[7] - 157179908 c[8] + 328712953 c[9] - 299482227 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63684 c[4] + 850254 c[5] - 7466066 c[6] +  
 43068708 c[7] - 157162756 c[8] + 328606649 c[9] - 299238291 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849758 c[5] - 7453402 c[6] +  
 42898244 c[7] - 155886796 c[8] + 323570569 c[9] - 291049803 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849774 c[5] - 7454218 c[6] +  
 42914724 c[7] - 156051564 c[8] + 324386073 c[9] - 292648059 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849774 c[5] - 7454218 c[6] +  
 42914724 c[7] - 156051436 c[8] + 324383513 c[9] - 292635387 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849774 c[5] - 7454218 c[6] +  
 42914788 c[7] - 156053420 c[8] + 324403929 c[9] - 292705083 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849774 c[5] - 7454186 c[6] +  
 42913508 c[7] - 156034412 c[8] + 324279769 c[9] - 292404123 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849774 c[5] - 7454154 c[6] +  
 42912228 c[7] - 156015276 c[8] + 324153049 c[9] - 292090491 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849790 c[5] - 7455034 c[6] +  
 42931204 c[7] - 156216204 c[8] + 325199017 c[9] - 294233643 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849790 c[5] - 7455002 c[6] +  
 42929988 c[7] - 156199052 c[8] + 325092713 c[9] - 293989707 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849790 c[5] - 7454970 c[6] +  
 42928772 c[7] - 156182028 c[8] + 324988969 c[9] - 293758443 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849790 c[5] - 7454970 c[6] +  
 42928772 c[7] - 156181900 c[8] + 324986409 c[9] - 293745771 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63676 c[4] + 849790 c[5] - 7454938 c[6] +  
 42927492 c[7] - 156162892 c[8] + 324862249 c[9] - 293444811 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63668 c[4] + 849262 c[5] - 7440706 c[6] +  
 42726500 c[7] - 154591700 c[8] + 318407769 c[9] - 282547683 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63668 c[4] + 849278 c[5] - 7441490 c[6] +  
 42741764 c[7] - 154739316 c[8] + 319116969 c[9] - 283902003 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63668 c[4] + 849294 c[5] - 7442306 c[6] +  
 42758244 c[7] - 154904212 c[8] + 319935033 c[9] - 285512931 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63668 c[4] + 849294 c[5] - 7442306 c[6] +  
 42758244 c[7] - 154904084 c[8] + 319932473 c[9] - 285500259 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63668 c[4] + 849294 c[5] - 7442306 c[6] +  
 42758308 c[7] - 154906068 c[8] + 319952889 c[9] - 285569955 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63668 c[4] + 849294 c[5] - 7442274 c[6] +  
 42756964 c[7] - 154885076 c[8] + 319808313 c[9] - 285199299 c[10],  
 c[1] - 83 c[2] + 3028 c[3] - 63668 c[4] + 849294 c[5] - 7442274 c[6] +  
 42757028 c[7] - 154886932 c[8] + 319826169 c[9] - 285256323 c[10],
```

$c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,294 c[5] - 7\,442\,242 c[6] +$
 $42\,755\,748 c[7] - 154\,867\,924 c[8] + 319\,702\,009 c[9] - 284\,955\,363 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,122 c[6] +$
 $42\,774\,852 c[7] - 155\,072\,692 c[8] + 320\,786\,249 c[9] - 287\,225\,235 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,090 c[6] +$
 $42\,773\,508 c[7] - 155\,051\,700 c[8] + 320\,641\,673 c[9] - 286\,854\,579 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,090 c[6] +$
 $42\,773\,572 c[7] - 155\,053\,684 c[8] + 320\,662\,089 c[9] - 286\,924\,275 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,090 c[6] +$
 $42\,773\,572 c[7] - 155\,053\,556 c[8] + 320\,659\,529 c[9] - 286\,911\,603 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,058 c[6] +$
 $42\,772\,228 c[7] - 155\,032\,564 c[8] + 320\,514\,953 c[9] - 286\,540\,947 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,058 c[6] +$
 $42\,772\,292 c[7] - 155\,034\,548 c[8] + 320\,535\,369 c[9] - 286\,610\,643 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,058 c[6] +$
 $42\,772\,292 c[7] - 155\,034\,420 c[8] + 320\,532\,809 c[9] - 286\,597\,971 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,026 c[6] +$
 $42\,771\,012 c[7] - 155\,015\,412 c[8] + 320\,408\,649 c[9] - 286\,297\,011 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,874 c[6] +$
 $42\,788\,836 c[7] - 155\,201\,172 c[8] + 321\,368\,729 c[9] - 288\,265\,923 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,842 c[6] +$
 $42\,787\,556 c[7] - 155\,182\,036 c[8] + 321\,242\,009 c[9] - 287\,952\,291 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,842 c[6] +$
 $42\,787\,620 c[7] - 155\,184\,020 c[8] + 321\,262\,425 c[9] - 288\,021\,987 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,810 c[6] +$
 $42\,786\,340 c[7] - 155\,165\,012 c[8] + 321\,138\,265 c[9] - 287\,721\,027 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,814 c[5] - 7\,430\,330 c[6] +$
 $42\,599\,268 c[7] - 153\,720\,444 c[8] + 315\,248\,409 c[9] - 277\,807\,563 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,830 c[5] - 7\,431\,146 c[6] +$
 $42\,615\,748 c[7] - 153\,885\,212 c[8] + 316\,063\,913 c[9] - 279\,405\,819 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,830 c[5] - 7\,431\,114 c[6] +$
 $42\,614\,532 c[7] - 153\,868\,060 c[8] + 315\,957\,609 c[9] - 279\,161\,883 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,962 c[6] +$
 $42\,632\,356 c[7] - 154\,053\,820 c[8] + 316\,917\,689 c[9] - 281\,130\,795 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,930 c[6] +$
 $42\,631\,076 c[7] - 154\,034\,684 c[8] + 316\,790\,969 c[9] - 280\,817\,163 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,930 c[6] +$
 $42\,631\,140 c[7] - 154\,036\,540 c[8] + 316\,808\,825 c[9] - 280\,874\,187 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,898 c[6] +$
 $42\,629\,796 c[7] - 154\,015\,548 c[8] + 316\,664\,249 c[9] - 280\,503\,531 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,898 c[6] +$
 $42\,629\,860 c[7] - 154\,017\,532 c[8] + 316\,684\,665 c[9] - 280\,573\,227 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,862 c[5] - 7\,432\,746 c[6] +$
 $42\,647\,684 c[7] - 154\,203\,292 c[8] + 317\,644\,745 c[9] - 282\,542\,139 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,862 c[5] - 7\,432\,714 c[6] +$
 $42\,646\,404 c[7] - 154\,184\,156 c[8] + 317\,518\,025 c[9] - 282\,228\,507 c[10],$
 $c[1] - 83 c[2] + 3028 c[3] - 63\,652 c[4] + 848\,366 c[5] - 7\,419\,986 c[6] +$

$$\begin{aligned}
& 42\,473\,316\,c[7] - 152\,868\,196\,c[8] + 312\,213\,209\,c[9] - 273\,368\,403\,c[10], \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,652\,c[4] + 848\,366\,c[5] - 7\,419\,954\,c[6] + \\
& 42\,472\,100\,c[7] - 152\,851\,044\,c[8] + 312\,106\,905\,c[9] - 273\,124\,467\,c[10], \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,652\,c[4] + 848\,382\,c[5] - 7\,420\,770\,c[6] + \\
& 42\,488\,644\,c[7] - 153\,017\,668\,c[8] + 312\,940\,265\,c[9] - 274\,779\,747\,c[10] \}
\end{aligned}$$

Array[c, 10].g

$$\begin{aligned}
& 49\,c[1] - 4067\,c[2] + 148\,372\,c[3] - 3\,120\,364\,c[4] + 41\,653\,838\,c[5] - 365\,636\,794\,c[6] + \\
& 2\,107\,911\,524\,c[7] - 7\,684\,295\,356\,c[8] + 16\,042\,134\,537\,c[9] - 14\,575\,180\,347\,c[10]
\end{aligned}$$

cert = Flatten[Array[c, 10] /. FindInstance[

$$\begin{aligned}
& 49\,c[1] - 4067\,c[2] + 148\,372\,c[3] - 3\,120\,364\,c[4] + 41\,653\,838\,c[5] - 365\,636\,794\,c[6] + \\
& 2\,107\,911\,524\,c[7] - 7\,684\,295\,356\,c[8] + 16\,042\,134\,537\,c[9] - 14\,575\,180\,347\,c[10] < \\
& 0 \&\& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,254\,c[5] - 7\,466\,130\,c[6] + \\
& 43\,071\,204\,c[7] - 157\,198\,788\,c[8] + 328\,834\,553\,c[9] - 299\,770\,515\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,254\,c[5] - 7\,466\,098\,c[6] + \\
& 43\,069\,924\,c[7] - 157\,179\,908\,c[8] + 328\,712\,953\,c[9] - 299\,482\,227\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,254\,c[5] - 7\,466\,066\,c[6] + \\
& 43\,068\,708\,c[7] - 157\,162\,756\,c[8] + 328\,606\,649\,c[9] - 299\,238\,291\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,758\,c[5] - 7\,453\,402\,c[6] + \\
& 42\,898\,244\,c[7] - 155\,886\,796\,c[8] + 323\,570\,569\,c[9] - 291\,049\,803\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,218\,c[6] + \\
& 42\,914\,724\,c[7] - 156\,051\,564\,c[8] + 324\,386\,073\,c[9] - 292\,648\,059\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,218\,c[6] + \\
& 42\,914\,724\,c[7] - 156\,051\,436\,c[8] + 324\,383\,513\,c[9] - 292\,635\,387\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,218\,c[6] + \\
& 42\,914\,788\,c[7] - 156\,053\,420\,c[8] + 324\,403\,929\,c[9] - 292\,705\,083\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,186\,c[6] + \\
& 42\,913\,508\,c[7] - 156\,034\,412\,c[8] + 324\,279\,769\,c[9] - 292\,404\,123\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,154\,c[6] + \\
& 42\,912\,228\,c[7] - 156\,015\,276\,c[8] + 324\,153\,049\,c[9] - 292\,090\,491\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,455\,034\,c[6] + \\
& 42\,931\,204\,c[7] - 156\,216\,204\,c[8] + 325\,199\,017\,c[9] - 294\,233\,643\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,455\,002\,c[6] + \\
& 42\,929\,988\,c[7] - 156\,199\,052\,c[8] + 325\,092\,713\,c[9] - 293\,989\,707\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,454\,970\,c[6] + \\
& 42\,928\,772\,c[7] - 156\,182\,028\,c[8] + 324\,988\,969\,c[9] - 293\,758\,443\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,454\,970\,c[6] + \\
& 42\,928\,772\,c[7] - 156\,181\,900\,c[8] + 324\,986\,409\,c[9] - 293\,745\,771\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,454\,938\,c[6] + \\
& 42\,927\,492\,c[7] - 156\,162\,892\,c[8] + 324\,862\,249\,c[9] - 293\,444\,811\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,262\,c[5] - 7\,440\,706\,c[6] + \\
& 42\,726\,500\,c[7] - 154\,591\,700\,c[8] + 318\,407\,769\,c[9] - 282\,547\,683\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,278\,c[5] - 7\,441\,490\,c[6] + \\
& 42\,741\,764\,c[7] - 154\,739\,316\,c[8] + 319\,116\,969\,c[9] - 283\,902\,003\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,294\,c[5] - 7\,442\,306\,c[6] + \\
& 42\,758\,244\,c[7] - 154\,904\,212\,c[8] + 319\,935\,033\,c[9] - 285\,512\,931\,c[10] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,294 c[5] - 7\,442\,306 c[6] + \\
& \quad 42\,758\,244 c[7] - 154\,904\,084 c[8] + 319\,932\,473 c[9] - 285\,500\,259 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,294 c[5] - 7\,442\,306 c[6] + \\
& \quad 42\,758\,308 c[7] - 154\,906\,068 c[8] + 319\,952\,889 c[9] - 285\,569\,955 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,294 c[5] - 7\,442\,274 c[6] + \\
& \quad 42\,756\,964 c[7] - 154\,885\,076 c[8] + 319\,808\,313 c[9] - 285\,199\,299 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,294 c[5] - 7\,442\,274 c[6] + \\
& \quad 42\,757\,028 c[7] - 154\,886\,932 c[8] + 319\,826\,169 c[9] - 285\,256\,323 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,294 c[5] - 7\,442\,242 c[6] + \\
& \quad 42\,755\,748 c[7] - 154\,867\,924 c[8] + 319\,702\,009 c[9] - 284\,955\,363 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,122 c[6] + \\
& \quad 42\,774\,852 c[7] - 155\,072\,692 c[8] + 320\,786\,249 c[9] - 287\,225\,235 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,090 c[6] + \\
& \quad 42\,773\,508 c[7] - 155\,051\,700 c[8] + 320\,641\,673 c[9] - 286\,854\,579 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,090 c[6] + \\
& \quad 42\,773\,572 c[7] - 155\,053\,684 c[8] + 320\,662\,089 c[9] - 286\,924\,275 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,090 c[6] + \\
& \quad 42\,773\,572 c[7] - 155\,053\,556 c[8] + 320\,659\,529 c[9] - 286\,911\,603 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,058 c[6] + \\
& \quad 42\,772\,228 c[7] - 155\,032\,564 c[8] + 320\,514\,953 c[9] - 286\,540\,947 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,058 c[6] + \\
& \quad 42\,772\,292 c[7] - 155\,034\,548 c[8] + 320\,535\,369 c[9] - 286\,610\,643 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,058 c[6] + \\
& \quad 42\,772\,292 c[7] - 155\,034\,420 c[8] + 320\,532\,809 c[9] - 286\,597\,971 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,026 c[6] + \\
& \quad 42\,771\,012 c[7] - 155\,015\,412 c[8] + 320\,408\,649 c[9] - 286\,297\,011 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,874 c[6] + \\
& \quad 42\,788\,836 c[7] - 155\,201\,172 c[8] + 321\,368\,729 c[9] - 288\,265\,923 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,842 c[6] + \\
& \quad 42\,787\,556 c[7] - 155\,182\,036 c[8] + 321\,242\,009 c[9] - 287\,952\,291 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,842 c[6] + \\
& \quad 42\,787\,620 c[7] - 155\,184\,020 c[8] + 321\,262\,425 c[9] - 288\,021\,987 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,810 c[6] + \\
& \quad 42\,786\,340 c[7] - 155\,165\,012 c[8] + 321\,138\,265 c[9] - 287\,721\,027 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,814 c[5] - 7\,430\,330 c[6] + \\
& \quad 42\,599\,268 c[7] - 153\,720\,444 c[8] + 315\,248\,409 c[9] - 277\,807\,563 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,830 c[5] - 7\,431\,146 c[6] + \\
& \quad 42\,615\,748 c[7] - 153\,885\,212 c[8] + 316\,063\,913 c[9] - 279\,405\,819 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,830 c[5] - 7\,431\,114 c[6] + \\
& \quad 42\,614\,532 c[7] - 153\,868\,060 c[8] + 315\,957\,609 c[9] - 279\,161\,883 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,962 c[6] + \\
& \quad 42\,632\,356 c[7] - 154\,053\,820 c[8] + 316\,917\,689 c[9] - 281\,130\,795 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,930 c[6] + \\
& \quad 42\,631\,076 c[7] - 154\,034\,684 c[8] + 316\,790\,969 c[9] - 280\,817\,163 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,930 c[6] + \\
& \quad 42\,631\,140 c[7] - 154\,036\,540 c[8] + 316\,808\,825 c[9] - 280\,874\,187 c[10] \geq 0 \&\& \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,898 c[6] +
\end{aligned}$$

```

42 629 796 c[7] - 154 015 548 c[8] + 316 664 249 c[9] - 280 503 531 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 898 c[6] +
42 629 860 c[7] - 154 017 532 c[8] + 316 684 665 c[9] - 280 573 227 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 746 c[6] +
42 647 684 c[7] - 154 203 292 c[8] + 317 644 745 c[9] - 282 542 139 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 714 c[6] +
42 646 404 c[7] - 154 184 156 c[8] + 317 518 025 c[9] - 282 228 507 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 986 c[6] +
42 473 316 c[7] - 152 868 196 c[8] + 312 213 209 c[9] - 273 368 403 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 954 c[6] +
42 472 100 c[7] - 152 851 044 c[8] + 312 106 905 c[9] - 273 124 467 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 770 c[6] +
42 488 644 c[7] - 153 017 668 c[8] + 312 940 265 c[9] -
274 779 747 c[10] ≥ 0, Array[c, 10], Integers]]
{0, 0, 0, 0, 0, 0, 0, -2 143 032, -1 241 360, -401 833, -97 740}

```

```
GCD[0, 0, 0, 0, 0, 0, 0, -2 143 032, -1 241 360, -401 833, -97 740]
```

```
1
```

```
cert.g
```

```
-25 886 267 149
```

```
{0, 0, 0, 0, 0, 0, 0, -2 143 032, -1 241 360, -401 833, -97 740}.
```

```
Reverse[gpart[listdim17[[109]]]]
```

```
-25 886 267 149
```

```
cert.Transpose[A]
```

```

{314 221 603, 306 049 443, 494 320 227, 5 198 738 995, 2 935 098 723, 2 566 335 843,
3 500 304 547, 3 123 369 507, 2 377 671 587, 302 695 571, 490 966 355, 1 048 000 019,
679 237 139, 302 302 099, 9 157 459 843, 7 082 090 355, 5 187 212 963, 4 818 450 083,
5 752 418 787, 4 441 515 043, 5 006 720 867, 4 629 785 827, 4 053 984 339, 2 743 080 595,
3 677 049 299, 3 308 286 419, 1 997 382 675, 2 931 351 379, 2 562 588 499, 2 185 653 459,
1 232 916 931, 487 219 011, 1 421 187 715, 1 044 252 675, 6 513 137 187, 4 249 496 915,
4 437 767 699, 3 485 031 171, 2 739 333 251, 3 304 539 075, 1 993 635 331, 2 927 604 035,
1 974 867 507, 1 229 169 587, 4 245 749 571, 4 434 020 355, 2 735 585 907}

```

```
chi = listdim17[[110]]
```

```
(-11 + x) (-9 + x)9 (5 + x)32 (-811 + 271 x - 29 x2 + x3) (8000 - 3489 x + 559 x2 - 39 x3 + x4)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -83, 3028, -63 684, 850 238, -7 465 314, 43 054 852,
      -157 037 604, 328 052 201, -298 273 635}, {1, -83, 3028, -63 684,
      850 238, -7 465 282, 43 053 572, -157 018 724, 327 930 601, -297 985 347},
{1, -83, 3028, -63 684, 850 254, -7 466 098, 43 070 052, -157 183 236,
      328 740 985, -299 558 259}, {1, -83, 3028, -63 684, 850 254,
      -7 466 066, 43 068 772, -157 164 356, 328 619 385, -299 269 971},
{1, -83, 3028, -63 676, 849 758, -7 453 402, 42 898 436, -155 892 236,
      323 621 577, -291 208 203}, {1, -83, 3028, -63 676, 849 774,
      -7 454 186, 42 913 572, -156 036 140, 324 295 065, -292 448 475},
{1, -83, 3028, -63 676, 849 774, -7 454 186, 42 913 572, -156 036 012,
      324 292 505, -292 435 803}, {1, -83, 3028, -63 676, 849 774,
      -7 454 186, 42 913 636, -156 037 868, 324 310 361, -292 492 827},
{1, -83, 3028, -63 676, 849 774, -7 454 154, 42 912 356, -156 018 988,
      324 188 761, -292 204 539}, {1, -83, 3028, -63 676, 849 790,
      -7 454 970, 42 928 836, -156 183 500, 324 999 145, -293 777 451},
{1, -83, 3028, -63 676, 849 806, -7 455 754, 42 944 036, -156 329 132,
      325 687 929, -295 062 075}, {1, -83, 3028, -63 668, 849 294,
      -7 442 274, 42 757 092, -154 888 788, 319 844 025, -285 313 347},
{1, -83, 3028, -63 668, 849 294, -7 442 274, 42 757 156, -154 890 644,
      319 861 881, -285 370 371}, {1, -83, 3028, -63 668, 849 310,
      -7 443 058, 42 772 292, -155 034 420, 320 532 809, -286 597 971},
{1, -83, 3028, -63 668, 849 310, -7 443 058, 42 772 356, -155 036 276,
      320 550 665, -286 654 995}, {1, -83, 3028, -63 668, 849 310,
      -7 443 058, 42 772 420, -155 038 132, 320 568 521, -286 712 019},
{1, -83, 3028, -63 668, 849 326, -7 443 842, 42 787 556, -155 181 908,
      321 239 449, -287 939 619}, {1, -83, 3028, -63 668, 849 326,
      -7 443 842, 42 787 620, -155 183 764, 321 257 305, -287 996 643},
{1, -83, 3028, -63 668, 849 342, -7 444 626, 42 802 820, -155 329 396,
      321 946 089, -289 281 267}, {1, -83, 3028, -63 660, 848 830,
      -7 431 178, 42 617 092, -153 906 204, 316 208 489, -279 776 475},
{1, -83, 3028, -63 660, 848 830, -7 431 146, 42 615 876, -153 889 052,
      316 102 185, -279 532 539}, {1, -83, 3028, -63 660, 848 830,
      -7 431 114, 42 614 660, -153 871 772, 315 993 321, -279 275 931},
{1, -83, 3028, -63 660, 848 846, -7 431 930, 42 631 140, -154 036 540,
      316 808 825, -280 874 187}, {1, -83, 3028, -63 660, 848 846,
      -7 431 930, 42 631 204, -154 038 396, 316 826 681, -280 931 211},
{1, -83, 3028, -63 660, 848 862, -7 432 714, 42 646 404, -154 184 028,
      317 515 465, -282 215 835}, {1, -83, 3028, -63 652, 848 382,
      -7 420 802, 42 489 988, -153 038 660, 313 084 841, -275 150 403}};

```

A // MatrixForm

```
( 1 -83 3028 -63 684 850 238 -7 465 314 43 054 852 -157 037 604 328 052 201 -298 273 63
1 -83 3028 -63 684 850 238 -7 465 282 43 053 572 -157 018 724 327 930 601 -297 985 34
1 -83 3028 -63 684 850 254 -7 466 098 43 070 052 -157 183 236 328 740 985 -299 558 25
1 -83 3028 -63 684 850 254 -7 466 066 43 068 772 -157 164 356 328 619 385 -299 269 97
1 -83 3028 -63 676 849 758 -7 453 402 42 898 436 -155 892 236 323 621 577 -291 208 26
1 -83 3028 -63 676 849 774 -7 454 186 42 913 572 -156 036 140 324 295 065 -292 448 47
1 -83 3028 -63 676 849 774 -7 454 186 42 913 572 -156 036 012 324 292 505 -292 435 86
1 -83 3028 -63 676 849 774 -7 454 186 42 913 636 -156 037 868 324 310 361 -292 492 82
1 -83 3028 -63 676 849 774 -7 454 154 42 912 356 -156 018 988 324 188 761 -292 204 53
1 -83 3028 -63 676 849 790 -7 454 970 42 928 836 -156 183 500 324 999 145 -293 777 45
1 -83 3028 -63 676 849 806 -7 455 754 42 944 036 -156 329 132 325 687 929 -295 062 07
1 -83 3028 -63 668 849 294 -7 442 274 42 757 092 -154 888 788 319 844 025 -285 313 34
1 -83 3028 -63 668 849 294 -7 442 274 42 757 156 -154 890 644 319 861 881 -285 370 37
1 -83 3028 -63 668 849 310 -7 443 058 42 772 292 -155 034 420 320 532 809 -286 597 97
1 -83 3028 -63 668 849 310 -7 443 058 42 772 356 -155 036 276 320 550 665 -286 654 99
1 -83 3028 -63 668 849 310 -7 443 058 42 772 420 -155 038 132 320 568 521 -286 712 01
1 -83 3028 -63 668 849 326 -7 443 842 42 787 556 -155 181 908 321 239 449 -287 939 61
1 -83 3028 -63 668 849 326 -7 443 842 42 787 620 -155 183 764 321 257 305 -287 996 64
1 -83 3028 -63 668 849 342 -7 444 626 42 802 820 -155 329 396 321 946 089 -289 281 26
1 -83 3028 -63 660 848 830 -7 431 178 42 617 092 -153 906 204 316 208 489 -279 776 47
1 -83 3028 -63 660 848 830 -7 431 146 42 615 876 -153 889 052 316 102 185 -279 532 53
1 -83 3028 -63 660 848 830 -7 431 114 42 614 660 -153 871 772 315 993 321 -279 275 93
1 -83 3028 -63 660 848 846 -7 431 930 42 631 140 -154 036 540 316 808 825 -280 874 18
1 -83 3028 -63 660 848 846 -7 431 930 42 631 204 -154 038 396 316 826 681 -280 931 21
1 -83 3028 -63 660 848 862 -7 432 714 42 646 404 -154 184 028 317 515 465 -282 215 83
1 -83 3028 -63 652 848 382 -7 420 802 42 489 988 -153 038 660 313 084 841 -275 150 46)
```

Dimensions[A]

```
{26, 10}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -4067, 148 372, -3 120 364, 41 653 838, -365 636 794,
2 107 914 276, -7 684 365 180, 16 042 704 713, -14 576 662 395}
```

Array[c, 10].Transpose[A]

```
{c[1] - 83 c[2] + 3028 c[3] - 63 684 c[4] + 850 238 c[5] - 7 465 314 c[6] +
43 054 852 c[7] - 157 037 604 c[8] + 328 052 201 c[9] - 298 273 635 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 684 c[4] + 850 238 c[5] - 7 465 282 c[6] +
43 053 572 c[7] - 157 018 724 c[8] + 327 930 601 c[9] - 297 985 347 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 684 c[4] + 850 254 c[5] - 7 466 098 c[6] +
43 070 052 c[7] - 157 183 236 c[8] + 328 740 985 c[9] - 299 558 259 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 684 c[4] + 850 254 c[5] - 7 466 066 c[6] +
43 068 772 c[7] - 157 164 356 c[8] + 328 619 385 c[9] - 299 269 971 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 758 c[5] - 7 453 402 c[6] +
42 898 436 c[7] - 155 892 236 c[8] + 323 621 577 c[9] - 291 208 203 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 774 c[5] - 7 454 186 c[6] +
42 913 572 c[7] - 156 036 140 c[8] + 324 295 065 c[9] - 292 448 475 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 774 c[5] - 7 454 186 c[6] +
42 913 572 c[7] - 156 036 012 c[8] + 324 292 505 c[9] - 292 435 803 c[10],
```

```

c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 774 c[5] - 7 454 186 c[6] +
  42 913 636 c[7] - 156 037 868 c[8] + 324 310 361 c[9] - 292 492 827 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 774 c[5] - 7 454 154 c[6] +
  42 912 356 c[7] - 156 018 988 c[8] + 324 188 761 c[9] - 292 204 539 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 790 c[5] - 7 454 970 c[6] +
  42 928 836 c[7] - 156 183 500 c[8] + 324 999 145 c[9] - 293 777 451 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 806 c[5] - 7 455 754 c[6] +
  42 944 036 c[7] - 156 329 132 c[8] + 325 687 929 c[9] - 295 062 075 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 294 c[5] - 7 442 274 c[6] +
  42 757 092 c[7] - 154 888 788 c[8] + 319 844 025 c[9] - 285 313 347 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 294 c[5] - 7 442 274 c[6] +
  42 757 156 c[7] - 154 890 644 c[8] + 319 861 881 c[9] - 285 370 371 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 058 c[6] +
  42 772 292 c[7] - 155 034 420 c[8] + 320 532 809 c[9] - 286 597 971 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 058 c[6] +
  42 772 356 c[7] - 155 036 276 c[8] + 320 550 665 c[9] - 286 654 995 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 058 c[6] +
  42 772 420 c[7] - 155 038 132 c[8] + 320 568 521 c[9] - 286 712 019 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 842 c[6] +
  42 787 556 c[7] - 155 181 908 c[8] + 321 239 449 c[9] - 287 939 619 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 842 c[6] +
  42 787 620 c[7] - 155 183 764 c[8] + 321 257 305 c[9] - 287 996 643 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 626 c[6] +
  42 802 820 c[7] - 155 329 396 c[8] + 321 946 089 c[9] - 289 281 267 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 830 c[5] - 7 431 178 c[6] +
  42 617 092 c[7] - 153 906 204 c[8] + 316 208 489 c[9] - 279 776 475 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 830 c[5] - 7 431 146 c[6] +
  42 615 876 c[7] - 153 889 052 c[8] + 316 102 185 c[9] - 279 532 539 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 830 c[5] - 7 431 114 c[6] +
  42 614 660 c[7] - 153 871 772 c[8] + 315 993 321 c[9] - 279 275 931 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 930 c[6] +
  42 631 140 c[7] - 154 036 540 c[8] + 316 808 825 c[9] - 280 874 187 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 930 c[6] +
  42 631 204 c[7] - 154 038 396 c[8] + 316 826 681 c[9] - 280 931 211 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 714 c[6] +
  42 646 404 c[7] - 154 184 028 c[8] + 317 515 465 c[9] - 282 215 835 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 802 c[6] +
  42 489 988 c[7] - 153 038 660 c[8] + 313 084 841 c[9] - 275 150 403 c[10] }

```

Array[c, 10].g

```

49 c[1] - 4067 c[2] + 148 372 c[3] - 3 120 364 c[4] + 41 653 838 c[5] - 365 636 794 c[6] +
  2 107 914 276 c[7] - 7 684 365 180 c[8] + 16 042 704 713 c[9] - 14 576 662 395 c[10]

```

cert = Flatten[Array[c, 10] /. FindInstance[

```

  49 c[1] - 4067 c[2] + 148 372 c[3] - 3 120 364 c[4] + 41 653 838 c[5] - 365 636 794 c[6] +
    2 107 914 276 c[7] - 7 684 365 180 c[8] + 16 042 704 713 c[9] - 14 576 662 395 c[10] <
    0 && c[1] - 83 c[2] + 3028 c[3] - 63 684 c[4] + 850 238 c[5] - 7 465 314 c[6] +

```

$$\begin{aligned}
& 43\,054\,852\,c[7] - 157\,037\,604\,c[8] + 328\,052\,201\,c[9] - 298\,273\,635\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,238\,c[5] - 7\,465\,282\,c[6] + \\
& 43\,053\,572\,c[7] - 157\,018\,724\,c[8] + 327\,930\,601\,c[9] - 297\,985\,347\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,254\,c[5] - 7\,466\,098\,c[6] + \\
& 43\,070\,052\,c[7] - 157\,183\,236\,c[8] + 328\,740\,985\,c[9] - 299\,558\,259\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,254\,c[5] - 7\,466\,066\,c[6] + \\
& 43\,068\,772\,c[7] - 157\,164\,356\,c[8] + 328\,619\,385\,c[9] - 299\,269\,971\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,758\,c[5] - 7\,453\,402\,c[6] + \\
& 42\,898\,436\,c[7] - 155\,892\,236\,c[8] + 323\,621\,577\,c[9] - 291\,208\,203\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,186\,c[6] + \\
& 42\,913\,572\,c[7] - 156\,036\,140\,c[8] + 324\,295\,065\,c[9] - 292\,448\,475\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,186\,c[6] + \\
& 42\,913\,572\,c[7] - 156\,036\,012\,c[8] + 324\,292\,505\,c[9] - 292\,435\,803\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,186\,c[6] + \\
& 42\,913\,636\,c[7] - 156\,037\,868\,c[8] + 324\,310\,361\,c[9] - 292\,492\,827\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,154\,c[6] + \\
& 42\,912\,356\,c[7] - 156\,018\,988\,c[8] + 324\,188\,761\,c[9] - 292\,204\,539\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,454\,970\,c[6] + \\
& 42\,928\,836\,c[7] - 156\,183\,500\,c[8] + 324\,999\,145\,c[9] - 293\,777\,451\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,806\,c[5] - 7\,455\,754\,c[6] + \\
& 42\,944\,036\,c[7] - 156\,329\,132\,c[8] + 325\,687\,929\,c[9] - 295\,062\,075\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,294\,c[5] - 7\,442\,274\,c[6] + \\
& 42\,757\,092\,c[7] - 154\,888\,788\,c[8] + 319\,844\,025\,c[9] - 285\,313\,347\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,294\,c[5] - 7\,442\,274\,c[6] + \\
& 42\,757\,156\,c[7] - 154\,890\,644\,c[8] + 319\,861\,881\,c[9] - 285\,370\,371\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,310\,c[5] - 7\,443\,058\,c[6] + \\
& 42\,772\,292\,c[7] - 155\,034\,420\,c[8] + 320\,532\,809\,c[9] - 286\,597\,971\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,310\,c[5] - 7\,443\,058\,c[6] + \\
& 42\,772\,356\,c[7] - 155\,036\,276\,c[8] + 320\,550\,665\,c[9] - 286\,654\,995\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,310\,c[5] - 7\,443\,058\,c[6] + \\
& 42\,772\,420\,c[7] - 155\,038\,132\,c[8] + 320\,568\,521\,c[9] - 286\,712\,019\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,326\,c[5] - 7\,443\,842\,c[6] + \\
& 42\,787\,556\,c[7] - 155\,181\,908\,c[8] + 321\,239\,449\,c[9] - 287\,939\,619\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,326\,c[5] - 7\,443\,842\,c[6] + \\
& 42\,787\,620\,c[7] - 155\,183\,764\,c[8] + 321\,257\,305\,c[9] - 287\,996\,643\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,342\,c[5] - 7\,444\,626\,c[6] + \\
& 42\,802\,820\,c[7] - 155\,329\,396\,c[8] + 321\,946\,089\,c[9] - 289\,281\,267\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,830\,c[5] - 7\,431\,178\,c[6] + \\
& 42\,617\,092\,c[7] - 153\,906\,204\,c[8] + 316\,208\,489\,c[9] - 279\,776\,475\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,830\,c[5] - 7\,431\,146\,c[6] + \\
& 42\,615\,876\,c[7] - 153\,889\,052\,c[8] + 316\,102\,185\,c[9] - 279\,532\,539\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,830\,c[5] - 7\,431\,114\,c[6] + \\
& 42\,614\,660\,c[7] - 153\,871\,772\,c[8] + 315\,993\,321\,c[9] - 279\,275\,931\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,846\,c[5] - 7\,431\,930\,c[6] + \\
& 42\,631\,140\,c[7] - 154\,036\,540\,c[8] + 316\,808\,825\,c[9] - 280\,874\,187\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,846\,c[5] - 7\,431\,930\,c[6] + \\
& 42\,631\,204\,c[7] - 154\,038\,396\,c[8] + 316\,826\,681\,c[9] - 280\,931\,211\,c[10] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 714 c[6] +
  42 646 404 c[7] - 154 184 028 c[8] + 317 515 465 c[9] - 282 215 835 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 802 c[6] +
  42 489 988 c[7] - 153 038 660 c[8] + 313 084 841 c[9] -
  275 150 403 c[10] ≥ 0, Array[c, 10], Integers]]
{0, 0, 0, 0, 0, 0, -14 047 613, -8 488 569, -2 909 072, -758 148}

GCD[0, 0, 0, 0, 0, 0, -14 047 613, -8 488 569, -2 909 072, -758 148]
1

cert.g
-15 578 207 644

{0, 0, 0, 0, 0, 0, -14 047 613, -8 488 569, -2 909 072, -758 148}.
Reverse[gpart[listdim17[[110]]]]
-15 578 207 644

cert.Transpose[A]
{14 725 840 908, 7 620 787 404, 7 622 271 820, 517 218 316, 21 823 058 516, 11 822 074 644,
  8 575 510 676, 14 719 489 428, 7 614 435 924, 7 615 920 340, 512 351 252,
  9 528 749 532, 15 672 728 284, 2 425 180 444, 8 569 159 196, 14 713 137 948,
  1 465 590 108, 7 609 568 860, 505 999 772, 13 730 036 772, 9 522 398 052,
  2 068 195 364, 8 562 807 716, 14 706 786 468, 7 603 217 380, 14 700 434 988}

chi = listdim17[[111]]
(-13 + x) (-9 + x)11 (5 + x)32 (73 - 18 x + x2) (-928 + 293 x - 30 x2 + x3)

CoefficientList[feasibleinterlacingpolylist[chi], x]

```

```

A = {{1, -65, 1777, -26433, 230507, -1175083, 3231203, -3681171},
      {1, -65, 1777, -26433, 230523, -1175579, 3236051, -3695523},
      {1, -65, 1777, -26433, 230523, -1175579, 3236115, -3696355},
      {1, -65, 1777, -26425, 230171, -1169867, 3195699, -3591419},
      {1, -65, 1777, -26425, 230171, -1169867, 3195763, -3592251},
      {1, -65, 1777, -26425, 230171, -1169835, 3194995, -3587675},
      {1, -65, 1777, -26425, 230187, -1170395, 3201443, -3612011},
      {1, -65, 1777, -26425, 230187, -1170395, 3201507, -3612843},
      {1, -65, 1777, -26425, 230187, -1170363, 3200675, -3607435},
      {1, -65, 1777, -26425, 230187, -1170363, 3200803, -3608971},
      {1, -65, 1777, -26425, 230203, -1170891, 3206419, -3628027},
      {1, -65, 1777, -26425, 230203, -1170859, 3205715, -3624155},
      {1, -65, 1777, -26417, 229835, -1164651, 3160259, -3502499},
      {1, -65, 1777, -26417, 229835, -1164651, 3160323, -3503331},
      {1, -65, 1777, -26417, 229851, -1165211, 3166771, -3527667},
      {1, -65, 1777, -26417, 229851, -1165179, 3166003, -3523091},
      {1, -65, 1777, -26417, 229851, -1165179, 3166067, -3523923},
      {1, -65, 1777, -26417, 229851, -1165147, 3165299, -3519347},
      {1, -65, 1777, -26417, 229851, -1165147, 3165363, -3520051},
      {1, -65, 1777, -26417, 229851, -1165115, 3164595, -3515475},
      {1, -65, 1777, -26417, 229867, -1165707, 3171811, -3544515},
      {1, -65, 1777, -26417, 229867, -1165707, 3171811, -3544387},
      {1, -65, 1777, -26417, 229867, -1165675, 3171107, -3540643},
      {1, -65, 1777, -26417, 229867, -1165611, 3169635, -3532195},
      {1, -65, 1777, -26417, 229883, -1166171, 3176147, -3557363},
      {1, -65, 1777, -26409, 229499, -1159435, 3124883, -3414411},
      {1, -65, 1777, -26409, 229499, -1159403, 3124179, -3410667},
      {1, -65, 1777, -26409, 229515, -1159963, 3130627, -3435003},
      {1, -65, 1777, -26409, 229515, -1159931, 3129923, -3431131},
      {1, -65, 1777, -26409, 229515, -1159899, 3129219, -3427387},
      {1, -65, 1777, -26409, 229515, -1159899, 3129283, -3428091},
      {1, -65, 1777, -26409, 229531, -1160491, 3136371, -3455595},
      {1, -65, 1777, -26409, 229531, -1160459, 3135667, -3451723},
      {1, -65, 1777, -26409, 229531, -1160427, 3135027, -3448683},
      {1, -65, 1777, -26409, 229547, -1160987, 3141475, -3473019},
      {1, -65, 1777, -26401, 229179, -1154715, 3094483, -3342339},
      {1, -65, 1777, -26401, 229179, -1154683, 3093843, -3339171},
      {1, -65, 1777, -26401, 229195, -1155211, 3099587, -3359763}};

```


A // MatrixForm

```
( 1 -65 1777 -26433 230507 -1175083 3231203 -3681171
 1 -65 1777 -26433 230523 -1175579 3236051 -3695523
 1 -65 1777 -26433 230523 -1175579 3236115 -3696355
 1 -65 1777 -26425 230171 -1169867 3195699 -3591419
 1 -65 1777 -26425 230171 -1169867 3195763 -3592251
 1 -65 1777 -26425 230171 -1169835 3194995 -3587675
 1 -65 1777 -26425 230187 -1170395 3201443 -3612011
 1 -65 1777 -26425 230187 -1170395 3201507 -3612843
 1 -65 1777 -26425 230187 -1170363 3200675 -3607435
 1 -65 1777 -26425 230187 -1170363 3200803 -3608971
 1 -65 1777 -26425 230203 -1170891 3206419 -3628027
 1 -65 1777 -26425 230203 -1170859 3205715 -3624155
 1 -65 1777 -26417 229835 -1164651 3160259 -3502499
 1 -65 1777 -26417 229835 -1164651 3160323 -3503331
 1 -65 1777 -26417 229851 -1165211 3166771 -3527667
 1 -65 1777 -26417 229851 -1165179 3166003 -3523091
 1 -65 1777 -26417 229851 -1165179 3166067 -3523923
 1 -65 1777 -26417 229851 -1165147 3165299 -3519347
 1 -65 1777 -26417 229851 -1165147 3165363 -3520051
 1 -65 1777 -26417 229851 -1165115 3164595 -3515475
 1 -65 1777 -26417 229867 -1165707 3171811 -3544515
 1 -65 1777 -26417 229867 -1165707 3171811 -3544387
 1 -65 1777 -26417 229867 -1165675 3171107 -3540643
 1 -65 1777 -26417 229867 -1165611 3169635 -3532195
 1 -65 1777 -26417 229883 -1166171 3176147 -3557363
 1 -65 1777 -26409 229499 -1159435 3124883 -3414411
 1 -65 1777 -26409 229499 -1159403 3124179 -3410667
 1 -65 1777 -26409 229515 -1159963 3130627 -3435003
 1 -65 1777 -26409 229515 -1159931 3129923 -3431131
 1 -65 1777 -26409 229515 -1159899 3129219 -3427387
 1 -65 1777 -26409 229515 -1159899 3129283 -3428091
 1 -65 1777 -26409 229531 -1160491 3136371 -3455595
 1 -65 1777 -26409 229531 -1160459 3135667 -3451723
 1 -65 1777 -26409 229531 -1160427 3135027 -3448683
 1 -65 1777 -26409 229547 -1160987 3141475 -3473019
 1 -65 1777 -26401 229179 -1154715 3094483 -3342339
 1 -65 1777 -26401 229179 -1154683 3093843 -3339171
 1 -65 1777 -26401 229195 -1155211 3099587 -3359763)
```

Dimensions[A]

{38, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3185, 87073, -1295065, 11289755, -57519531, 158041747, -179863691}

Array[c, 8].Transpose[A]

```
{c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230507 c[5] -
 1175083 c[6] + 3231203 c[7] - 3681171 c[8], c[1] - 65 c[2] + 1777 c[3] -
 26433 c[4] + 230523 c[5] - 1175579 c[6] + 3236051 c[7] - 3695523 c[8],
 c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230523 c[5] - 1175579 c[6] +
 3236115 c[7] - 3696355 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
```

$$\begin{aligned}
& 230\,171\,c[5] - 1\,169\,867\,c[6] + 3\,195\,699\,c[7] - 3\,591\,419\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,867\,c[6] + \\
& 3\,195\,763\,c[7] - 3\,592\,251\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,171\,c[5] - 1\,169\,835\,c[6] + 3\,194\,995\,c[7] - 3\,587\,675\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,187\,c[5] - 1\,170\,395\,c[6] + \\
& 3\,201\,443\,c[7] - 3\,612\,011\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,187\,c[5] - 1\,170\,395\,c[6] + 3\,201\,507\,c[7] - 3\,612\,843\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,187\,c[5] - 1\,170\,363\,c[6] + \\
& 3\,200\,675\,c[7] - 3\,607\,435\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,187\,c[5] - 1\,170\,363\,c[6] + 3\,200\,803\,c[7] - 3\,608\,971\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,203\,c[5] - 1\,170\,891\,c[6] + \\
& 3\,206\,419\,c[7] - 3\,628\,027\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& 230\,203\,c[5] - 1\,170\,859\,c[6] + 3\,205\,715\,c[7] - 3\,624\,155\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,651\,c[6] + \\
& 3\,160\,259\,c[7] - 3\,502\,499\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,651\,c[6] + 3\,160\,323\,c[7] - 3\,503\,331\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,211\,c[6] + \\
& 3\,166\,771\,c[7] - 3\,527\,667\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,851\,c[5] - 1\,165\,179\,c[6] + 3\,166\,003\,c[7] - 3\,523\,091\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,179\,c[6] + \\
& 3\,166\,067\,c[7] - 3\,523\,923\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,851\,c[5] - 1\,165\,147\,c[6] + 3\,165\,299\,c[7] - 3\,519\,347\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,147\,c[6] + \\
& 3\,165\,363\,c[7] - 3\,520\,051\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,851\,c[5] - 1\,165\,115\,c[6] + 3\,164\,595\,c[7] - 3\,515\,475\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,867\,c[5] - 1\,165\,707\,c[6] + \\
& 3\,171\,811\,c[7] - 3\,544\,515\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,867\,c[5] - 1\,165\,707\,c[6] + 3\,171\,811\,c[7] - 3\,544\,387\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,867\,c[5] - 1\,165\,675\,c[6] + \\
& 3\,171\,107\,c[7] - 3\,540\,643\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,867\,c[5] - 1\,165\,611\,c[6] + 3\,169\,635\,c[7] - 3\,532\,195\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,883\,c[5] - 1\,166\,171\,c[6] + \\
& 3\,176\,147\,c[7] - 3\,557\,363\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,499\,c[5] - 1\,159\,435\,c[6] + 3\,124\,883\,c[7] - 3\,414\,411\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,403\,c[6] + \\
& 3\,124\,179\,c[7] - 3\,410\,667\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,515\,c[5] - 1\,159\,963\,c[6] + 3\,130\,627\,c[7] - 3\,435\,003\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,515\,c[5] - 1\,159\,931\,c[6] + \\
& 3\,129\,923\,c[7] - 3\,431\,131\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,515\,c[5] - 1\,159\,899\,c[6] + 3\,129\,219\,c[7] - 3\,427\,387\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,515\,c[5] - 1\,159\,899\,c[6] + \\
& 3\,129\,283\,c[7] - 3\,428\,091\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,531\,c[5] - 1\,160\,491\,c[6] + 3\,136\,371\,c[7] - 3\,455\,595\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,531\,c[5] - 1\,160\,459\,c[6] + \\
& 3\,135\,667\,c[7] - 3\,451\,723\,c[8], \quad c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,531\,c[5] - 1\,160\,427\,c[6] + 3\,135\,027\,c[7] - 3\,448\,683\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,547\,c[5] - 1\,160\,987\,c[6] +
\end{aligned}$$

```

3 141 475 c[7] - 3 473 019 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 179 c[5] - 1 154 715 c[6] + 3 094 483 c[7] - 3 342 339 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 683 c[6] +
3 093 843 c[7] - 3 339 171 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 195 c[5] - 1 155 211 c[6] + 3 099 587 c[7] - 3 359 763 c[8]}

```

```
Array[c, 8].g
```

```

49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 065 c[4] +
11 289 755 c[5] - 57 519 531 c[6] + 158 041 747 c[7] - 179 863 691 c[8]

```

```
cert =
```

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 295 065 c[4] +
11 289 755 c[5] - 57 519 531 c[6] + 158 041 747 c[7] - 179 863 691 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 507 c[5] - 1 175 083 c[6] +
3 231 203 c[7] - 3 681 171 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 523 c[5] - 1 175 579 c[6] + 3 236 051 c[7] - 3 695 523 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 523 c[5] - 1 175 579 c[6] +
3 236 115 c[7] - 3 696 355 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 171 c[5] - 1 169 867 c[6] + 3 195 699 c[7] - 3 591 419 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 171 c[5] - 1 169 867 c[6] +
3 195 763 c[7] - 3 592 251 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 171 c[5] - 1 169 835 c[6] + 3 194 995 c[7] - 3 587 675 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 187 c[5] - 1 170 395 c[6] +
3 201 443 c[7] - 3 612 011 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 187 c[5] - 1 170 395 c[6] + 3 201 507 c[7] - 3 612 843 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 187 c[5] - 1 170 363 c[6] +
3 200 675 c[7] - 3 607 435 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 187 c[5] - 1 170 363 c[6] + 3 200 803 c[7] - 3 608 971 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 203 c[5] - 1 170 891 c[6] +
3 206 419 c[7] - 3 628 027 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 203 c[5] - 1 170 859 c[6] + 3 205 715 c[7] - 3 624 155 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 835 c[5] - 1 164 651 c[6] +
3 160 259 c[7] - 3 502 499 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 835 c[5] - 1 164 651 c[6] + 3 160 323 c[7] - 3 503 331 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 851 c[5] - 1 165 211 c[6] +
3 166 771 c[7] - 3 527 667 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 851 c[5] - 1 165 179 c[6] + 3 166 003 c[7] - 3 523 091 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 851 c[5] - 1 165 179 c[6] +
3 166 067 c[7] - 3 523 923 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 851 c[5] - 1 165 147 c[6] + 3 165 299 c[7] - 3 519 347 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 851 c[5] - 1 165 147 c[6] +
3 165 363 c[7] - 3 520 051 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 851 c[5] - 1 165 115 c[6] + 3 164 595 c[7] - 3 515 475 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 867 c[5] -
1 165 707 c[6] + 3 171 811 c[7] - 3 544 515 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 867 c[5] - 1 165 707 c[6] +
3 171 811 c[7] - 3 544 387 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +

```

```

229 867 c[5] - 1 165 675 c[6] + 3 171 107 c[7] - 3 540 643 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 867 c[5] - 1 165 611 c[6] +
3 169 635 c[7] - 3 532 195 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 883 c[5] - 1 166 171 c[6] + 3 176 147 c[7] - 3 557 363 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 435 c[6] +
3 124 883 c[7] - 3 414 411 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 499 c[5] - 1 159 403 c[6] + 3 124 179 c[7] - 3 410 667 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 963 c[6] +
3 130 627 c[7] - 3 435 003 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 159 931 c[6] + 3 129 923 c[7] - 3 431 131 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 899 c[6] +
3 129 219 c[7] - 3 427 387 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 515 c[5] - 1 159 899 c[6] + 3 129 283 c[7] - 3 428 091 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 531 c[5] - 1 160 491 c[6] +
3 136 371 c[7] - 3 455 595 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 531 c[5] - 1 160 459 c[6] + 3 135 667 c[7] - 3 451 723 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 531 c[5] - 1 160 427 c[6] +
3 135 027 c[7] - 3 448 683 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 547 c[5] - 1 160 987 c[6] + 3 141 475 c[7] - 3 473 019 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 715 c[6] +
3 094 483 c[7] - 3 342 339 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 179 c[5] - 1 154 683 c[6] + 3 093 843 c[7] - 3 339 171 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 195 c[5] - 1 155 211 c[6] +
3 099 587 c[7] - 3 359 763 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -1 552 628, -531 841, -97 912, -13 407}

GCD[0, 0, 0, 0, -1 552 628, -531 841, -97 912, -13 407]
1

cert.g
-295 866 596

{0, 0, 0, 0, -1 552 628, -531 841, -97 912, -13 407}.Reverse[gpart[listdim17[[111]]]]
-295 866 596

cert.Transpose[A]
{45 606 868, 2 297 844, 7 186 100, 66 169 804, 71 058 060, 67 885 132, 35 810 220,
40 698 476, 32 637 292, 40 697 708, 2 277 708, 2 276 940, 91 620 996, 96 509 252,
64 434 340, 61 261 412, 66 149 668, 62 976 740, 66 148 900, 62 975 972,
35 790 084, 34 073 988, 35 789 316, 32 615 620, 5 428 964, 121 960 444,
123 675 772, 91 600 860, 91 600 092, 93 315 420, 96 487 580, 61 241 276,
61 240 508, 66 127 996, 34 053 084, 118 767 380, 121 938 772, 91 579 188}

```

```
chi = listdim17[[112]]
```

$$(-13+x)(-11+x)(-9+x)^9(-7+x)(5+x)^{32}(95-20x+x^2)(-752+255x-28x^2+x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -83, 3028, -63 692, 850 734, -7 477 882, 43 221 412,
      -158 255 068, 332 705 625, -305 540 235}, {1, -83, 3028, -63 684,
      850 254, -7 466 002, 43 066 212, -157 126 596, 328 376 185, -298 693 395},
      {1, -83, 3028, -63 684, 850 270, -7 466 818, 43 082 692, -157 291 236,
      329 189 129, -300 278 979}, {1, -83, 3028, -63 684, 850 270,
      -7 466 786, 43 081 412, -157 272 228, 329 065 225, -299 980 835},
      {1, -83, 3028, -63 676, 849 774, -7 454 122, 42 911 012, -155 998 124,
      324 046 745, -291 846 555}, {1, -83, 3028, -63 676, 849 774,
      -7 454 122, 42 911 076, -155 999 980, 324 064 345, -291 901 275},
      {1, -83, 3028, -63 676, 849 790, -7 454 938, 42 927 492, -156 162 764,
      324 859 689, -293 432 139}, {1, -83, 3028, -63 676, 849 790,
      -7 454 906, 42 926 212, -156 143 756, 324 735 785, -293 133 995},
      {1, -83, 3028, -63 676, 849 790, -7 454 906, 42 926 276, -156 145 740,
      324 755 945, -293 200 875}, {1, -83, 3028, -63 676, 849 790,
      -7 454 874, 42 924 996, -156 126 732, 324 631 785, -292 899 915},
      {1, -83, 3028, -63 676, 849 806, -7 455 690, 42 941 476, -156 291 372,
      325 444 729, -294 485 499}, {1, -83, 3028, -63 676, 849 806,
      -7 455 658, 42 940 196, -156 272 364, 325 320 825, -294 187 355},
      {1, -83, 3028, -63 668, 849 294, -7 442 242, 42 755 812, -154 869 652,
      319 717 305, -284 999 715}, {1, -83, 3028, -63 668, 849 310,
      -7 443 026, 42 771 012, -155 015 412, 320 408 649, -286 297 011},
      {1, -83, 3028, -63 668, 849 310, -7 443 026, 42 771 076, -155 017 268,
      320 426 505, -286 354 035}, {1, -83, 3028, -63 668, 849 310,
      -7 442 994, 42 769 796, -154 998 260, 320 302 345, -286 053 075},
      {1, -83, 3028, -63 668, 849 326, -7 443 842, 42 787 492, -155 180 052,
      321 221 593, -287 882 595}, {1, -83, 3028, -63 668, 849 326,
      -7 443 810, 42 786 276, -155 162 900, 321 115 289, -287 638 659},
      {1, -83, 3028, -63 668, 849 326, -7 443 778, 42 785 060, -155 145 876,
      321 011 545, -287 407 395}, {1, -83, 3028, -63 668, 849 326,
      -7 443 746, 42 783 780, -155 126 868, 320 887 385, -287 106 435},
      {1, -83, 3028, -63 660, 848 846, -7 431 898, 42 629 796, -154 015 548,
      316 664 249, -280 503 531}, {1, -83, 3028, -63 660, 848 846,
      -7 431 898, 42 629 860, -154 017 404, 316 682 105, -280 560 555},
      {1, -83, 3028, -63 660, 848 846, -7 431 866, 42 628 580, -153 998 396,
      316 557 945, -280 259 595}, {1, -83, 3028, -63 660, 848 862,
      -7 432 682, 42 645 060, -154 163 036, 317 370 889, -281 845 179},
      {1, -83, 3028, -63 660, 848 862, -7 432 650, 42 643 844, -154 146 012,
      317 267 145, -281 613 915}, {1, -83, 3028, -63 652, 848 382,
      -7 420 738, 42 487 364, -152 998 532, 312 813 545, -274 466 115}};
```

A // MatrixForm

```
( 1 -83 3028 -63 692 850 734 -7 477 882 43 221 412 -158 255 068 332 705 625 -305 540 23
1 -83 3028 -63 684 850 254 -7 466 002 43 066 212 -157 126 596 328 376 185 -298 693 39
1 -83 3028 -63 684 850 270 -7 466 818 43 082 692 -157 291 236 329 189 129 -300 278 97
1 -83 3028 -63 684 850 270 -7 466 786 43 081 412 -157 272 228 329 065 225 -299 980 83
1 -83 3028 -63 676 849 774 -7 454 122 42 911 012 -155 998 124 324 046 745 -291 846 55
1 -83 3028 -63 676 849 774 -7 454 122 42 911 076 -155 999 980 324 064 345 -291 901 27
1 -83 3028 -63 676 849 790 -7 454 938 42 927 492 -156 162 764 324 859 689 -293 432 13
1 -83 3028 -63 676 849 790 -7 454 906 42 926 212 -156 143 756 324 735 785 -293 133 99
1 -83 3028 -63 676 849 790 -7 454 906 42 926 276 -156 145 740 324 755 945 -293 200 87
1 -83 3028 -63 676 849 790 -7 454 874 42 924 996 -156 126 732 324 631 785 -292 899 91
1 -83 3028 -63 676 849 806 -7 455 690 42 941 476 -156 291 372 325 444 729 -294 485 49
1 -83 3028 -63 676 849 806 -7 455 658 42 940 196 -156 272 364 325 320 825 -294 187 35
1 -83 3028 -63 668 849 294 -7 442 242 42 755 812 -154 869 652 319 717 305 -284 999 71
1 -83 3028 -63 668 849 310 -7 443 026 42 771 012 -155 015 412 320 408 649 -286 297 01
1 -83 3028 -63 668 849 310 -7 443 026 42 771 076 -155 017 268 320 426 505 -286 354 03
1 -83 3028 -63 668 849 310 -7 442 994 42 769 796 -154 998 260 320 302 345 -286 053 07
1 -83 3028 -63 668 849 326 -7 443 842 42 787 492 -155 180 052 321 221 593 -287 882 59
1 -83 3028 -63 668 849 326 -7 443 810 42 786 276 -155 162 900 321 115 289 -287 638 65
1 -83 3028 -63 668 849 326 -7 443 778 42 785 060 -155 145 876 321 011 545 -287 407 39
1 -83 3028 -63 668 849 326 -7 443 746 42 783 780 -155 126 868 320 887 385 -287 106 43
1 -83 3028 -63 660 848 846 -7 431 898 42 629 796 -154 015 548 316 664 249 -280 503 53
1 -83 3028 -63 660 848 846 -7 431 898 42 629 860 -154 017 404 316 682 105 -280 560 55
1 -83 3028 -63 660 848 846 -7 431 866 42 628 580 -153 998 396 316 557 945 -280 259 59
1 -83 3028 -63 660 848 862 -7 432 682 42 645 060 -154 163 036 317 370 889 -281 845 17
1 -83 3028 -63 660 848 862 -7 432 650 42 643 844 -154 146 012 317 267 145 -281 613 91
1 -83 3028 -63 652 848 382 -7 420 738 42 487 364 -152 998 532 312 813 545 -274 466 11
```

Dimensions[A]

```
{26, 10}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -4067, 148 372, -3 120 364, 41 654 558, -365 669 098,
2 108 480 516, -7 689 199 132, 16 062 737 945, -14 608 785 195}
```

Array[c, 10].Transpose[A]

```
{c[1] -83 c[2] +3028 c[3] -63 692 c[4] +850 734 c[5] -7 477 882 c[6] +
43 221 412 c[7] -158 255 068 c[8] +332 705 625 c[9] -305 540 235 c[10],
c[1] -83 c[2] +3028 c[3] -63 684 c[4] +850 254 c[5] -7 466 002 c[6] +
43 066 212 c[7] -157 126 596 c[8] +328 376 185 c[9] -298 693 395 c[10],
c[1] -83 c[2] +3028 c[3] -63 684 c[4] +850 270 c[5] -7 466 818 c[6] +
43 082 692 c[7] -157 291 236 c[8] +329 189 129 c[9] -300 278 979 c[10],
c[1] -83 c[2] +3028 c[3] -63 684 c[4] +850 270 c[5] -7 466 786 c[6] +
43 081 412 c[7] -157 272 228 c[8] +329 065 225 c[9] -299 980 835 c[10],
c[1] -83 c[2] +3028 c[3] -63 676 c[4] +849 774 c[5] -7 454 122 c[6] +
42 911 012 c[7] -155 998 124 c[8] +324 046 745 c[9] -291 846 555 c[10],
c[1] -83 c[2] +3028 c[3] -63 676 c[4] +849 774 c[5] -7 454 122 c[6] +
42 911 076 c[7] -155 999 980 c[8] +324 064 345 c[9] -291 901 275 c[10],
c[1] -83 c[2] +3028 c[3] -63 676 c[4] +849 790 c[5] -7 454 938 c[6] +
42 927 492 c[7] -156 162 764 c[8] +324 859 689 c[9] -293 432 139 c[10],
```

```

c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 790 c[5] - 7 454 906 c[6] +
  42 926 212 c[7] - 156 143 756 c[8] + 324 735 785 c[9] - 293 133 995 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 790 c[5] - 7 454 906 c[6] +
  42 926 276 c[7] - 156 145 740 c[8] + 324 755 945 c[9] - 293 200 875 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 790 c[5] - 7 454 874 c[6] +
  42 924 996 c[7] - 156 126 732 c[8] + 324 631 785 c[9] - 292 899 915 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 806 c[5] - 7 455 690 c[6] +
  42 941 476 c[7] - 156 291 372 c[8] + 325 444 729 c[9] - 294 485 499 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 806 c[5] - 7 455 658 c[6] +
  42 940 196 c[7] - 156 272 364 c[8] + 325 320 825 c[9] - 294 187 355 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 294 c[5] - 7 442 242 c[6] +
  42 755 812 c[7] - 154 869 652 c[8] + 319 717 305 c[9] - 284 999 715 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 026 c[6] +
  42 771 012 c[7] - 155 015 412 c[8] + 320 408 649 c[9] - 286 297 011 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 026 c[6] +
  42 771 076 c[7] - 155 017 268 c[8] + 320 426 505 c[9] - 286 354 035 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 442 994 c[6] +
  42 769 796 c[7] - 154 998 260 c[8] + 320 302 345 c[9] - 286 053 075 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 842 c[6] +
  42 787 492 c[7] - 155 180 052 c[8] + 321 221 593 c[9] - 287 882 595 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 810 c[6] +
  42 786 276 c[7] - 155 162 900 c[8] + 321 115 289 c[9] - 287 638 659 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 778 c[6] +
  42 785 060 c[7] - 155 145 876 c[8] + 321 011 545 c[9] - 287 407 395 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 746 c[6] +
  42 783 780 c[7] - 155 126 868 c[8] + 320 887 385 c[9] - 287 106 435 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 898 c[6] +
  42 629 796 c[7] - 154 015 548 c[8] + 316 664 249 c[9] - 280 503 531 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 898 c[6] +
  42 629 860 c[7] - 154 017 404 c[8] + 316 682 105 c[9] - 280 560 555 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 866 c[6] +
  42 628 580 c[7] - 153 998 396 c[8] + 316 557 945 c[9] - 280 259 595 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 682 c[6] +
  42 645 060 c[7] - 154 163 036 c[8] + 317 370 889 c[9] - 281 845 179 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 650 c[6] +
  42 643 844 c[7] - 154 146 012 c[8] + 317 267 145 c[9] - 281 613 915 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 738 c[6] +
  42 487 364 c[7] - 152 998 532 c[8] + 312 813 545 c[9] - 274 466 115 c[10] }

```

Array[c, 10].g

```

49 c[1] - 4067 c[2] + 148 372 c[3] - 3 120 364 c[4] + 41 654 558 c[5] - 365 669 098 c[6] +
  2 108 480 516 c[7] - 7 689 199 132 c[8] + 16 062 737 945 c[9] - 14 608 785 195 c[10]

```

cert = Flatten[Array[c, 10] /. FindInstance[

```

  49 c[1] - 4067 c[2] + 148 372 c[3] - 3 120 364 c[4] + 41 654 558 c[5] - 365 669 098 c[6] +
    2 108 480 516 c[7] - 7 689 199 132 c[8] + 16 062 737 945 c[9] - 14 608 785 195 c[10] <
    0 && c[1] - 83 c[2] + 3028 c[3] - 63 692 c[4] + 850 734 c[5] - 7 477 882 c[6] +

```

$$\begin{aligned}
& 43\,221\,412\,c[7] - 158\,255\,068\,c[8] + 332\,705\,625\,c[9] - 305\,540\,235\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,254\,c[5] - 7\,466\,002\,c[6] + \\
& 43\,066\,212\,c[7] - 157\,126\,596\,c[8] + 328\,376\,185\,c[9] - 298\,693\,395\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,270\,c[5] - 7\,466\,818\,c[6] + \\
& 43\,082\,692\,c[7] - 157\,291\,236\,c[8] + 329\,189\,129\,c[9] - 300\,278\,979\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,684\,c[4] + 850\,270\,c[5] - 7\,466\,786\,c[6] + \\
& 43\,081\,412\,c[7] - 157\,272\,228\,c[8] + 329\,065\,225\,c[9] - 299\,980\,835\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,122\,c[6] + \\
& 42\,911\,012\,c[7] - 155\,998\,124\,c[8] + 324\,046\,745\,c[9] - 291\,846\,555\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,774\,c[5] - 7\,454\,122\,c[6] + \\
& 42\,911\,076\,c[7] - 155\,999\,980\,c[8] + 324\,064\,345\,c[9] - 291\,901\,275\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,454\,938\,c[6] + \\
& 42\,927\,492\,c[7] - 156\,162\,764\,c[8] + 324\,859\,689\,c[9] - 293\,432\,139\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,454\,906\,c[6] + \\
& 42\,926\,212\,c[7] - 156\,143\,756\,c[8] + 324\,735\,785\,c[9] - 293\,133\,995\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,454\,906\,c[6] + \\
& 42\,926\,276\,c[7] - 156\,145\,740\,c[8] + 324\,755\,945\,c[9] - 293\,200\,875\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,790\,c[5] - 7\,454\,874\,c[6] + \\
& 42\,924\,996\,c[7] - 156\,126\,732\,c[8] + 324\,631\,785\,c[9] - 292\,899\,915\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,806\,c[5] - 7\,455\,690\,c[6] + \\
& 42\,941\,476\,c[7] - 156\,291\,372\,c[8] + 325\,444\,729\,c[9] - 294\,485\,499\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,676\,c[4] + 849\,806\,c[5] - 7\,455\,658\,c[6] + \\
& 42\,940\,196\,c[7] - 156\,272\,364\,c[8] + 325\,320\,825\,c[9] - 294\,187\,355\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,294\,c[5] - 7\,442\,242\,c[6] + \\
& 42\,755\,812\,c[7] - 154\,869\,652\,c[8] + 319\,717\,305\,c[9] - 284\,999\,715\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,310\,c[5] - 7\,443\,026\,c[6] + \\
& 42\,771\,012\,c[7] - 155\,015\,412\,c[8] + 320\,408\,649\,c[9] - 286\,297\,011\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,310\,c[5] - 7\,443\,026\,c[6] + \\
& 42\,771\,076\,c[7] - 155\,017\,268\,c[8] + 320\,426\,505\,c[9] - 286\,354\,035\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,310\,c[5] - 7\,442\,994\,c[6] + \\
& 42\,769\,796\,c[7] - 154\,998\,260\,c[8] + 320\,302\,345\,c[9] - 286\,053\,075\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,326\,c[5] - 7\,443\,842\,c[6] + \\
& 42\,787\,492\,c[7] - 155\,180\,052\,c[8] + 321\,221\,593\,c[9] - 287\,882\,595\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,326\,c[5] - 7\,443\,810\,c[6] + \\
& 42\,786\,276\,c[7] - 155\,162\,900\,c[8] + 321\,115\,289\,c[9] - 287\,638\,659\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,326\,c[5] - 7\,443\,778\,c[6] + \\
& 42\,785\,060\,c[7] - 155\,145\,876\,c[8] + 321\,011\,545\,c[9] - 287\,407\,395\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,326\,c[5] - 7\,443\,746\,c[6] + \\
& 42\,783\,780\,c[7] - 155\,126\,868\,c[8] + 320\,887\,385\,c[9] - 287\,106\,435\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,846\,c[5] - 7\,431\,898\,c[6] + \\
& 42\,629\,796\,c[7] - 154\,015\,548\,c[8] + 316\,664\,249\,c[9] - 280\,503\,531\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,846\,c[5] - 7\,431\,898\,c[6] + \\
& 42\,629\,860\,c[7] - 154\,017\,404\,c[8] + 316\,682\,105\,c[9] - 280\,560\,555\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,846\,c[5] - 7\,431\,866\,c[6] + \\
& 42\,628\,580\,c[7] - 153\,998\,396\,c[8] + 316\,557\,945\,c[9] - 280\,259\,595\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,682\,c[6] + \\
& 42\,645\,060\,c[7] - 154\,163\,036\,c[8] + 317\,370\,889\,c[9] - 281\,845\,179\,c[10] \geq 0 \&\&
\end{aligned}$$


```

c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 650 c[6] +
  42 643 844 c[7] - 154 146 012 c[8] + 317 267 145 c[9] - 281 613 915 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 738 c[6] +
  42 487 364 c[7] - 152 998 532 c[8] + 312 813 545 c[9] -
  274 466 115 c[10] ≥ 0, Array[c, 10], Integers]]
{0, 0, 0, 0, 0, 0, 0, -2 618 443, -1 505 910, -482 407, -115 715}

GCD[0, 0, 0, 0, 0, 0, 0, -2 618 443, -1 505 910, -482 407, -115 715]
1

cert.g
-15 827 880 658

{0, 0, 0, 0, 0, 0, 0, -2 618 443, -1 505 910, -482 407, -115 715}.
Reverse[gpart[listdim17[[112]]]]
-15 827 880 658

cert.Transpose[A]
{1 151 604 014, 4 426 759 574, 513 817 686, 513 511 414, 7 701 915 134, 8 170 865 342,
  3 788 973 246, 3 788 666 974, 4 622 506 142, 4 419 842 622, 506 900 734,
  506 594 462, 10 977 070 694, 7 285 600 326, 7 897 661 702, 7 694 998 182,
  3 372 658 438, 3 782 056 294, 4 615 589 190, 4 412 925 670, 7 278 683 374,
  7 890 744 750, 7 688 081 230, 3 775 139 342, 4 608 672 238, 7 681 164 278}

chi = listdim17[[113]]
(-11 + x) (-9 + x)10 (5 + x)32 (95 - 20 x + x2)2 (80 - 19 x + x2)

```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {349 125, -271 670, 84 535, -13 556, 1187, -54, 1},
  {350 645, -271 990, 84 551, -13 556, 1187, -54, 1},
  {352 165, -272 310, 84 567, -13 556, 1187, -54, 1},
  {339 245, -268 830, 84 271, -13 548, 1187, -54, 1},
  {340 765, -269 150, 84 287, -13 548, 1187, -54, 1},
  {343 053, -269 534, 84 303, -13 548, 1187, -54, 1},
  {342 637, -269 502, 84 303, -13 548, 1187, -54, 1},
  {342 285, -269 470, 84 303, -13 548, 1187, -54, 1},
  {344 509, -269 854, 84 319, -13 548, 1187, -54, 1},
  {344 573, -269 854, 84 319, -13 548, 1187, -54, 1},
  {344 157, -269 822, 84 319, -13 548, 1187, -54, 1},
  {343 805, -269 790, 84 319, -13 548, 1187, -54, 1},
  {330 885, -266 310, 84 023, -13 540, 1187, -54, 1},
  {332 757, -266 662, 84 039, -13 540, 1187, -54, 1},
  {332 405, -266 630, 84 039, -13 540, 1187, -54, 1},
  {334 277, -266 982, 84 055, -13 540, 1187, -54, 1},
  {333 925, -266 950, 84 055, -13 540, 1187, -54, 1},
  {336 149, -267 334, 84 071, -13 540, 1187, -54, 1},
  {336 213, -267 334, 84 071, -13 540, 1187, -54, 1},
  {335 797, -267 302, 84 071, -13 540, 1187, -54, 1},
  {335 445, -267 270, 84 071, -13 540, 1187, -54, 1},
  {338 085, -267 686, 84 087, -13 540, 1187, -54, 1},
  {337 733, -267 654, 84 087, -13 540, 1187, -54, 1},
  {324 045, -264 110, 83 791, -13 532, 1187, -54, 1},
  {325 853, -264 462, 83 807, -13 532, 1187, -54, 1},
  {325 917, -264 462, 83 807, -13 532, 1187, -54, 1},
  {325 565, -264 430, 83 807, -13 532, 1187, -54, 1},
  {327 789, -264 814, 83 823, -13 532, 1187, -54, 1},
  {327 437, -264 782, 83 823, -13 532, 1187, -54, 1},
  {327 085, -264 750, 83 823, -13 532, 1187, -54, 1},
  {329 373, -265 134, 83 839, -13 532, 1187, -54, 1},
  {317 493, -261 942, 83 559, -13 524, 1187, -54, 1},
  {317 205, -261 910, 83 559, -13 524, 1187, -54, 1},
  {319 077, -262 262, 83 575, -13 524, 1187, -54, 1},
  {318 725, -262 230, 83 575, -13 524, 1187, -54, 1},
  {310 365, -259 710, 83 327, -13 516, 1187, -54, 1} }
```

```

A = {{349125, -271670, 84535, -13556, 1187, -54, 1},
      {350645, -271990, 84551, -13556, 1187, -54, 1},
      {352165, -272310, 84567, -13556, 1187, -54, 1},
      {339245, -268830, 84271, -13548, 1187, -54, 1},
      {340765, -269150, 84287, -13548, 1187, -54, 1},
      {343053, -269534, 84303, -13548, 1187, -54, 1},
      {342637, -269502, 84303, -13548, 1187, -54, 1},
      {342285, -269470, 84303, -13548, 1187, -54, 1},
      {344509, -269854, 84319, -13548, 1187, -54, 1},
      {344573, -269854, 84319, -13548, 1187, -54, 1},
      {344157, -269822, 84319, -13548, 1187, -54, 1},
      {343805, -269790, 84319, -13548, 1187, -54, 1},
      {330885, -266310, 84023, -13540, 1187, -54, 1},
      {332757, -266662, 84039, -13540, 1187, -54, 1},
      {332405, -266630, 84039, -13540, 1187, -54, 1},
      {334277, -266982, 84055, -13540, 1187, -54, 1},
      {333925, -266950, 84055, -13540, 1187, -54, 1},
      {336149, -267334, 84071, -13540, 1187, -54, 1},
      {336213, -267334, 84071, -13540, 1187, -54, 1},
      {335797, -267302, 84071, -13540, 1187, -54, 1},
      {335445, -267270, 84071, -13540, 1187, -54, 1},
      {338085, -267686, 84087, -13540, 1187, -54, 1},
      {337733, -267654, 84087, -13540, 1187, -54, 1},
      {324045, -264110, 83791, -13532, 1187, -54, 1},
      {325853, -264462, 83807, -13532, 1187, -54, 1},
      {325917, -264462, 83807, -13532, 1187, -54, 1},
      {325565, -264430, 83807, -13532, 1187, -54, 1},
      {327789, -264814, 83823, -13532, 1187, -54, 1},
      {327437, -264782, 83823, -13532, 1187, -54, 1},
      {327085, -264750, 83823, -13532, 1187, -54, 1},
      {329373, -265134, 83839, -13532, 1187, -54, 1},
      {317493, -261942, 83559, -13524, 1187, -54, 1},
      {317205, -261910, 83559, -13524, 1187, -54, 1},
      {319077, -262262, 83575, -13524, 1187, -54, 1},
      {318725, -262230, 83575, -13524, 1187, -54, 1},
      {310365, -259710, 83327, -13516, 1187, -54, 1}};

```

A // MatrixForm

$$\begin{pmatrix} 349125 & -271670 & 84535 & -13556 & 1187 & -54 & 1 \\ 350645 & -271990 & 84551 & -13556 & 1187 & -54 & 1 \\ 352165 & -272310 & 84567 & -13556 & 1187 & -54 & 1 \\ 339245 & -268830 & 84271 & -13548 & 1187 & -54 & 1 \\ 340765 & -269150 & 84287 & -13548 & 1187 & -54 & 1 \\ 343053 & -269534 & 84303 & -13548 & 1187 & -54 & 1 \\ 342637 & -269502 & 84303 & -13548 & 1187 & -54 & 1 \\ 342285 & -269470 & 84303 & -13548 & 1187 & -54 & 1 \\ 344509 & -269854 & 84319 & -13548 & 1187 & -54 & 1 \\ 344573 & -269854 & 84319 & -13548 & 1187 & -54 & 1 \\ 344157 & -269822 & 84319 & -13548 & 1187 & -54 & 1 \\ 343805 & -269790 & 84319 & -13548 & 1187 & -54 & 1 \\ 330885 & -266310 & 84023 & -13540 & 1187 & -54 & 1 \\ 332757 & -266662 & 84039 & -13540 & 1187 & -54 & 1 \\ 332405 & -266630 & 84039 & -13540 & 1187 & -54 & 1 \\ 334277 & -266982 & 84055 & -13540 & 1187 & -54 & 1 \\ 333925 & -266950 & 84055 & -13540 & 1187 & -54 & 1 \\ 336149 & -267334 & 84071 & -13540 & 1187 & -54 & 1 \\ 336213 & -267334 & 84071 & -13540 & 1187 & -54 & 1 \\ 335797 & -267302 & 84071 & -13540 & 1187 & -54 & 1 \\ 335445 & -267270 & 84071 & -13540 & 1187 & -54 & 1 \\ 338085 & -267686 & 84087 & -13540 & 1187 & -54 & 1 \\ 337733 & -267654 & 84087 & -13540 & 1187 & -54 & 1 \\ 324045 & -264110 & 83791 & -13532 & 1187 & -54 & 1 \\ 325853 & -264462 & 83807 & -13532 & 1187 & -54 & 1 \\ 325917 & -264462 & 83807 & -13532 & 1187 & -54 & 1 \\ 325565 & -264430 & 83807 & -13532 & 1187 & -54 & 1 \\ 327789 & -264814 & 83823 & -13532 & 1187 & -54 & 1 \\ 327437 & -264782 & 83823 & -13532 & 1187 & -54 & 1 \\ 327085 & -264750 & 83823 & -13532 & 1187 & -54 & 1 \\ 329373 & -265134 & 83839 & -13532 & 1187 & -54 & 1 \\ 317493 & -261942 & 83559 & -13524 & 1187 & -54 & 1 \\ 317205 & -261910 & 83559 & -13524 & 1187 & -54 & 1 \\ 319077 & -262262 & 83575 & -13524 & 1187 & -54 & 1 \\ 318725 & -262230 & 83575 & -13524 & 1187 & -54 & 1 \\ 310365 & -259710 & 83327 & -13516 & 1187 & -54 & 1 \end{pmatrix}$$

Dimensions[A]

{36, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{17 077 325, -13 289 710, 4 138 735, -664 092, 58 163, -2646, 49}

Array[c, 7].Transpose[A]

```
{ 349 125 c[1] - 271 670 c[2] + 84 535 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  350 645 c[1] - 271 990 c[2] + 84 551 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  352 165 c[1] - 272 310 c[2] + 84 567 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  339 245 c[1] - 268 830 c[2] + 84 271 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  340 765 c[1] - 269 150 c[2] + 84 287 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  343 053 c[1] - 269 534 c[2] + 84 303 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  342 637 c[1] - 269 502 c[2] + 84 303 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  342 285 c[1] - 269 470 c[2] + 84 303 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  344 509 c[1] - 269 854 c[2] + 84 319 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  344 573 c[1] - 269 854 c[2] + 84 319 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  344 157 c[1] - 269 822 c[2] + 84 319 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  343 805 c[1] - 269 790 c[2] + 84 319 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  330 885 c[1] - 266 310 c[2] + 84 023 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  332 757 c[1] - 266 662 c[2] + 84 039 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  332 405 c[1] - 266 630 c[2] + 84 039 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  334 277 c[1] - 266 982 c[2] + 84 055 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  333 925 c[1] - 266 950 c[2] + 84 055 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  336 149 c[1] - 267 334 c[2] + 84 071 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  336 213 c[1] - 267 334 c[2] + 84 071 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  335 797 c[1] - 267 302 c[2] + 84 071 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  335 445 c[1] - 267 270 c[2] + 84 071 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  338 085 c[1] - 267 686 c[2] + 84 087 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  337 733 c[1] - 267 654 c[2] + 84 087 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  324 045 c[1] - 264 110 c[2] + 83 791 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  325 853 c[1] - 264 462 c[2] + 83 807 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  325 917 c[1] - 264 462 c[2] + 83 807 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  325 565 c[1] - 264 430 c[2] + 83 807 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  327 789 c[1] - 264 814 c[2] + 83 823 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  327 437 c[1] - 264 782 c[2] + 83 823 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  327 085 c[1] - 264 750 c[2] + 83 823 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  329 373 c[1] - 265 134 c[2] + 83 839 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  317 493 c[1] - 261 942 c[2] + 83 559 c[3] - 13 524 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  317 205 c[1] - 261 910 c[2] + 83 559 c[3] - 13 524 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  319 077 c[1] - 262 262 c[2] + 83 575 c[3] - 13 524 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  318 725 c[1] - 262 230 c[2] + 83 575 c[3] - 13 524 c[4] + 1187 c[5] - 54 c[6] + c[7] ,
  310 365 c[1] - 259 710 c[2] + 83 327 c[3] - 13 516 c[4] + 1187 c[5] - 54 c[6] + c[7] }
```

Array[c, 7].g

```
17 077 325 c[1] - 13 289 710 c[2] + 4 138 735 c[3] -
  664 092 c[4] + 58 163 c[5] - 2646 c[6] + 49 c[7]
```

cert =

```
Flatten[Array[c, 7] /. FindInstance[17 077 325 c[1] - 13 289 710 c[2] + 4 138 735 c[3] -
  664 092 c[4] + 58 163 c[5] - 2646 c[6] + 49 c[7] < 0 && 349 125 c[1] -
  271 670 c[2] + 84 535 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
  350 645 c[1] - 271 990 c[2] + 84 551 c[3] - 13 556 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
```

```

0 && 352 165 c[1] - 272 310 c[2] + 84 567 c[3] - 13 556 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 339 245 c[1] - 268 830 c[2] +
  84 271 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
340 765 c[1] - 269 150 c[2] + 84 287 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 343 053 c[1] - 269 534 c[2] + 84 303 c[3] - 13 548 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 342 637 c[1] - 269 502 c[2] +
  84 303 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
342 285 c[1] - 269 470 c[2] + 84 303 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 344 509 c[1] - 269 854 c[2] + 84 319 c[3] - 13 548 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 344 573 c[1] - 269 854 c[2] +
  84 319 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
344 157 c[1] - 269 822 c[2] + 84 319 c[3] - 13 548 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 343 805 c[1] - 269 790 c[2] + 84 319 c[3] - 13 548 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 330 885 c[1] - 266 310 c[2] +
  84 023 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
332 757 c[1] - 266 662 c[2] + 84 039 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 332 405 c[1] - 266 630 c[2] + 84 039 c[3] - 13 540 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 334 277 c[1] - 266 982 c[2] +
  84 055 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
333 925 c[1] - 266 950 c[2] + 84 055 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 336 149 c[1] - 267 334 c[2] + 84 071 c[3] - 13 540 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 336 213 c[1] - 267 334 c[2] +
  84 071 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
335 797 c[1] - 267 302 c[2] + 84 071 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 335 445 c[1] - 267 270 c[2] + 84 071 c[3] - 13 540 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 338 085 c[1] - 267 686 c[2] +
  84 087 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
337 733 c[1] - 267 654 c[2] + 84 087 c[3] - 13 540 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 324 045 c[1] - 264 110 c[2] + 83 791 c[3] - 13 532 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 325 853 c[1] - 264 462 c[2] +
  83 807 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
325 917 c[1] - 264 462 c[2] + 83 807 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 325 565 c[1] - 264 430 c[2] + 83 807 c[3] - 13 532 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 327 789 c[1] - 264 814 c[2] +
  83 823 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
327 437 c[1] - 264 782 c[2] + 83 823 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 327 085 c[1] - 264 750 c[2] + 83 823 c[3] - 13 532 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 329 373 c[1] - 265 134 c[2] +
  83 839 c[3] - 13 532 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
317 493 c[1] - 261 942 c[2] + 83 559 c[3] - 13 524 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 317 205 c[1] - 261 910 c[2] + 83 559 c[3] - 13 524 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0 && 319 077 c[1] - 262 262 c[2] +
  83 575 c[3] - 13 524 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥ 0 &&
318 725 c[1] - 262 230 c[2] + 83 575 c[3] - 13 524 c[4] + 1187 c[5] - 54 c[6] + c[7] ≥
  0 && 310 365 c[1] - 259 710 c[2] + 83 327 c[3] - 13 516 c[4] +
  1187 c[5] - 54 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]

```

```
{125 110, 1 426 243, 16 639 510, 197 697 391, 0, 0, 1 617 153 799 881}
```

```
GCD[125 110, 1 426 243, 16 639 510, 197 697 391, 0, 0, 1 617 153 799 881]
```

```
1
```

```
Reverse[cert]
```

```
{1 617 153 799 881, 0, 0, 197 697 391, 16 639 510, 1 426 243, 125 110}
```

```
cert.g
```

```
-8 898 733
```

```
{125 110, 1 426 243, 16 639 510, 197 697 391, 0, 0, 1 617 153 799 881}.
```

```
gpart[listdim17[[113]]]
```

```
-8 898 733
```

```
cert.Transpose[A]
```

```
{538 275, 539 875, 541 475, 3 730 083, 3 731 683, 8 538 211, 2 132 227, 3 733 283,
532 771, 8 539 811, 2 133 827, 3 734 883, 6 923 491, 5 324 035, 6 925 091,
5 325 635, 6 926 691, 3 726 179, 11 733 219, 5 327 235, 6 928 291, 10 133 763,
11 734 819, 10 118 499, 512 003, 8 519 043, 10 120 099, 6 919 587, 8 520 643,
10 121 699, 14 928 227, 3 705 411, 13 313 507, 11 714 051, 13 315 107, 16 508 515}
```

```
chi = listdim17[[114]]
```

```
 $(-11 + x)^2 (-9 + x)^{12} (5 + x)^{32} (-796 + 281 x - 30 x^2 + x^3)$ 
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-36993, 25077, -6418, 778, -45, 1},
  {-37169, 25093, -6418, 778, -45, 1}, {-35673, 24869, -6410, 778, -45, 1},
  {-35849, 24885, -6410, 778, -45, 1}, {-36025, 24901, -6410, 778, -45, 1},
  {-36201, 24917, -6410, 778, -45, 1}, {-36377, 24933, -6410, 778, -45, 1},
  {-36553, 24949, -6410, 778, -45, 1}, {-34529, 24677, -6402, 778, -45, 1},
  {-34705, 24693, -6402, 778, -45, 1}, {-34881, 24709, -6402, 778, -45, 1},
  {-35057, 24725, -6402, 778, -45, 1}, {-35233, 24741, -6402, 778, -45, 1},
  {-35409, 24757, -6402, 778, -45, 1}, {-35585, 24773, -6402, 778, -45, 1},
  {-33561, 24501, -6394, 778, -45, 1}, {-33737, 24517, -6394, 778, -45, 1},
  {-33913, 24533, -6394, 778, -45, 1}, {-34089, 24549, -6394, 778, -45, 1},
  {-34265, 24565, -6394, 778, -45, 1}, {-34441, 24581, -6394, 778, -45, 1},
  {-34617, 24597, -6394, 778, -45, 1}, {-32769, 24341, -6386, 778, -45, 1},
  {-32945, 24357, -6386, 778, -45, 1}, {-33121, 24373, -6386, 778, -45, 1},
  {-33297, 24389, -6386, 778, -45, 1}, {-33473, 24405, -6386, 778, -45, 1},
  {-33649, 24421, -6386, 778, -45, 1}, {-31977, 24181, -6378, 778, -45, 1},
  {-32153, 24197, -6378, 778, -45, 1}, {-32329, 24213, -6378, 778, -45, 1},
  {-32505, 24229, -6378, 778, -45, 1}, {-32681, 24245, -6378, 778, -45, 1},
  {-32857, 24261, -6378, 778, -45, 1}, {-31185, 24021, -6370, 778, -45, 1},
  {-31361, 24037, -6370, 778, -45, 1}, {-31537, 24053, -6370, 778, -45, 1},
  {-31713, 24069, -6370, 778, -45, 1}, {-31889, 24085, -6370, 778, -45, 1},
  {-30393, 23861, -6362, 778, -45, 1}, {-30569, 23877, -6362, 778, -45, 1},
  {-30745, 23893, -6362, 778, -45, 1}, {-30921, 23909, -6362, 778, -45, 1},
  {-29601, 23701, -6354, 778, -45, 1}, {-29777, 23717, -6354, 778, -45, 1},
  {-29953, 23733, -6354, 778, -45, 1}, {-28809, 23541, -6346, 778, -45, 1},
  {-28985, 23557, -6346, 778, -45, 1}, {-28017, 23381, -6338, 778, -45, 1}}
```



```

A = {{-36993, 25077, -6418, 778, -45, 1},
      {-37169, 25093, -6418, 778, -45, 1}, {-35673, 24869, -6410, 778, -45, 1},
      {-35849, 24885, -6410, 778, -45, 1}, {-36025, 24901, -6410, 778, -45, 1},
      {-36201, 24917, -6410, 778, -45, 1}, {-36377, 24933, -6410, 778, -45, 1},
      {-36553, 24949, -6410, 778, -45, 1}, {-34529, 24677, -6402, 778, -45, 1},
      {-34705, 24693, -6402, 778, -45, 1}, {-34881, 24709, -6402, 778, -45, 1},
      {-35057, 24725, -6402, 778, -45, 1}, {-35233, 24741, -6402, 778, -45, 1},
      {-35409, 24757, -6402, 778, -45, 1}, {-35585, 24773, -6402, 778, -45, 1},
      {-33561, 24501, -6394, 778, -45, 1}, {-33737, 24517, -6394, 778, -45, 1},
      {-33913, 24533, -6394, 778, -45, 1}, {-34089, 24549, -6394, 778, -45, 1},
      {-34265, 24565, -6394, 778, -45, 1}, {-34441, 24581, -6394, 778, -45, 1},
      {-34617, 24597, -6394, 778, -45, 1}, {-32769, 24341, -6386, 778, -45, 1},
      {-32945, 24357, -6386, 778, -45, 1}, {-33121, 24373, -6386, 778, -45, 1},
      {-33297, 24389, -6386, 778, -45, 1}, {-33473, 24405, -6386, 778, -45, 1},
      {-33649, 24421, -6386, 778, -45, 1}, {-31977, 24181, -6378, 778, -45, 1},
      {-32153, 24197, -6378, 778, -45, 1}, {-32329, 24213, -6378, 778, -45, 1},
      {-32505, 24229, -6378, 778, -45, 1}, {-32681, 24245, -6378, 778, -45, 1},
      {-32857, 24261, -6378, 778, -45, 1}, {-31185, 24021, -6370, 778, -45, 1},
      {-31361, 24037, -6370, 778, -45, 1}, {-31537, 24053, -6370, 778, -45, 1},
      {-31713, 24069, -6370, 778, -45, 1}, {-31889, 24085, -6370, 778, -45, 1},
      {-30393, 23861, -6362, 778, -45, 1}, {-30569, 23877, -6362, 778, -45, 1},
      {-30745, 23893, -6362, 778, -45, 1}, {-30921, 23909, -6362, 778, -45, 1},
      {-29601, 23701, -6354, 778, -45, 1}, {-29777, 23717, -6354, 778, -45, 1},
      {-29953, 23733, -6354, 778, -45, 1}, {-28809, 23541, -6346, 778, -45, 1},
      {-28985, 23557, -6346, 778, -45, 1}, {-28017, 23381, -6338, 778, -45, 1}};

```

A // MatrixForm

```
( -36993 25077 -6418 778 -45 1
-37169 25093 -6418 778 -45 1
-35673 24869 -6410 778 -45 1
-35849 24885 -6410 778 -45 1
-36025 24901 -6410 778 -45 1
-36201 24917 -6410 778 -45 1
-36377 24933 -6410 778 -45 1
-36553 24949 -6410 778 -45 1
-34529 24677 -6402 778 -45 1
-34705 24693 -6402 778 -45 1
-34881 24709 -6402 778 -45 1
-35057 24725 -6402 778 -45 1
-35233 24741 -6402 778 -45 1
-35409 24757 -6402 778 -45 1
-35585 24773 -6402 778 -45 1
-33561 24501 -6394 778 -45 1
-33737 24517 -6394 778 -45 1
-33913 24533 -6394 778 -45 1
-34089 24549 -6394 778 -45 1
-34265 24565 -6394 778 -45 1
-34441 24581 -6394 778 -45 1
-34617 24597 -6394 778 -45 1
-32769 24341 -6386 778 -45 1
-32945 24357 -6386 778 -45 1
-33121 24373 -6386 778 -45 1
-33297 24389 -6386 778 -45 1
-33473 24405 -6386 778 -45 1
-33649 24421 -6386 778 -45 1
-31977 24181 -6378 778 -45 1
-32153 24197 -6378 778 -45 1
-32329 24213 -6378 778 -45 1
-32505 24229 -6378 778 -45 1
-32681 24245 -6378 778 -45 1
-32857 24261 -6378 778 -45 1
-31185 24021 -6370 778 -45 1
-31361 24037 -6370 778 -45 1
-31537 24053 -6370 778 -45 1
-31713 24069 -6370 778 -45 1
-31889 24085 -6370 778 -45 1
-30393 23861 -6362 778 -45 1
-30569 23877 -6362 778 -45 1
-30745 23893 -6362 778 -45 1
-30921 23909 -6362 778 -45 1
-29601 23701 -6354 778 -45 1
-29777 23717 -6354 778 -45 1
-29953 23733 -6354 778 -45 1
-28809 23541 -6346 778 -45 1
-28985 23557 -6346 778 -45 1
-28017 23381 -6338 778 -45 1)
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{-1785633, 1222597, -314146, 38122, -2205, 49}
```

Array[c, 6].Transpose[A]

```
{ -36 993 c[1] + 25 077 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
  -37 169 c[1] + 25 093 c[2] - 6418 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 673 c[1] + 24 869 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 849 c[1] + 24 885 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 025 c[1] + 24 901 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 201 c[1] + 24 917 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 377 c[1] + 24 933 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -36 553 c[1] + 24 949 c[2] - 6410 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 529 c[1] + 24 677 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 705 c[1] + 24 693 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 881 c[1] + 24 709 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 057 c[1] + 24 725 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 233 c[1] + 24 741 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 409 c[1] + 24 757 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -35 585 c[1] + 24 773 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 561 c[1] + 24 501 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 737 c[1] + 24 517 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 913 c[1] + 24 533 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 089 c[1] + 24 549 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 265 c[1] + 24 565 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 441 c[1] + 24 581 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -34 617 c[1] + 24 597 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 769 c[1] + 24 341 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 945 c[1] + 24 357 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 121 c[1] + 24 373 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 297 c[1] + 24 389 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 473 c[1] + 24 405 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6],
  -33 649 c[1] + 24 421 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6],
  -31 977 c[1] + 24 181 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 153 c[1] + 24 197 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 329 c[1] + 24 213 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 505 c[1] + 24 229 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 681 c[1] + 24 245 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6],
  -32 857 c[1] + 24 261 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6],
  -31 185 c[1] + 24 021 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6],
  -31 361 c[1] + 24 037 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6],
  -31 537 c[1] + 24 053 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6],
  -31 713 c[1] + 24 069 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6],
  -31 889 c[1] + 24 085 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6],
  -30 393 c[1] + 23 861 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6],
  -30 569 c[1] + 23 877 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6],
  -30 745 c[1] + 23 893 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6],
  -30 921 c[1] + 23 909 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6],
  -29 601 c[1] + 23 701 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6],
  -29 777 c[1] + 23 717 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6],
  -29 953 c[1] + 23 733 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6],
```

$-28\,809\,c[1] + 23\,541\,c[2] - 6346\,c[3] + 778\,c[4] - 45\,c[5] + c[6],$
 $-28\,985\,c[1] + 23\,557\,c[2] - 6346\,c[3] + 778\,c[4] - 45\,c[5] + c[6],$
 $-28\,017\,c[1] + 23\,381\,c[2] - 6338\,c[3] + 778\,c[4] - 45\,c[5] + c[6]\}$

Array[c, 6].g

$-1\,785\,633\,c[1] + 1\,222\,597\,c[2] - 314\,146\,c[3] + 38\,122\,c[4] - 2205\,c[5] + 49\,c[6]$

cert = Flatten[Array[c, 6] /. FindInstance[

$-1\,785\,633\,c[1] + 1\,222\,597\,c[2] - 314\,146\,c[3] + 38\,122\,c[4] - 2205\,c[5] + 49\,c[6] < 0 \&\&$
 $-36\,993\,c[1] + 25\,077\,c[2] - 6418\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-37\,169\,c[1] + 25\,093\,c[2] - 6418\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,673\,c[1] + 24\,869\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,849\,c[1] + 24\,885\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,025\,c[1] + 24\,901\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,201\,c[1] + 24\,917\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,377\,c[1] + 24\,933\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-36\,553\,c[1] + 24\,949\,c[2] - 6410\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,529\,c[1] + 24\,677\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,705\,c[1] + 24\,693\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,881\,c[1] + 24\,709\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,057\,c[1] + 24\,725\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,233\,c[1] + 24\,741\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,409\,c[1] + 24\,757\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-35\,585\,c[1] + 24\,773\,c[2] - 6402\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,561\,c[1] + 24\,501\,c[2] - 6394\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,737\,c[1] + 24\,517\,c[2] - 6394\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,913\,c[1] + 24\,533\,c[2] - 6394\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,089\,c[1] + 24\,549\,c[2] - 6394\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,265\,c[1] + 24\,565\,c[2] - 6394\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,441\,c[1] + 24\,581\,c[2] - 6394\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-34\,617\,c[1] + 24\,597\,c[2] - 6394\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-32\,769\,c[1] + 24\,341\,c[2] - 6386\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-32\,945\,c[1] + 24\,357\,c[2] - 6386\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,121\,c[1] + 24\,373\,c[2] - 6386\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,297\,c[1] + 24\,389\,c[2] - 6386\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,473\,c[1] + 24\,405\,c[2] - 6386\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-33\,649\,c[1] + 24\,421\,c[2] - 6386\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-31\,977\,c[1] + 24\,181\,c[2] - 6378\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-32\,153\,c[1] + 24\,197\,c[2] - 6378\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-32\,329\,c[1] + 24\,213\,c[2] - 6378\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-32\,505\,c[1] + 24\,229\,c[2] - 6378\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-32\,681\,c[1] + 24\,245\,c[2] - 6378\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-32\,857\,c[1] + 24\,261\,c[2] - 6378\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-31\,185\,c[1] + 24\,021\,c[2] - 6370\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-31\,361\,c[1] + 24\,037\,c[2] - 6370\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-31\,537\,c[1] + 24\,053\,c[2] - 6370\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$
 $-31\,713\,c[1] + 24\,069\,c[2] - 6370\,c[3] + 778\,c[4] - 45\,c[5] + c[6] \geq 0 \&\&$

```

-31889 c[1] + 24085 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-30393 c[1] + 23861 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-30569 c[1] + 23877 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-30745 c[1] + 23893 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-30921 c[1] + 23909 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-29601 c[1] + 23701 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-29777 c[1] + 23717 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-29953 c[1] + 23733 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-28809 c[1] + 23541 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-28985 c[1] + 23557 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-28017 c[1] + 23381 c[2] - 6338 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{13135, 144494, 1589426, 0, 0, 7063410652}

GCD[13135, 144494, 1589426, 0, 0, 7063410652]
1

Reverse[cert]
{7063410652, 0, 0, 1589426, 144494, 13135}

cert.g
-1056785

{13135, 144494, 1589426, 0, 0, 7063410652}.gpart[listdim17[[114]]]
-1056785

cert.Transpose[A]
{47567, 47711, 46423, 46567, 46711, 46855, 46999, 47143, 45423,
45567, 45711, 45855, 45999, 46143, 46287, 44567, 44711, 44855, 44999,
45143, 45287, 45431, 43855, 43999, 44143, 44287, 44431, 44575, 43143,
43287, 43431, 43575, 43719, 43863, 42431, 42575, 42719, 42863, 43007,
41719, 41863, 42007, 42151, 41007, 41151, 41295, 40295, 40439, 39583}

chi = listdim17[[115]]
(-11 + x)2 (-9 + x)10 (5 + x)32 (-64796 + 37121 x - 8284 x2 + 902 x3 - 48 x4 + x5)

CoefficientList[feasibleinterlacingpolylist[chi], x]
A = {{1, -63, 1669, -24067, 203651, -1009069, 2704055, -3014737},
{1, -63, 1669, -24067, 203651, -1009069, 2704119, -3015441},
{1, -63, 1669, -24067, 203651, -1009037, 2703415, -3011569},
{1, -63, 1669, -24067, 203651, -1009037, 2703479, -3012273},
{1, -63, 1669, -24067, 203651, -1009005, 2702839, -3009105},

```

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1	-63	1669	-24027	202083	-986205	2557207	-2664585
1	-63	1669	-24027	202083	-986173	2556567	-2661417
1	-63	1669	-24027	202083	-986141	2555927	-2658249
1	-63	1669	-24027	202099	-986669	2561671	-2678841
1	-63	1669	-24027	202099	-986637	2561031	-2675673
1	-63	1669	-24027	202099	-986605	2560391	-2672505
1	-63	1669	-24027	202115	-987165	2566775	-2696265
1	-63	1669	-24027	202115	-987133	2566135	-2693097
1	-63	1669	-24027	202131	-987629	2571239	-2710521
1	-63	1669	-24019	201747	-980925	2520423	-2568753
1	-63	1669	-24019	201763	-981421	2525527	-2586177
1	-63	1669	-24019	201763	-981389	2524887	-2583009
1	-63	1669	-24019	201779	-981885	2529991	-2600433

1	-63	1669	-24019	201779	-981853	2529351	-2597265
1	-63	1669	-24019	201795	-982349	2534455	-2614689
1	-63	1669	-24019	201811	-982845	2539559	-2632113
1	-63	1669	-24011	201459	-977101	2498311	-2522025
1	-63	1669	-24011	201459	-977069	2497671	-2518857
1	-63	1669	-24011	201475	-977565	2502775	-2536281
1	-63	1669	-24003	201139	-972317	2466631	-2443617
1	-63	1669	-24003	201155	-972781	2471095	-2457873

Dimensions[A]

{132, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1178947, 9966547, -49275421, 131479175, -145429393}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203651 c[5] -
 1009069 c[6] + 2704055 c[7] - 3014737 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24067 c[4] + 203651 c[5] - 1009069 c[6] + 2704119 c[7] - 3015441 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203651 c[5] - 1009037 c[6] +
 2703415 c[7] - 3011569 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
 203651 c[5] - 1009037 c[6] + 2703479 c[7] - 3012273 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203651 c[5] - 1009005 c[6] +
 2702839 c[7] - 3009105 c[8], c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
 203667 c[5] - 1009501 c[6] + 2707879 c[7] - 3025825 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203315 c[5] - 1003853 c[6] +
 2668615 c[7] - 2925945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203315 c[5] - 1003821 c[6] + 2667975 c[7] - 2922777 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203331 c[5] - 1004381 c[6] +
 2674359 c[7] - 2946537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203331 c[5] - 1004349 c[6] + 2673719 c[7] - 2943369 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203331 c[5] - 1004317 c[6] +
 2673015 c[7] - 2939497 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203331 c[5] - 1004317 c[6] + 2673079 c[7] - 2940201 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203331 c[5] - 1004285 c[6] +
 2672375 c[7] - 2936329 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203331 c[5] - 1004285 c[6] + 2672439 c[7] - 2937033 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203331 c[5] - 1004253 c[6] +
 2671799 c[7] - 2933865 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203347 c[5] - 1004845 c[6] + 2678823 c[7] - 2960793 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203347 c[5] - 1004813 c[6] +
 2678119 c[7] - 2956921 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203347 c[5] - 1004813 c[6] + 2678183 c[7] - 2957625 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203347 c[5] - 1004781 c[6] +
 2677479 c[7] - 2953753 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203347 c[5] - 1004781 c[6] + 2677543 c[7] - 2954457 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203347 c[5] - 1004749 c[6] +
 2676839 c[7] - 2950585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203347 c[5] - 1004749 c[6] + 2676903 c[7] - 2951289 c[8],

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,277 c[6] + \\
& \quad 2\,682\,583 c[7] - 2\,971\,177 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,245 c[6] + 2\,681\,943 c[7] - 2\,968\,009 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,245 c[6] + \\
& \quad 2\,682\,007 c[7] - 2\,968\,713 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,213 c[6] + 2\,681\,303 c[7] - 2\,964\,841 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,979 c[5] - 998\,637 c[6] + \\
& \quad 2\,633\,111 c[7] - 2\,836\,449 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 202\,979 c[5] - 998\,605 c[6] + 2\,632\,471 c[7] - 2\,833\,281 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,995 c[5] - 999\,133 c[6] + \\
& \quad 2\,638\,215 c[7] - 2\,853\,873 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 202\,995 c[5] - 999\,101 c[6] + 2\,637\,575 c[7] - 2\,850\,705 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,995 c[5] - 999\,069 c[6] + \\
& \quad 2\,636\,935 c[7] - 2\,847\,537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,629 c[6] + 2\,643\,319 c[7] - 2\,871\,297 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,597 c[6] + \\
& \quad 2\,642\,679 c[7] - 2\,868\,129 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,565 c[6] + 2\,642\,039 c[7] - 2\,864\,961 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,533 c[6] + \\
& \quad 2\,641\,399 c[7] - 2\,861\,793 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,501 c[6] + 2\,640\,759 c[7] - 2\,858\,625 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 1\,000\,093 c[6] + \\
& \quad 2\,647\,783 c[7] - 2\,885\,553 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 1\,000\,061 c[6] + 2\,647\,143 c[7] - 2\,882\,385 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 1\,000\,029 c[6] + \\
& \quad 2\,646\,503 c[7] - 2\,879\,217 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,997 c[6] + 2\,645\,799 c[7] - 2\,875\,345 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,997 c[6] + \\
& \quad 2\,645\,863 c[7] - 2\,876\,049 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,965 c[6] + 2\,645\,223 c[7] - 2\,872\,881 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,589 c[6] + \\
& \quad 2\,652\,887 c[7] - 2\,902\,977 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,557 c[6] + 2\,652\,247 c[7] - 2\,899\,809 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,525 c[6] + \\
& \quad 2\,651\,607 c[7] - 2\,896\,641 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,493 c[6] + 2\,650\,903 c[7] - 2\,892\,769 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,493 c[6] + \\
& \quad 2\,650\,967 c[7] - 2\,893\,473 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,263 c[7] - 2\,889\,601 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,461 c[6] + \\
& \quad 2\,650\,327 c[7] - 2\,890\,305 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,623 c[7] - 2\,886\,433 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,001\,021 c[6] + \\
& \quad 2\,656\,711 c[7] - 2\,914\,065 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,989 c[6] + 2\,656\,071 c[7] - 2\,910\,897 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,957 c[6] + \\
& \quad 2\,655\,367 c[7] - 2\,907\,025 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 203\,059\,c[5] - 1\,000\,957\,c[6] + 2\,655\,431\,c[7] - 2\,907\,729\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,925\,c[6] + \\
& 2\,654\,727\,c[7] - 2\,903\,857\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,453\,c[6] + 2\,660\,535\,c[7] - 2\,925\,153\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,421\,c[6] + \\
& 2\,659\,831\,c[7] - 2\,921\,281\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,659\,c[5] - 993\,885\,c[6] + 2\,602\,071\,c[7] - 2\,761\,209\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,659\,c[5] - 993\,853\,c[6] + \\
& 2\,601\,431\,c[7] - 2\,758\,041\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,675\,c[5] - 994\,349\,c[6] + 2\,606\,535\,c[7] - 2\,775\,465\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,675\,c[5] - 994\,317\,c[6] + \\
& 2\,605\,895\,c[7] - 2\,772\,297\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,845\,c[6] + 2\,611\,639\,c[7] - 2\,792\,889\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,813\,c[6] + \\
& 2\,610\,999\,c[7] - 2\,789\,721\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,781\,c[6] + 2\,610\,359\,c[7] - 2\,786\,553\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,749\,c[6] + \\
& 2\,609\,719\,c[7] - 2\,783\,385\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,309\,c[6] + 2\,616\,103\,c[7] - 2\,807\,145\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,277\,c[6] + \\
& 2\,615\,463\,c[7] - 2\,803\,977\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,245\,c[6] + 2\,614\,823\,c[7] - 2\,800\,809\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,213\,c[6] + \\
& 2\,614\,183\,c[7] - 2\,797\,641\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,181\,c[6] + 2\,613\,543\,c[7] - 2\,794\,473\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,773\,c[6] + \\
& 2\,620\,567\,c[7] - 2\,821\,401\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,741\,c[6] + 2\,619\,927\,c[7] - 2\,818\,233\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] + \\
& 2\,619\,287\,c[7] - 2\,815\,065\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,583\,c[7] - 2\,811\,193\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,647\,c[7] - 2\,811\,897\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,269\,c[6] + 2\,625\,671\,c[7] - 2\,838\,825\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,237\,c[6] + \\
& 2\,625\,031\,c[7] - 2\,835\,657\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,205\,c[6] + 2\,624\,391\,c[7] - 2\,832\,489\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& 2\,623\,687\,c[7] - 2\,828\,617\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,751\,c[7] - 2\,829\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& 2\,623\,047\,c[7] - 2\,825\,449\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,733\,c[6] + 2\,630\,135\,c[7] - 2\,853\,081\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,701\,c[6] + \\
& 2\,629\,495\,c[7] - 2\,849\,913\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,669\,c[6] + 2\,628\,855\,c[7] - 2\,846\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,628\,151\,c[7] - 2\,842\,873\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,197\,c[6] + 2\,634\,599\,c[7] - 2\,867\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,165\,c[6] + \\
& 2\,633\,959\,c[7] - 2\,864\,169\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,339\,c[5] - 989\,101\,c[6] + 2\,570\,391\,c[7] - 2\,682\,801\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,355\,c[5] - 989\,565\,c[6] + \\
& 2\,574\,855\,c[7] - 2\,697\,057\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 990\,029\,c[6] + 2\,579\,319\,c[7] - 2\,711\,313\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 989\,997\,c[6] + \\
& 2\,578\,679\,c[7] - 2\,708\,145\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,525\,c[6] + 2\,584\,423\,c[7] - 2\,728\,737\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,493\,c[6] + \\
& 2\,583\,783\,c[7] - 2\,725\,569\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,143\,c[7] - 2\,722\,401\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,429\,c[6] + \\
& 2\,582\,503\,c[7] - 2\,719\,233\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,989\,c[6] + 2\,588\,887\,c[7] - 2\,742\,993\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,957\,c[6] + \\
& 2\,588\,247\,c[7] - 2\,739\,825\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,925\,c[6] + 2\,587\,607\,c[7] - 2\,736\,657\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,893\,c[6] + \\
& 2\,586\,967\,c[7] - 2\,733\,489\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,453\,c[6] + 2\,593\,351\,c[7] - 2\,757\,249\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,421\,c[6] + \\
& 2\,592\,711\,c[7] - 2\,754\,081\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,007\,c[7] - 2\,750\,209\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,071\,c[7] - 2\,750\,913\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,949\,c[6] + 2\,598\,455\,c[7] - 2\,774\,673\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,917\,c[6] + \\
& 2\,597\,815\,c[7] - 2\,771\,505\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,175\,c[7] - 2\,768\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,471\,c[7] - 2\,764\,465\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,413\,c[6] + 2\,602\,919\,c[7] - 2\,788\,929\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,051\,c[5] - 985\,245\,c[6] + \\
& 2\,547\,639\,c[7] - 2\,632\,905\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,067\,c[5] - 985\,709\,c[6] + 2\,552\,103\,c[7] - 2\,647\,161\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,067\,c[5] - 985\,677\,c[6] + \\
& 2\,551\,463\,c[7] - 2\,643\,993\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,083\,c[5] - 986\,205\,c[6] + 2\,557\,207\,c[7] - 2\,664\,585\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,083\,c[5] - 986\,173\,c[6] + \\
& 2\,556\,567\,c[7] - 2\,661\,417\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,083\,c[5] - 986\,141\,c[6] + 2\,555\,927\,c[7] - 2\,658\,249\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,669\,c[6] + \\
& 2\,561\,671\,c[7] - 2\,678\,841\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,637\,c[6] + 2\,561\,031\,c[7] - 2\,675\,673\,c[8],
\end{aligned}$$

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c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 605 c[6] +
  2 560 391 c[7] - 2 672 505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 115 c[5] - 987 165 c[6] + 2 566 775 c[7] - 2 696 265 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 133 c[6] +
  2 566 135 c[7] - 2 693 097 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 131 c[5] - 987 629 c[6] + 2 571 239 c[7] - 2 710 521 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 747 c[5] - 980 925 c[6] +
  2 520 423 c[7] - 2 568 753 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 763 c[5] - 981 421 c[6] + 2 525 527 c[7] - 2 586 177 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 763 c[5] - 981 389 c[6] +
  2 524 887 c[7] - 2 583 009 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 779 c[5] - 981 885 c[6] + 2 529 991 c[7] - 2 600 433 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 779 c[5] - 981 853 c[6] +
  2 529 351 c[7] - 2 597 265 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 795 c[5] - 982 349 c[6] + 2 534 455 c[7] - 2 614 689 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 845 c[6] +
  2 539 559 c[7] - 2 632 113 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 459 c[5] - 977 101 c[6] + 2 498 311 c[7] - 2 522 025 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 069 c[6] +
  2 497 671 c[7] - 2 518 857 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 475 c[5] - 977 565 c[6] + 2 502 775 c[7] - 2 536 281 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 139 c[5] - 972 317 c[6] +
  2 466 631 c[7] - 2 443 617 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 155 c[5] - 972 781 c[6] + 2 471 095 c[7] - 2 457 873 c[8] }

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Array[c, 8].g

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49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 947 c[4] +
  9 966 547 c[5] - 49 275 421 c[6] + 131 479 175 c[7] - 145 429 393 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 947 c[4] +
  9 966 547 c[5] - 49 275 421 c[6] + 131 479 175 c[7] - 145 429 393 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] - 1 009 069 c[6] +
  2 704 055 c[7] - 3 014 737 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 651 c[5] - 1 009 069 c[6] + 2 704 119 c[7] - 3 015 441 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] - 1 009 037 c[6] +
  2 703 415 c[7] - 3 011 569 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 651 c[5] - 1 009 037 c[6] + 2 703 479 c[7] - 3 012 273 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 651 c[5] - 1 009 005 c[6] +
  2 702 839 c[7] - 3 009 105 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 667 c[5] - 1 009 501 c[6] + 2 707 879 c[7] - 3 025 825 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 315 c[5] - 1 003 853 c[6] +
  2 668 615 c[7] - 2 925 945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 315 c[5] - 1 003 821 c[6] + 2 667 975 c[7] - 2 922 777 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 331 c[5] - 1 004 381 c[6] +
  2 674 359 c[7] - 2 946 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 331 c[5] - 1 004 349 c[6] + 2 673 719 c[7] - 2 943 369 c[8] ≥ 0 &&

```

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,317 c[6] + \\
& \quad 2\,673\,015 c[7] - 2\,939\,497 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,331 c[5] - 1\,004\,317 c[6] + 2\,673\,079 c[7] - 2\,940\,201 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,285 c[6] + \\
& \quad 2\,672\,375 c[7] - 2\,936\,329 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,331 c[5] - 1\,004\,285 c[6] + 2\,672\,439 c[7] - 2\,937\,033 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,331 c[5] - 1\,004\,253 c[6] + \\
& \quad 2\,671\,799 c[7] - 2\,933\,865 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,347 c[5] - 1\,004\,845 c[6] + 2\,678\,823 c[7] - 2\,960\,793 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,813 c[6] + \\
& \quad 2\,678\,119 c[7] - 2\,956\,921 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,347 c[5] - 1\,004\,813 c[6] + 2\,678\,183 c[7] - 2\,957\,625 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,781 c[6] + \\
& \quad 2\,677\,479 c[7] - 2\,953\,753 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,347 c[5] - 1\,004\,781 c[6] + 2\,677\,543 c[7] - 2\,954\,457 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,347 c[5] - 1\,004\,749 c[6] + \\
& \quad 2\,676\,839 c[7] - 2\,950\,585 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,347 c[5] - 1\,004\,749 c[6] + 2\,676\,903 c[7] - 2\,951\,289 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,277 c[6] + \\
& \quad 2\,682\,583 c[7] - 2\,971\,177 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,245 c[6] + 2\,681\,943 c[7] - 2\,968\,009 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,245 c[6] + \\
& \quad 2\,682\,007 c[7] - 2\,968\,713 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,213 c[6] + 2\,681\,303 c[7] - 2\,964\,841 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,979 c[5] - 998\,637 c[6] + \\
& \quad 2\,633\,111 c[7] - 2\,836\,449 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 202\,979 c[5] - 998\,605 c[6] + 2\,632\,471 c[7] - 2\,833\,281 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,995 c[5] - 999\,133 c[6] + \\
& \quad 2\,638\,215 c[7] - 2\,853\,873 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 202\,995 c[5] - 999\,101 c[6] + 2\,637\,575 c[7] - 2\,850\,705 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 202\,995 c[5] - 999\,069 c[6] + \\
& \quad 2\,636\,935 c[7] - 2\,847\,537 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,629 c[6] + 2\,643\,319 c[7] - 2\,871\,297 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,597 c[6] + \\
& \quad 2\,642\,679 c[7] - 2\,868\,129 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,565 c[6] + 2\,642\,039 c[7] - 2\,864\,961 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,533 c[6] + \\
& \quad 2\,641\,399 c[7] - 2\,861\,793 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,011 c[5] - 999\,501 c[6] + 2\,640\,759 c[7] - 2\,858\,625 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 1\,000\,093 c[6] + \\
& \quad 2\,647\,783 c[7] - 2\,885\,553 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 1\,000\,061 c[6] + 2\,647\,143 c[7] - 2\,882\,385 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 1\,000\,029 c[6] + \\
& \quad 2\,646\,503 c[7] - 2\,879\,217 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,997 c[6] + 2\,645\,799 c[7] - 2\,875\,345 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,997 c[6] + \\
& \quad 2\,645\,863 c[7] - 2\,876\,049 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 203\,027\,c[5] - 999\,965\,c[6] + 2\,645\,223\,c[7] - 2\,872\,881\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - \\
& \quad 1\,000\,589\,c[6] + 2\,652\,887\,c[7] - 2\,902\,977\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,557\,c[6] + \\
& \quad 2\,652\,247\,c[7] - 2\,899\,809\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,525\,c[6] + 2\,651\,607\,c[7] - 2\,896\,641\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,493\,c[6] + \\
& \quad 2\,650\,903\,c[7] - 2\,892\,769\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,493\,c[6] + 2\,650\,967\,c[7] - 2\,893\,473\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,461\,c[6] + \\
& \quad 2\,650\,263\,c[7] - 2\,889\,601\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,461\,c[6] + 2\,650\,327\,c[7] - 2\,890\,305\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,429\,c[6] + \\
& \quad 2\,649\,623\,c[7] - 2\,886\,433\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,001\,021\,c[6] + 2\,656\,711\,c[7] - 2\,914\,065\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,989\,c[6] + \\
& \quad 2\,656\,071\,c[7] - 2\,910\,897\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,957\,c[6] + 2\,655\,367\,c[7] - 2\,907\,025\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,957\,c[6] + \\
& \quad 2\,655\,431\,c[7] - 2\,907\,729\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,925\,c[6] + 2\,654\,727\,c[7] - 2\,903\,857\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,453\,c[6] + \\
& \quad 2\,660\,535\,c[7] - 2\,925\,153\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,421\,c[6] + 2\,659\,831\,c[7] - 2\,921\,281\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,659\,c[5] - 993\,885\,c[6] + \\
& \quad 2\,602\,071\,c[7] - 2\,761\,209\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,659\,c[5] - 993\,853\,c[6] + 2\,601\,431\,c[7] - 2\,758\,041\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,675\,c[5] - 994\,349\,c[6] + \\
& \quad 2\,606\,535\,c[7] - 2\,775\,465\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,675\,c[5] - 994\,317\,c[6] + 2\,605\,895\,c[7] - 2\,772\,297\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,845\,c[6] + \\
& \quad 2\,611\,639\,c[7] - 2\,792\,889\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,691\,c[5] - 994\,813\,c[6] + 2\,610\,999\,c[7] - 2\,789\,721\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,781\,c[6] + \\
& \quad 2\,610\,359\,c[7] - 2\,786\,553\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,691\,c[5] - 994\,749\,c[6] + 2\,609\,719\,c[7] - 2\,783\,385\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,309\,c[6] + \\
& \quad 2\,616\,103\,c[7] - 2\,807\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,277\,c[6] + 2\,615\,463\,c[7] - 2\,803\,977\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,245\,c[6] + \\
& \quad 2\,614\,823\,c[7] - 2\,800\,809\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,183\,c[7] - 2\,797\,641\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& \quad 2\,613\,543\,c[7] - 2\,794\,473\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,773\,c[6] + 2\,620\,567\,c[7] - 2\,821\,401\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,741\,c[6] + \\
& \quad 2\,619\,927\,c[7] - 2\,818\,233\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,287\,c[7] - 2\,815\,065\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& \quad 2\,618\,583\,c[7] - 2\,811\,193\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,647\,c[7] - 2\,811\,897\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,269\,c[6] + \\
& \quad 2\,625\,671\,c[7] - 2\,838\,825\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,237\,c[6] + 2\,625\,031\,c[7] - 2\,835\,657\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,205\,c[6] + \\
& \quad 2\,624\,391\,c[7] - 2\,832\,489\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,687\,c[7] - 2\,828\,617\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& \quad 2\,623\,751\,c[7] - 2\,829\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,047\,c[7] - 2\,825\,449\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,733\,c[6] + \\
& \quad 2\,630\,135\,c[7] - 2\,853\,081\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,701\,c[6] + 2\,629\,495\,c[7] - 2\,849\,913\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,669\,c[6] + \\
& \quad 2\,628\,855\,c[7] - 2\,846\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,151\,c[7] - 2\,842\,873\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,197\,c[6] + \\
& \quad 2\,634\,599\,c[7] - 2\,867\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,165\,c[6] + 2\,633\,959\,c[7] - 2\,864\,169\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,339\,c[5] - 989\,101\,c[6] + \\
& \quad 2\,570\,391\,c[7] - 2\,682\,801\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,355\,c[5] - 989\,565\,c[6] + 2\,574\,855\,c[7] - 2\,697\,057\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 990\,029\,c[6] + \\
& \quad 2\,579\,319\,c[7] - 2\,711\,313\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,371\,c[5] - 989\,997\,c[6] + 2\,578\,679\,c[7] - 2\,708\,145\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,525\,c[6] + \\
& \quad 2\,584\,423\,c[7] - 2\,728\,737\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,387\,c[5] - 990\,493\,c[6] + 2\,583\,783\,c[7] - 2\,725\,569\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,461\,c[6] + \\
& \quad 2\,583\,143\,c[7] - 2\,722\,401\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,387\,c[5] - 990\,429\,c[6] + 2\,582\,503\,c[7] - 2\,719\,233\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,989\,c[6] + \\
& \quad 2\,588\,887\,c[7] - 2\,742\,993\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,403\,c[5] - 990\,957\,c[6] + 2\,588\,247\,c[7] - 2\,739\,825\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,925\,c[6] + \\
& \quad 2\,587\,607\,c[7] - 2\,736\,657\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,403\,c[5] - 990\,893\,c[6] + 2\,586\,967\,c[7] - 2\,733\,489\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,453\,c[6] + \\
& \quad 2\,593\,351\,c[7] - 2\,757\,249\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,419\,c[5] - 991\,421\,c[6] + 2\,592\,711\,c[7] - 2\,754\,081\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& \quad 2\,592\,007\,c[7] - 2\,750\,209\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,071\,c[7] - 2\,750\,913\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,949\,c[6] +
\end{aligned}$$

```

2 598 455 c[7] - 2 774 673 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 435 c[5] - 991 917 c[6] + 2 597 815 c[7] - 2 771 505 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 435 c[5] - 991 885 c[6] +
2 597 175 c[7] - 2 768 337 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 435 c[5] - 991 853 c[6] + 2 596 471 c[7] - 2 764 465 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 413 c[6] +
2 602 919 c[7] - 2 788 929 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 051 c[5] - 985 245 c[6] + 2 547 639 c[7] - 2 632 905 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 067 c[5] - 985 709 c[6] +
2 552 103 c[7] - 2 647 161 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 067 c[5] - 985 677 c[6] + 2 551 463 c[7] - 2 643 993 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 205 c[6] +
2 557 207 c[7] - 2 664 585 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 083 c[5] - 986 173 c[6] + 2 556 567 c[7] - 2 661 417 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 141 c[6] +
2 555 927 c[7] - 2 658 249 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 099 c[5] - 986 669 c[6] + 2 561 671 c[7] - 2 678 841 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 637 c[6] +
2 561 031 c[7] - 2 675 673 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 099 c[5] - 986 605 c[6] + 2 560 391 c[7] - 2 672 505 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 165 c[6] +
2 566 775 c[7] - 2 696 265 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 133 c[6] + 2 566 135 c[7] - 2 693 097 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 629 c[6] +
2 571 239 c[7] - 2 710 521 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 747 c[5] - 980 925 c[6] + 2 520 423 c[7] - 2 568 753 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 763 c[5] - 981 421 c[6] +
2 525 527 c[7] - 2 586 177 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 763 c[5] - 981 389 c[6] + 2 524 887 c[7] - 2 583 009 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 779 c[5] - 981 885 c[6] +
2 529 991 c[7] - 2 600 433 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 779 c[5] - 981 853 c[6] + 2 529 351 c[7] - 2 597 265 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 349 c[6] +
2 534 455 c[7] - 2 614 689 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 845 c[6] + 2 539 559 c[7] - 2 632 113 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 101 c[6] +
2 498 311 c[7] - 2 522 025 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 459 c[5] - 977 069 c[6] + 2 497 671 c[7] - 2 518 857 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 565 c[6] +
2 502 775 c[7] - 2 536 281 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 139 c[5] - 972 317 c[6] + 2 466 631 c[7] - 2 443 617 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 781 c[6] +
2 471 095 c[7] - 2 457 873 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -114 103 753, -29 961 502, -4 900 266, -687 311, -89 354}

GCD[0, 0, 0, -114 103 753, -29 961 502, -4 900 266, -687 311, -89 354]

```

cert.g

-155 689 820

{0, 0, 0, -114 103 753, -29 961 502, -4 900 266, -687 311, -89 354}.

Reverse[gpart[listdim17[[115]]]

-155 689 820

cert.Transpose[A]

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22 581 516, 22 604 060, 22 601 116, 3 680 860, 22 598 172, 3 677 916, 22 595 228,
22 592 284, 22 617 772, 3 697 516, 22 614 828, 3 694 572, 22 611 884, 3 691 628,
22 608 940, 3 711 228, 3 708 284, 22 625 596, 3 705 340, 22 495 812, 22 492 868,
22 512 468, 22 509 524, 22 506 580, 22 529 124, 22 526 180, 22 523 236,
22 520 292, 22 517 348, 22 542 836, 22 539 892, 22 536 948, 3 616 692, 22 534 004,
22 531 060, 22 559 492, 22 556 548, 22 553 604, 3 633 348, 22 550 660, 3 630 404,
22 547 716, 3 627 460, 22 570 260, 22 567 316, 3 647 060, 22 564 372, 3 644 116,
22 581 028, 3 660 772, 22 420 876, 22 417 932, 22 434 588, 22 431 644, 22 451 244,
22 448 300, 22 445 356, 22 442 412, 22 464 956, 22 462 012, 22 459 068, 22 456 124,
22 453 180, 22 478 668, 22 475 724, 22 472 780, 3 552 524, 22 469 836, 22 495 324,
22 492 380, 22 489 436, 3 569 180, 22 486 492, 3 566 236, 22 509 036, 22 506 092,
22 503 148, 3 582 892, 22 522 748, 22 519 804, 22 342 996, 22 356 708, 22 370 420,
22 367 476, 22 387 076, 22 384 132, 22 381 188, 22 378 244, 22 400 788, 22 397 844,
22 394 900, 22 391 956, 22 414 500, 22 411 556, 3 491 300, 22 408 612, 22 431 156,
22 428 212, 22 425 268, 3 505 012, 22 444 868, 22 292 540, 22 306 252, 22 303 308,
22 322 908, 22 319 964, 22 317 020, 22 336 620, 22 333 676, 22 330 732, 22 353 276,
22 350 332, 22 366 988, 22 228 372, 22 245 028, 22 242 084, 22 258 740, 22 255 796,
22 272 452, 22 289 108, 22 180 860, 22 177 916, 22 194 572, 22 102 980, 22 116 692}

chi = listdim17[[116]]

$(-11 + x)^2 (-9 + x)^{11} (5 + x)^{32} (7196 - 3325 x + 551 x^2 - 39 x^3 + x^4)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

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 329 505 c[1] - 261 318 c[2] + 82 655 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 331 089 c[1] - 261 638 c[2] + 82 671 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 330 737 c[1] - 261 606 c[2] + 82 671 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 314 937 c[1] - 257 518 c[2] + 82 343 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 314 585 c[1] - 257 486 c[2] + 82 343 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 316 809 c[1] - 257 870 c[2] + 82 359 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 316 393 c[1] - 257 838 c[2] + 82 359 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 316 457 c[1] - 257 838 c[2] + 82 359 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 316 521 c[1] - 257 838 c[2] + 82 359 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 318 681 c[1] - 258 222 c[2] + 82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 318 329 c[1] - 258 190 c[2] + 82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 318 393 c[1] - 258 190 c[2] + 82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 317 977 c[1] - 258 158 c[2] + 82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 318 041 c[1] - 258 158 c[2] + 82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 317 689 c[1] - 258 126 c[2] + 82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 320 265 c[1] - 258 542 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 319 913 c[1] - 258 510 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 319 977 c[1] - 258 510 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 319 561 c[1] - 258 478 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 319 625 c[1] - 258 478 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 319 273 c[1] - 258 446 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 321 849 c[1] - 258 862 c[2] + 82 407 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 321 497 c[1] - 258 830 c[2] + 82 407 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 321 561 c[1] - 258 830 c[2] + 82 407 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 321 145 c[1] - 258 798 c[2] + 82 407 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 320 793 c[1] - 258 766 c[2] + 82 407 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 323 433 c[1] - 259 182 c[2] + 82 423 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
```

[illegible]

$302\,841\,c[1] - 253\,438\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $302\,489\,c[1] - 253\,406\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $302\,553\,c[1] - 253\,406\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $302\,201\,c[1] - 253\,374\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $304\,425\,c[1] - 253\,758\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $304\,073\,c[1] - 253\,726\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $304\,137\,c[1] - 253\,726\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $303\,721\,c[1] - 253\,694\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $306\,009\,c[1] - 254\,078\,c[2] + 81\,927\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $305\,657\,c[1] - 254\,046\,c[2] + 81\,927\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $305\,305\,c[1] - 254\,014\,c[2] + 81\,927\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $307\,593\,c[1] - 254\,398\,c[2] + 81\,943\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $307\,241\,c[1] - 254\,366\,c[2] + 81\,943\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $309\,177\,c[1] - 254\,718\,c[2] + 81\,959\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $289\,377\,c[1] - 249\,926\,c[2] + 81\,599\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $290\,961\,c[1] - 250\,246\,c[2] + 81\,615\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $290\,673\,c[1] - 250\,214\,c[2] + 81\,615\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $292\,545\,c[1] - 250\,566\,c[2] + 81\,631\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $292\,257\,c[1] - 250\,534\,c[2] + 81\,631\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $294\,129\,c[1] - 250\,886\,c[2] + 81\,647\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $293\,777\,c[1] - 250\,854\,c[2] + 81\,647\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $293\,841\,c[1] - 250\,854\,c[2] + 81\,647\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $295\,713\,c[1] - 251\,206\,c[2] + 81\,663\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $295\,361\,c[1] - 251\,174\,c[2] + 81\,663\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $297\,297\,c[1] - 251\,526\,c[2] + 81\,679\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $296\,945\,c[1] - 251\,494\,c[2] + 81\,679\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $296\,593\,c[1] - 251\,462\,c[2] + 81\,679\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $298\,881\,c[1] - 251\,846\,c[2] + 81\,695\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $298\,529\,c[1] - 251\,814\,c[2] + 81\,695\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $300\,465\,c[1] - 252\,166\,c[2] + 81\,711\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $283\,833\,c[1] - 248\,014\,c[2] + 81\,383\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $283\,545\,c[1] - 247\,982\,c[2] + 81\,383\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $285\,417\,c[1] - 248\,334\,c[2] + 81\,399\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $285\,129\,c[1] - 248\,302\,c[2] + 81\,399\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $287\,001\,c[1] - 248\,654\,c[2] + 81\,415\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $286\,649\,c[1] - 248\,622\,c[2] + 81\,415\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $288\,585\,c[1] - 248\,974\,c[2] + 81\,431\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $288\,233\,c[1] - 248\,942\,c[2] + 81\,431\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $290\,169\,c[1] - 249\,294\,c[2] + 81\,447\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $289\,817\,c[1] - 249\,262\,c[2] + 81\,447\,c[3] - 13\,372\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $276\,705\,c[1] - 245\,782\,c[2] + 81\,151\,c[3] - 13\,364\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $278\,289\,c[1] - 246\,102\,c[2] + 81\,167\,c[3] - 13\,364\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $279\,873\,c[1] - 246\,422\,c[2] + 81\,183\,c[3] - 13\,364\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $281\,457\,c[1] - 246\,742\,c[2] + 81\,199\,c[3] - 13\,364\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $269\,577\,c[1] - 243\,550\,c[2] + 80\,919\,c[3] - 13\,356\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $271\,161\,c[1] - 243\,870\,c[2] + 80\,935\,c[3] - 13\,356\,c[4] + 1183\,c[5] - 54\,c[6] + c[7],$
 $272\,745\,c[1] - 244\,190\,c[2] + 80\,951\,c[3] - 13\,356\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \}$

Array[c, 7].g

16 149 833 c[1] - 12 811 854 c[2] + 4 051 351 c[3] -
657 244 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7]

cert =

```
Flatten[Array[c, 7] /. FindInstance[16 149 833 c[1] - 12 811 854 c[2] + 4 051 351 c[3] -
657 244 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7] < 0 &&
326 689 c[1] - 260 710 c[2] + 82 623 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 326 753 c[1] - 260 710 c[2] + 82 623 c[3] - 13 412 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 326 401 c[1] - 260 678 c[2] +
82 623 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
328 977 c[1] - 261 094 c[2] + 82 639 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 328 625 c[1] - 261 062 c[2] + 82 639 c[3] - 13 412 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 328 689 c[1] - 261 062 c[2] +
82 639 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
328 273 c[1] - 261 030 c[2] + 82 639 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 328 337 c[1] - 261 030 c[2] + 82 639 c[3] - 13 412 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 327 921 c[1] - 260 998 c[2] +
82 639 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
327 985 c[1] - 260 998 c[2] + 82 639 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 330 209 c[1] - 261 382 c[2] + 82 655 c[3] - 13 412 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 329 857 c[1] - 261 350 c[2] +
82 655 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
329 921 c[1] - 261 350 c[2] + 82 655 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 329 505 c[1] - 261 318 c[2] + 82 655 c[3] - 13 412 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 331 089 c[1] - 261 638 c[2] +
82 671 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
330 737 c[1] - 261 606 c[2] + 82 671 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 314 937 c[1] - 257 518 c[2] + 82 343 c[3] - 13 404 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 314 585 c[1] - 257 486 c[2] +
82 343 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
316 809 c[1] - 257 870 c[2] + 82 359 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 316 393 c[1] - 257 838 c[2] + 82 359 c[3] - 13 404 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 316 457 c[1] - 257 838 c[2] +
82 359 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
316 521 c[1] - 257 838 c[2] + 82 359 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 318 681 c[1] - 258 222 c[2] + 82 375 c[3] - 13 404 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 318 329 c[1] - 258 190 c[2] +
82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
318 393 c[1] - 258 190 c[2] + 82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 317 977 c[1] - 258 158 c[2] + 82 375 c[3] - 13 404 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 318 041 c[1] - 258 158 c[2] +
82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
317 689 c[1] - 258 126 c[2] + 82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 320 265 c[1] - 258 542 c[2] + 82 391 c[3] - 13 404 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 319 913 c[1] - 258 510 c[2] +
82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
```


$$\begin{aligned}
& 82\,159\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 312\,849\,c[1] - 256\,278\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 312\,433\,c[1] - 256\,246\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 314\,721\,c[1] - 256\,630\,c[2] + \\
& 82\,175\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 314\,369\,c[1] - 256\,598\,c[2] + 82\,175\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 314\,017\,c[1] - 256\,566\,c[2] + 82\,175\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 313\,665\,c[1] - 256\,534\,c[2] + \\
& 82\,175\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 316\,305\,c[1] - 256\,950\,c[2] + 82\,191\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 315\,953\,c[1] - 256\,918\,c[2] + 82\,191\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 315\,601\,c[1] - 256\,886\,c[2] + \\
& 82\,191\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 317\,889\,c[1] - 257\,270\,c[2] + 82\,207\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 296\,505\,c[1] - 252\,158\,c[2] + 81\,831\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 298\,089\,c[1] - 252\,478\,c[2] + \\
& 81\,847\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 297\,801\,c[1] - 252\,446\,c[2] + 81\,847\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 297\,513\,c[1] - 252\,414\,c[2] + 81\,847\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 299\,673\,c[1] - 252\,798\,c[2] + \\
& 81\,863\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 299\,321\,c[1] - 252\,766\,c[2] + 81\,863\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 299\,385\,c[1] - 252\,766\,c[2] + 81\,863\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 301\,257\,c[1] - 253\,118\,c[2] + \\
& 81\,879\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 300\,905\,c[1] - 253\,086\,c[2] + 81\,879\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 300\,969\,c[1] - 253\,086\,c[2] + 81\,879\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 300\,617\,c[1] - 253\,054\,c[2] + \\
& 81\,879\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 302\,841\,c[1] - 253\,438\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 302\,489\,c[1] - 253\,406\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 302\,553\,c[1] - 253\,406\,c[2] + \\
& 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 302\,201\,c[1] - 253\,374\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 304\,425\,c[1] - 253\,758\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 304\,073\,c[1] - 253\,726\,c[2] + \\
& 81\,911\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 304\,137\,c[1] - 253\,726\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 303\,721\,c[1] - 253\,694\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 306\,009\,c[1] - 254\,078\,c[2] + \\
& 81\,927\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 305\,657\,c[1] - 254\,046\,c[2] + 81\,927\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 305\,305\,c[1] - 254\,014\,c[2] + 81\,927\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 307\,593\,c[1] - 254\,398\,c[2] + \\
& 81\,943\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 307\,241\,c[1] - 254\,366\,c[2] + 81\,943\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 309\,177\,c[1] - 254\,718\,c[2] + 81\,959\,c[3] - 13\,388\,c[4] +
\end{aligned}$$

```

1183 c[5] - 54 c[6] + c[7] ≥ 0 && 289 377 c[1] - 249 926 c[2] +
81 599 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
290 961 c[1] - 250 246 c[2] + 81 615 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 290 673 c[1] - 250 214 c[2] + 81 615 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 292 545 c[1] - 250 566 c[2] +
81 631 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
292 257 c[1] - 250 534 c[2] + 81 631 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 294 129 c[1] - 250 886 c[2] + 81 647 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 293 777 c[1] - 250 854 c[2] +
81 647 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
293 841 c[1] - 250 854 c[2] + 81 647 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 295 713 c[1] - 251 206 c[2] + 81 663 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 295 361 c[1] - 251 174 c[2] +
81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
297 297 c[1] - 251 526 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 296 945 c[1] - 251 494 c[2] + 81 679 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 296 593 c[1] - 251 462 c[2] +
81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
298 881 c[1] - 251 846 c[2] + 81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 298 529 c[1] - 251 814 c[2] + 81 695 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 300 465 c[1] - 252 166 c[2] +
81 711 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
283 833 c[1] - 248 014 c[2] + 81 383 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 283 545 c[1] - 247 982 c[2] + 81 383 c[3] - 13 372 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 285 417 c[1] - 248 334 c[2] +
81 399 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
285 129 c[1] - 248 302 c[2] + 81 399 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 287 001 c[1] - 248 654 c[2] + 81 415 c[3] - 13 372 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 286 649 c[1] - 248 622 c[2] +
81 415 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
288 585 c[1] - 248 974 c[2] + 81 431 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 288 233 c[1] - 248 942 c[2] + 81 431 c[3] - 13 372 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 290 169 c[1] - 249 294 c[2] +
81 447 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
289 817 c[1] - 249 262 c[2] + 81 447 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 276 705 c[1] - 245 782 c[2] + 81 151 c[3] - 13 364 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 278 289 c[1] - 246 102 c[2] +
81 167 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
279 873 c[1] - 246 422 c[2] + 81 183 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 281 457 c[1] - 246 742 c[2] + 81 199 c[3] - 13 364 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 269 577 c[1] - 243 550 c[2] +
80 919 c[3] - 13 356 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
271 161 c[1] - 243 870 c[2] + 80 935 c[3] - 13 356 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 272 745 c[1] - 244 190 c[2] + 80 951 c[3] - 13 356 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{2468, 13 173, 31 817, 0, 0, 0, 0}

```

```
GCD[2468, 13 173, 31 817, 0, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 0, 31 817, 13 173, 2468}
```

```
cert.g
```

```
-10 930 131
```

```
{2468, 13 173, 31 817, 0, 0, 0, 0}.gpart[listdim17[[116]]]
```

```
-10 930 131
```

```
cert.Transpose[A]
```

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4 439 933, 5 379 405, 4 774 253, 4 932 205, 5 090 157, 5 871 677, 5 424 477, 5 582 429,
4 977 277, 5 135 229, 4 688 029, 6 074 701, 5 627 501, 5 785 453, 5 180 301, 5 338 253,
4 891 053, 6 277 725, 5 830 525, 5 988 477, 5 383 325, 4 936 125, 6 480 749, 6 033 549,
5 586 349, 5 139 149, 6 683 773, 6 236 573, 5 789 373, 8 909 773, 9 244 093, 9 402 045,
9 112 797, 9 894 317, 9 447 117, 9 605 069, 9 157 869, 9 315 821, 10 097 341, 9 650 141,
9 808 093, 9 360 893, 10 300 365, 9 853 165, 10 011 117, 9 405 965, 9 563 917,
10 503 389, 10 056 189, 10 214 141, 9 608 989, 10 706 413, 10 259 213, 9 812 013,
9 364 813, 10 909 437, 10 462 237, 10 015 037, 11 112 461, 13 713 933, 13 916 957,
13 627 709, 13 338 461, 14 119 981, 13 672 781, 13 830 733, 14 323 005, 13 875 805,
14 033 757, 13 586 557, 14 526 029, 14 078 829, 14 236 781, 13 789 581, 14 729 053,
14 281 853, 14 439 805, 13 834 653, 14 932 077, 14 484 877, 14 037 677, 15 135 101,
14 687 901, 15 338 125, 18 142 621, 18 345 645, 18 056 397, 18 548 669, 18 259 421,
18 751 693, 18 304 493, 18 462 445, 18 954 717, 18 507 517, 19 157 741, 18 710 541,
18 263 341, 19 360 765, 18 913 565, 19 563 789, 22 774 333, 22 485 085, 22 977 357,
22 688 109, 23 180 381, 22 733 181, 23 383 405, 22 936 205, 23 586 429, 23 139 229,
27 203 021, 27 406 045, 27 609 069, 27 812 093, 31 631 709, 31 834 733, 32 037 757}
```

```
chi = listdim17[[117]]
```

```
 $(-11 + x) (-9 + x)^{11} (5 + x)^{32} (-79\,124 + 43\,771\,x - 9386\,x^2 + 980\,x^3 - 50\,x^4 + x^5)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

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{1, -65, 1777, -26 377, 228 155, -1 138 411, 2 979 667, -3 040 587},
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{1, -65, 1777, -26 369, 227 819, -1 133 163, 2 943 523, -2 947 923},
{1, -65, 1777, -26 369, 227 835, -1 133 627, 2 947 987, -2 962 179}};
```

```
A // MatrixForm
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```
{ 1 -65 1777 -26 433 230 491 -1 174 715 3 228 787 -3 677 443 }
{ 1 -65 1777 -26 433 230 507 -1 175 243 3 234 531 -3 698 035 }
{ 1 -65 1777 -26 425 230 139 -1 168 971 3 187 603 -3 568 059 }
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1	-65	1777	-26409	229515	-1159963	3130563	-3434299
1	-65	1777	-26409	229515	-1159963	3130627	-3435003
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1	-65	1777	-26409	229531	-1160459	3135667	-3451723
1	-65	1777	-26401	229099	-1152235	3069027	-3255795
1	-65	1777	-26401	229115	-1152731	3074067	-3272643
1	-65	1777	-26401	229115	-1152699	3073491	-3270051
1	-65	1777	-26401	229131	-1153259	3079811	-3293235
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1	-65	1777	-26401	229131	-1153195	3078531	-3286899
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1	-65	1777	-26401	229147	-1153723	3084275	-3307491
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1	-65	1777	-26401	229147	-1153659	3082995	-3301155
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1	-65	1777	-26401	229163	-1154219	3089379	-3324915
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1	-65	1777	-26393	228843	-1149435	3057699	-3246507
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1	-65	1777	-26385	228491	-1143691	3016451	-3136419
1	-65	1777	-26385	228491	-1143659	3015811	-3133251
1	-65	1777	-26385	228507	-1144187	3021555	-3153843

1	-65	1777	-26385	228507	-1144155	3020915	-3150675
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1	-65	1777	-26377	228139	-1137947	2975203	-3026331
1	-65	1777	-26377	228155	-1138411	2979667	-3040587
1	-65	1777	-26377	228171	-1138907	2984771	-3058011
1	-65	1777	-26369	227819	-1133163	2943523	-2947923
1	-65	1777	-26369	227835	-1133627	2947987	-2962179

Dimensions[A]

{107, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3185, 87073, -1294881, 11281035, -57375307, 157057507, -177567587}

Array[c, 8].Transpose[A]

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 c[1] - 65 c[2] + 1777 c[3] - 26433 c[4] + 230507 c[5] - 1175243 c[6] +
 3234531 c[7] - 3698035 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
 230139 c[5] - 1168971 c[6] + 3187603 c[7] - 3568059 c[8],
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 3187603 c[7] - 3567931 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
 230155 c[5] - 1169499 c[6] + 3193347 c[7] - 3588651 c[8],
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 3192643 c[7] - 3584779 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
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 3199027 c[7] - 3608539 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
 230171 c[5] - 1170027 c[6] + 3199091 c[7] - 3609243 c[8],
 c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230171 c[5] - 1169995 c[6] +
 3198387 c[7] - 3605371 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
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 c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230171 c[5] - 1169963 c[6] +
 3197747 c[7] - 3602203 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
 230187 c[5] - 1170555 c[6] + 3204835 c[7] - 3629835 c[8],
 c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230187 c[5] - 1170523 c[6] +
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 230187 c[5] - 1170491 c[6] + 3203555 c[7] - 3623499 c[8],
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 3208595 c[7] - 3640219 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +
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 3145715 c[7] - 3454803 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +
 229803 c[5] - 1163755 c[6] + 3152163 c[7] - 3479139 c[8],
 c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229803 c[5] - 1163723 c[6] +

$$\begin{aligned}
& 3\,151\,459\,c[7] - 3\,475\,395\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,803\,c[5] - 1\,163\,691\,c[6] + 3\,150\,819\,c[7] - 3\,472\,227\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& 3\,157\,139\,c[7] - 3\,495\,283\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,251\,c[6] + 3\,157\,203\,c[7] - 3\,495\,987\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& 3\,156\,499\,c[7] - 3\,492\,115\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,563\,c[7] - 3\,492\,819\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,811\,c[6] + \\
& 3\,163\,587\,c[7] - 3\,519\,747\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,779\,c[6] + 3\,162\,947\,c[7] - 3\,516\,579\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,747\,c[6] + \\
& 3\,162\,243\,c[7] - 3\,512\,707\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,747\,c[6] + 3\,162\,307\,c[7] - 3\,513\,411\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,715\,c[6] + \\
& 3\,161\,603\,c[7] - 3\,509\,539\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,835\,c[5] - 1\,164\,715\,c[6] + 3\,161\,667\,c[7] - 3\,510\,243\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,275\,c[6] + \\
& 3\,168\,051\,c[7] - 3\,534\,003\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,851\,c[5] - 1\,165\,243\,c[6] + 3\,167\,347\,c[7] - 3\,530\,131\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,243\,c[6] + \\
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& 229\,851\,c[5] - 1\,165\,211\,c[6] + 3\,166\,707\,c[7] - 3\,526\,963\,c[8], \\
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& 3\,173\,155\,c[7] - 3\,551\,427\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
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& 229\,451\,c[5] - 1\,157\,947\,c[6] + 3\,109\,635\,c[7] - 3\,362\,715\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,507\,c[6] + \\
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& 3\,114\,035\,c[7] - 3\,376\,395\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,159\,035\,c[6] + 3\,121\,699\,c[7] - 3\,406\,491\,c[8], \\
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& 229\,483\,c[5] - 1\,159\,003\,c[6] + 3\,121\,059\,c[7] - 3\,403\,323\,c[8], \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,971\,c[6] + \\
& 3\,120\,419\,c[7] - 3\,400\,155\,c[8], c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,939\,c[6] + 3\,119\,779\,c[7] - 3\,396\,987\,c[8],
\end{aligned}$$

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 $3043027 c[7] - 3197403 c[8], c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] +$

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228 795 c[5] - 1 147 947 c[6] + 3 042 387 c[7] - 3 194 235 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 811 c[5] - 1 148 507 c[6] +
3 048 771 c[7] - 3 217 995 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 811 c[5] - 1 148 475 c[6] + 3 048 131 c[7] - 3 214 827 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 811 c[5] - 1 148 443 c[6] +
3 047 491 c[7] - 3 211 659 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 811 c[5] - 1 148 411 c[6] + 3 046 851 c[7] - 3 208 491 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 827 c[5] - 1 148 971 c[6] +
3 053 235 c[7] - 3 232 251 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
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3 051 955 c[7] - 3 225 915 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
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3 057 699 c[7] - 3 246 507 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 459 c[5] - 1 142 731 c[6] + 3 006 883 c[7] - 3 104 739 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 475 c[5] - 1 143 227 c[6] +
3 011 987 c[7] - 3 122 163 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
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3 016 451 c[7] - 3 136 419 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 491 c[5] - 1 143 659 c[6] + 3 015 811 c[7] - 3 133 251 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 507 c[5] - 1 144 187 c[6] +
3 021 555 c[7] - 3 153 843 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 507 c[5] - 1 144 155 c[6] + 3 020 915 c[7] - 3 150 675 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 523 c[5] - 1 144 683 c[6] +
3 026 659 c[7] - 3 171 267 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] +
228 139 c[5] - 1 137 947 c[6] + 2 975 203 c[7] - 3 026 331 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] + 228 155 c[5] - 1 138 411 c[6] +
2 979 667 c[7] - 3 040 587 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] +
228 171 c[5] - 1 138 907 c[6] + 2 984 771 c[7] - 3 058 011 c[8],
c[1] - 65 c[2] + 1777 c[3] - 26 369 c[4] + 227 819 c[5] - 1 133 163 c[6] +
2 943 523 c[7] - 2 947 923 c[8], c[1] - 65 c[2] + 1777 c[3] - 26 369 c[4] +
227 835 c[5] - 1 133 627 c[6] + 2 947 987 c[7] - 2 962 179 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3185 c[2] + 87 073 c[3] - 1 294 881 c[4] +
11 281 035 c[5] - 57 375 307 c[6] + 157 057 507 c[7] - 177 567 587 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 294 881 c[4] +
11 281 035 c[5] - 57 375 307 c[6] + 157 057 507 c[7] - 177 567 587 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] + 230 491 c[5] - 1 174 715 c[6] +
3 228 787 c[7] - 3 677 443 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 433 c[4] +
230 507 c[5] - 1 175 243 c[6] + 3 234 531 c[7] - 3 698 035 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 139 c[5] - 1 168 971 c[6] +
3 187 603 c[7] - 3 568 059 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +

```

$$\begin{aligned}
& 230\,139\,c[5] - 1\,168\,971\,c[6] + 3\,187\,603\,c[7] - 3\,567\,931\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,499\,c[6] + \\
& \quad 3\,193\,347\,c[7] - 3\,588\,651\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,155\,c[5] - 1\,169\,467\,c[6] + 3\,192\,643\,c[7] - 3\,584\,779\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,155\,c[5] - 1\,169\,467\,c[6] + \\
& \quad 3\,192\,707\,c[7] - 3\,585\,483\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,171\,c[5] - 1\,170\,027\,c[6] + 3\,199\,027\,c[7] - 3\,608\,539\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,170\,027\,c[6] + \\
& \quad 3\,199\,091\,c[7] - 3\,609\,243\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,171\,c[5] - 1\,169\,995\,c[6] + 3\,198\,387\,c[7] - 3\,605\,371\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,171\,c[5] - 1\,169\,995\,c[6] + \\
& \quad 3\,198\,451\,c[7] - 3\,606\,075\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,171\,c[5] - 1\,169\,963\,c[6] + 3\,197\,747\,c[7] - 3\,602\,203\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,187\,c[5] - 1\,170\,555\,c[6] + \\
& \quad 3\,204\,835\,c[7] - 3\,629\,835\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,187\,c[5] - 1\,170\,523\,c[6] + 3\,204\,131\,c[7] - 3\,625\,963\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,187\,c[5] - 1\,170\,523\,c[6] + \\
& \quad 3\,204\,195\,c[7] - 3\,626\,667\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,187\,c[5] - 1\,170\,491\,c[6] + 3\,203\,491\,c[7] - 3\,622\,795\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + 230\,187\,c[5] - 1\,170\,491\,c[6] + \\
& \quad 3\,203\,555\,c[7] - 3\,623\,499\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,425\,c[4] + \\
& \quad 230\,203\,c[5] - 1\,170\,987\,c[6] + 3\,208\,595\,c[7] - 3\,640\,219\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,787\,c[5] - 1\,163\,227\,c[6] + \\
& \quad 3\,146\,419\,c[7] - 3\,458\,547\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,787\,c[5] - 1\,163\,195\,c[6] + 3\,145\,715\,c[7] - 3\,454\,803\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,755\,c[6] + \\
& \quad 3\,152\,163\,c[7] - 3\,479\,139\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,803\,c[5] - 1\,163\,723\,c[6] + 3\,151\,459\,c[7] - 3\,475\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,803\,c[5] - 1\,163\,691\,c[6] + \\
& \quad 3\,150\,819\,c[7] - 3\,472\,227\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,251\,c[6] + 3\,157\,139\,c[7] - 3\,495\,283\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,251\,c[6] + \\
& \quad 3\,157\,203\,c[7] - 3\,495\,987\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,819\,c[5] - 1\,164\,219\,c[6] + 3\,156\,499\,c[7] - 3\,492\,115\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,819\,c[5] - 1\,164\,219\,c[6] + \\
& \quad 3\,156\,563\,c[7] - 3\,492\,819\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,811\,c[6] + 3\,163\,587\,c[7] - 3\,519\,747\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,779\,c[6] + \\
& \quad 3\,162\,947\,c[7] - 3\,516\,579\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,747\,c[6] + 3\,162\,243\,c[7] - 3\,512\,707\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,747\,c[6] + \\
& \quad 3\,162\,307\,c[7] - 3\,513\,411\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,835\,c[5] - 1\,164\,715\,c[6] + 3\,161\,603\,c[7] - 3\,509\,539\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,835\,c[5] - 1\,164\,715\,c[6] + \\
& \quad 3\,161\,667\,c[7] - 3\,510\,243\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& \quad 229\,851\,c[5] - 1\,165\,275\,c[6] + 3\,168\,051\,c[7] - 3\,534\,003\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,243\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 3\,167\,347\,c[7] - 3\,530\,131\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,851\,c[5] - 1\,165\,243\,c[6] + 3\,167\,411\,c[7] - 3\,530\,835\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,851\,c[5] - 1\,165\,211\,c[6] + \\
& 3\,166\,707\,c[7] - 3\,526\,963\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,867\,c[5] - 1\,165\,771\,c[6] + 3\,173\,155\,c[7] - 3\,551\,427\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + 229\,867\,c[5] - 1\,165\,739\,c[6] + \\
& 3\,172\,515\,c[7] - 3\,548\,259\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,417\,c[4] + \\
& 229\,883\,c[5] - 1\,166\,267\,c[6] + 3\,178\,259\,c[7] - 3\,568\,851\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,979\,c[6] + \\
& 3\,110\,275\,c[7] - 3\,365\,883\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,451\,c[5] - 1\,157\,947\,c[6] + 3\,109\,571\,c[7] - 3\,362\,139\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,451\,c[5] - 1\,157\,947\,c[6] + \\
& 3\,109\,635\,c[7] - 3\,362\,715\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,507\,c[6] + 3\,115\,955\,c[7] - 3\,385\,899\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,475\,c[6] + \\
& 3\,115\,315\,c[7] - 3\,382\,731\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,475\,c[6] + 3\,115\,379\,c[7] - 3\,383\,307\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,467\,c[5] - 1\,158\,443\,c[6] + \\
& 3\,114\,675\,c[7] - 3\,379\,563\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,467\,c[5] - 1\,158\,411\,c[6] + 3\,114\,035\,c[7] - 3\,376\,395\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,159\,035\,c[6] + \\
& 3\,121\,699\,c[7] - 3\,406\,491\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,159\,003\,c[6] + 3\,120\,995\,c[7] - 3\,402\,619\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,159\,003\,c[6] + \\
& 3\,121\,059\,c[7] - 3\,403\,323\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,483\,c[5] - 1\,158\,971\,c[6] + 3\,120\,419\,c[7] - 3\,400\,155\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,483\,c[5] - 1\,158\,939\,c[6] + \\
& 3\,119\,779\,c[7] - 3\,396\,987\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,499\,c[5] - 1\,159\,531\,c[6] + 3\,126\,803\,c[7] - 3\,423\,915\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,499\,c[6] + \\
& 3\,126\,163\,c[7] - 3\,420\,747\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,499\,c[5] - 1\,159\,467\,c[6] + 3\,125\,459\,c[7] - 3\,416\,875\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,499\,c[5] - 1\,159\,467\,c[6] + \\
& 3\,125\,523\,c[7] - 3\,417\,579\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,515\,c[5] - 1\,159\,995\,c[6] + 3\,131\,267\,c[7] - 3\,438\,171\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,515\,c[5] - 1\,159\,963\,c[6] + \\
& 3\,130\,563\,c[7] - 3\,434\,299\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,515\,c[5] - 1\,159\,963\,c[6] + 3\,130\,627\,c[7] - 3\,435\,003\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + 229\,531\,c[5] - 1\,160\,491\,c[6] + \\
& 3\,136\,371\,c[7] - 3\,455\,595\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,409\,c[4] + \\
& 229\,531\,c[5] - 1\,160\,459\,c[6] + 3\,135\,667\,c[7] - 3\,451\,723\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,099\,c[5] - 1\,152\,235\,c[6] + \\
& 3\,069\,027\,c[7] - 3\,255\,795\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& 229\,115\,c[5] - 1\,152\,731\,c[6] + 3\,074\,067\,c[7] - 3\,272\,643\,c[8] \geq 0 \&\& \\
& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + 229\,115\,c[5] - 1\,152\,699\,c[6] + \\
& 3\,073\,491\,c[7] - 3\,270\,051\,c[8] \geq 0 \&\& c[1] - 65\,c[2] + 1777\,c[3] - 26\,401\,c[4] + \\
& 229\,131\,c[5] - 1\,153\,259\,c[6] + 3\,079\,811\,c[7] - 3\,293\,235\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229131 c[5] - 1153227 c[6] + \\
& \quad 3079171 c[7] - 3290067 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + \\
& \quad 229131 c[5] - 1153195 c[6] + 3078531 c[7] - 3286899 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229131 c[5] - 1153195 c[6] + \\
& \quad 3078595 c[7] - 3287475 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + \\
& \quad 229147 c[5] - 1153755 c[6] + 3084915 c[7] - 3310659 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229147 c[5] - 1153723 c[6] + \\
& \quad 3084275 c[7] - 3307491 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + \\
& \quad 229147 c[5] - 1153691 c[6] + 3083635 c[7] - 3304323 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229147 c[5] - 1153659 c[6] + \\
& \quad 3082995 c[7] - 3301155 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + \\
& \quad 229163 c[5] - 1154251 c[6] + 3090019 c[7] - 3328083 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229163 c[5] - 1154219 c[6] + \\
& \quad 3089379 c[7] - 3324915 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + \\
& \quad 229163 c[5] - 1154187 c[6] + 3088739 c[7] - 3321747 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229179 c[5] - 1154747 c[6] + \\
& \quad 3095123 c[7] - 3345507 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + \\
& \quad 229179 c[5] - 1154715 c[6] + 3094483 c[7] - 3342339 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229179 c[5] - 1154683 c[6] + \\
& \quad 3093779 c[7] - 3338467 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + \\
& \quad 229195 c[5] - 1155211 c[6] + 3099587 c[7] - 3359763 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + 228779 c[5] - 1147515 c[6] + \\
& \quad 3038563 c[7] - 3183147 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + \\
& \quad 228779 c[5] - 1147483 c[6] + 3037923 c[7] - 3179979 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + 228795 c[5] - 1148011 c[6] + \\
& \quad 3043667 c[7] - 3200571 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + \\
& \quad 228795 c[5] - 1147979 c[6] + 3043027 c[7] - 3197403 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + 228795 c[5] - 1147947 c[6] + \\
& \quad 3042387 c[7] - 3194235 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + \\
& \quad 228811 c[5] - 1148507 c[6] + 3048771 c[7] - 3217995 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + 228811 c[5] - 1148475 c[6] + \\
& \quad 3048131 c[7] - 3214827 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + \\
& \quad 228811 c[5] - 1148443 c[6] + 3047491 c[7] - 3211659 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + 228811 c[5] - 1148411 c[6] + \\
& \quad 3046851 c[7] - 3208491 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + \\
& \quad 228827 c[5] - 1148971 c[6] + 3053235 c[7] - 3232251 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + 228827 c[5] - 1148939 c[6] + \\
& \quad 3052595 c[7] - 3229083 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + \\
& \quad 228827 c[5] - 1148907 c[6] + 3051955 c[7] - 3225915 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + 228843 c[5] - 1149467 c[6] + \\
& \quad 3058339 c[7] - 3249675 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + \\
& \quad 228843 c[5] - 1149435 c[6] + 3057699 c[7] - 3246507 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26385 c[4] + 228459 c[5] - 1142731 c[6] + \\
& \quad 3006883 c[7] - 3104739 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26385 c[4] + \\
& \quad 228475 c[5] - 1143227 c[6] + 3011987 c[7] - 3122163 c[8] \geq 0 \&\& \\
& c[1] - 65 c[2] + 1777 c[3] - 26385 c[4] + 228475 c[5] - 1143195 c[6] + \\
& \quad 3011347 c[7] - 3118995 c[8] \geq 0 \&\& c[1] - 65 c[2] + 1777 c[3] - 26385 c[4] +
\end{aligned}$$

```

228 491 c[5] - 1 143 691 c[6] + 3 016 451 c[7] - 3 136 419 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 491 c[5] - 1 143 659 c[6] +
3 015 811 c[7] - 3 133 251 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 507 c[5] - 1 144 187 c[6] + 3 021 555 c[7] - 3 153 843 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 507 c[5] - 1 144 155 c[6] +
3 020 915 c[7] - 3 150 675 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 523 c[5] - 1 144 683 c[6] + 3 026 659 c[7] - 3 171 267 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] + 228 139 c[5] - 1 137 947 c[6] +
2 975 203 c[7] - 3 026 331 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] +
228 155 c[5] - 1 138 411 c[6] + 2 979 667 c[7] - 3 040 587 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] + 228 171 c[5] - 1 138 907 c[6] +
2 984 771 c[7] - 3 058 011 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 369 c[4] +
227 819 c[5] - 1 133 163 c[6] + 2 943 523 c[7] - 2 947 923 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 369 c[4] + 227 835 c[5] - 1 133 627 c[6] +
2 947 987 c[7] - 2 962 179 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -10 677 039, -3 964 370, -842 610, -142 646}

GCD[0, 0, 0, 0, -10 677 039, -3 964 370, -842 610, -142 646]
1

cert.g
-24 801 843

{0, 0, 0, 0, -10 677 039, -3 964 370, -842 610, -142 646}.
Reverse[gpart[listdim17[[117]]]]
-24 801 843

cert.Transpose[A]
{7 828 509, 27 597 837, 93 665 133, 75 406 445, 113 434 461, 27 446 749, 73 942 493,
86 708 045, 133 203 789, 47 216 077, 93 711 821, 7 724 109, 152 973 117, 66 985 405,
113 481 149, 27 493 437, 73 989 181, 7 770 797, 161 243 069, 93 514 045, 181 012 397,
113 283 373, 73 791 405, 86 556 957, 133 052 701, 47 064 989, 93 560 733, 192 313 997,
152 822 029, 66 834 317, 113 330 061, 27 342 349, 73 838 093, 133 099 389, 47 111 677,
93 607 421, 7 619 709, 113 376 749, 73 884 781, 93 654 109, 180 861 309, 113 132 285,
141 369 341, 172 393 581, 132 901 613, 161 138 669, 93 409 645, 53 917 677, 192 162 909,
106 175 197, 152 670 941, 113 178 973, 73 687 005, 172 440 269, 132 948 301,
46 960 589, 93 456 333, 113 225 661, 27 237 949, 73 733 693, 93 503 021, 7 515 309,
220 202 189, 172 242 493, 160 987 581, 192 011 821, 152 519 853, 113 027 885,
141 264 941, 172 289 181, 132 797 213, 93 305 245, 53 813 277, 152 566 541,
113 074 573, 73 582 605, 132 843 901, 93 351 933, 7 364 221, 73 629 293, 231 352 701,
191 860 733, 211 630 061, 172 138 093, 132 646 125, 191 907 421, 152 415 453,
112 923 485, 73 431 517, 132 692 813, 93 200 845, 53 708 877, 112 970 173, 73 478 205,
191 756 333, 172 033 693, 132 541 725, 112 819 085, 73 327 117, 93 096 445,
53 604 477, 73 373 805, 152 159 965, 92 945 357, 73 222 717, 112 563 597, 53 348 989}

```



```
chi = listdim17[[118]]
```

$$(-13 + x)^2 (-11 + x) (-9 + x)^{12} (5 + x)^{32} (52 - 15x + x^2)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-31239, 21669, -5694, 714, -43, 1},
 {-31415, 21685, -5694, 714, -43, 1}, {-31383, 21685, -5694, 714, -43, 1},
 {-31559, 21701, -5694, 714, -43, 1}, {-30303, 21493, -5686, 714, -43, 1},
 {-30479, 21509, -5686, 714, -43, 1}, {-30447, 21509, -5686, 714, -43, 1},
 {-30623, 21525, -5686, 714, -43, 1}, {-30591, 21525, -5686, 714, -43, 1},
 {-30767, 21541, -5686, 714, -43, 1}, {-29367, 21317, -5678, 714, -43, 1},
 {-29511, 21333, -5678, 714, -43, 1}, {-29655, 21349, -5678, 714, -43, 1},
 {-29831, 21365, -5678, 714, -43, 1}, {-29799, 21365, -5678, 714, -43, 1},
 {-29975, 21381, -5678, 714, -43, 1}, {-28575, 21157, -5670, 714, -43, 1},
 {-28719, 21173, -5670, 714, -43, 1}, {-28863, 21189, -5670, 714, -43, 1},
 {-29007, 21205, -5670, 714, -43, 1}, {-29183, 21221, -5670, 714, -43, 1},
 {-27927, 21013, -5662, 714, -43, 1}, {-28071, 21029, -5662, 714, -43, 1},
 {-28215, 21045, -5662, 714, -43, 1}, {-28391, 21061, -5662, 714, -43, 1},
 {-27135, 20853, -5654, 714, -43, 1}, {-27279, 20869, -5654, 714, -43, 1},
 {-27423, 20885, -5654, 714, -43, 1}, {-26487, 20709, -5646, 714, -43, 1},
 {-26631, 20725, -5646, 714, -43, 1}, {-25839, 20565, -5638, 714, -43, 1}}
```

```
A = {{-31239, 21669, -5694, 714, -43, 1},
 {-31415, 21685, -5694, 714, -43, 1}, {-31383, 21685, -5694, 714, -43, 1},
 {-31559, 21701, -5694, 714, -43, 1}, {-30303, 21493, -5686, 714, -43, 1},
 {-30479, 21509, -5686, 714, -43, 1}, {-30447, 21509, -5686, 714, -43, 1},
 {-30623, 21525, -5686, 714, -43, 1}, {-30591, 21525, -5686, 714, -43, 1},
 {-30767, 21541, -5686, 714, -43, 1}, {-29367, 21317, -5678, 714, -43, 1},
 {-29511, 21333, -5678, 714, -43, 1}, {-29655, 21349, -5678, 714, -43, 1},
 {-29831, 21365, -5678, 714, -43, 1}, {-29799, 21365, -5678, 714, -43, 1},
 {-29975, 21381, -5678, 714, -43, 1}, {-28575, 21157, -5670, 714, -43, 1},
 {-28719, 21173, -5670, 714, -43, 1}, {-28863, 21189, -5670, 714, -43, 1},
 {-29007, 21205, -5670, 714, -43, 1}, {-29183, 21221, -5670, 714, -43, 1},
 {-27927, 21013, -5662, 714, -43, 1}, {-28071, 21029, -5662, 714, -43, 1},
 {-28215, 21045, -5662, 714, -43, 1}, {-28391, 21061, -5662, 714, -43, 1},
 {-27135, 20853, -5654, 714, -43, 1}, {-27279, 20869, -5654, 714, -43, 1},
 {-27423, 20885, -5654, 714, -43, 1}, {-26487, 20709, -5646, 714, -43, 1},
 {-26631, 20725, -5646, 714, -43, 1}, {-25839, 20565, -5638, 714, -43, 1}};
```

A // MatrixForm

$$\begin{pmatrix} -31239 & 21669 & -5694 & 714 & -43 & 1 \\ -31415 & 21685 & -5694 & 714 & -43 & 1 \\ -31383 & 21685 & -5694 & 714 & -43 & 1 \\ -31559 & 21701 & -5694 & 714 & -43 & 1 \\ -30303 & 21493 & -5686 & 714 & -43 & 1 \\ -30479 & 21509 & -5686 & 714 & -43 & 1 \\ -30447 & 21509 & -5686 & 714 & -43 & 1 \\ -30623 & 21525 & -5686 & 714 & -43 & 1 \\ -30591 & 21525 & -5686 & 714 & -43 & 1 \\ -30767 & 21541 & -5686 & 714 & -43 & 1 \\ -29367 & 21317 & -5678 & 714 & -43 & 1 \\ -29511 & 21333 & -5678 & 714 & -43 & 1 \\ -29655 & 21349 & -5678 & 714 & -43 & 1 \\ -29831 & 21365 & -5678 & 714 & -43 & 1 \\ -29799 & 21365 & -5678 & 714 & -43 & 1 \\ -29975 & 21381 & -5678 & 714 & -43 & 1 \\ -28575 & 21157 & -5670 & 714 & -43 & 1 \\ -28719 & 21173 & -5670 & 714 & -43 & 1 \\ -28863 & 21189 & -5670 & 714 & -43 & 1 \\ -29007 & 21205 & -5670 & 714 & -43 & 1 \\ -29183 & 21221 & -5670 & 714 & -43 & 1 \\ -27927 & 21013 & -5662 & 714 & -43 & 1 \\ -28071 & 21029 & -5662 & 714 & -43 & 1 \\ -28215 & 21045 & -5662 & 714 & -43 & 1 \\ -28391 & 21061 & -5662 & 714 & -43 & 1 \\ -27135 & 20853 & -5654 & 714 & -43 & 1 \\ -27279 & 20869 & -5654 & 714 & -43 & 1 \\ -27423 & 20885 & -5654 & 714 & -43 & 1 \\ -26487 & 20709 & -5646 & 714 & -43 & 1 \\ -26631 & 20725 & -5646 & 714 & -43 & 1 \\ -25839 & 20565 & -5638 & 714 & -43 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1516983, 1056933, -278670, 34986, -2107, 49}

Array[c, 6].Transpose[A]

```
{ -31 239 c[1] + 21 669 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6],
  -31 415 c[1] + 21 685 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6],
  -31 383 c[1] + 21 685 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6],
  -31 559 c[1] + 21 701 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6],
  -30 303 c[1] + 21 493 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
  -30 479 c[1] + 21 509 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
  -30 447 c[1] + 21 509 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
  -30 623 c[1] + 21 525 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
  -30 591 c[1] + 21 525 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
  -30 767 c[1] + 21 541 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6],
  -29 367 c[1] + 21 317 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6],
  -29 511 c[1] + 21 333 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6],
  -29 655 c[1] + 21 349 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6],
  -29 831 c[1] + 21 365 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6],
  -29 799 c[1] + 21 365 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6],
  -29 975 c[1] + 21 381 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6],
  -28 575 c[1] + 21 157 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6],
  -28 719 c[1] + 21 173 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6],
  -28 863 c[1] + 21 189 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6],
  -29 007 c[1] + 21 205 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6],
  -29 183 c[1] + 21 221 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6],
  -27 927 c[1] + 21 013 c[2] - 5662 c[3] + 714 c[4] - 43 c[5] + c[6],
  -28 071 c[1] + 21 029 c[2] - 5662 c[3] + 714 c[4] - 43 c[5] + c[6],
  -28 215 c[1] + 21 045 c[2] - 5662 c[3] + 714 c[4] - 43 c[5] + c[6],
  -28 391 c[1] + 21 061 c[2] - 5662 c[3] + 714 c[4] - 43 c[5] + c[6],
  -27 135 c[1] + 20 853 c[2] - 5654 c[3] + 714 c[4] - 43 c[5] + c[6],
  -27 279 c[1] + 20 869 c[2] - 5654 c[3] + 714 c[4] - 43 c[5] + c[6],
  -27 423 c[1] + 20 885 c[2] - 5654 c[3] + 714 c[4] - 43 c[5] + c[6],
  -26 487 c[1] + 20 709 c[2] - 5646 c[3] + 714 c[4] - 43 c[5] + c[6],
  -26 631 c[1] + 20 725 c[2] - 5646 c[3] + 714 c[4] - 43 c[5] + c[6],
  -25 839 c[1] + 20 565 c[2] - 5638 c[3] + 714 c[4] - 43 c[5] + c[6] }
```

Array[c, 6].g

```
-1 516 983 c[1] + 1 056 933 c[2] - 278 670 c[3] + 34 986 c[4] - 2107 c[5] + 49 c[6]
```

```

cert = Flatten[Array[c, 6] /. FindInstance[
  -1516983 c[1] + 1056933 c[2] - 278670 c[3] + 34986 c[4] - 2107 c[5] + 49 c[6] < 0 &&
  -31239 c[1] + 21669 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31415 c[1] + 21685 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31383 c[1] + 21685 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31559 c[1] + 21701 c[2] - 5694 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30303 c[1] + 21493 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30479 c[1] + 21509 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30447 c[1] + 21509 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30623 c[1] + 21525 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30591 c[1] + 21525 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30767 c[1] + 21541 c[2] - 5686 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29367 c[1] + 21317 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29511 c[1] + 21333 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29655 c[1] + 21349 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29831 c[1] + 21365 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29799 c[1] + 21365 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29975 c[1] + 21381 c[2] - 5678 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -28575 c[1] + 21157 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -28719 c[1] + 21173 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -28863 c[1] + 21189 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29007 c[1] + 21205 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29183 c[1] + 21221 c[2] - 5670 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -27927 c[1] + 21013 c[2] - 5662 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -28071 c[1] + 21029 c[2] - 5662 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -28215 c[1] + 21045 c[2] - 5662 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -28391 c[1] + 21061 c[2] - 5662 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -27135 c[1] + 20853 c[2] - 5654 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -27279 c[1] + 20869 c[2] - 5654 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -27423 c[1] + 20885 c[2] - 5654 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -26487 c[1] + 20709 c[2] - 5646 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -26631 c[1] + 20725 c[2] - 5646 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -25839 c[1] + 20565 c[2] - 5638 c[3] + 714 c[4] - 43 c[5] + c[6] ≥ 0,
  Array[c, 6], Integers]]
{1375, 7941, 22638, 0, 0, 0}

GCD[1375, 7941, 22638, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, 22638, 7941, 1375}

cert.g
-1278132

{1375, 7941, 22638, 0, 0, 0}.gpart[listdim17[[118]]]
-1278132

```

cert.Transpose[A]

```
{219132, 104188, 148188, 33244, 289620, 174676, 218676,
 103732, 147732, 32788, 360108, 289164, 218220, 103276, 147276,
 32332, 359652, 288708, 217764, 146820, 31876, 288252, 217308,
 146364, 31420, 287796, 216852, 145908, 216396, 145452, 144996}
```

chi = listdim17[[119]]

$$(-11 + x)^2 (-9 + x)^9 (5 + x)^{32}$$

$$(585980 - 399493x + 111709x^2 - 16402x^3 + 1334x^4 - 57x^5 + x^6)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
A = {{1, -72, 2236, -39088, 420286, -2843016, 11799180, -27423232, 27270265},
      {1, -72, 2236, -39080, 419878, -2834808, 11717788, -27025560, 26504577},
      {1, -72, 2236, -39080, 419878, -2834776, 11716860, -27016632, 26476065},
      {1, -72, 2236, -39080, 419894, -2835448, 11727228, -27086360, 26648721},
      {1, -72, 2236, -39080, 419894, -2835448, 11727292, -27087640, 26655057},
      {1, -72, 2236, -39080, 419894, -2835448, 11727356, -27088920, 26661393},
      {1, -72, 2236, -39080, 419894, -2835416, 11726364, -27078712, 26626545},
      {1, -72, 2236, -39080, 419910, -2836056, 11735804, -27139640, 26772097},
      {1, -72, 2236, -39080, 419910, -2836056, 11735804, -27139512, 26770689},
      {1, -72, 2236, -39080, 419910, -2836056, 11735868, -27140792, 26777025},
      {1, -72, 2236, -39080, 419910, -2836024, 11734876, -27130712, 26743585},
      {1, -72, 2236, -39080, 419910, -2836024, 11734940, -27131864, 26748513},
      {1, -72, 2236, -39080, 419926, -2836632, 11743452, -27183864, 26865553},
      {1, -72, 2236, -39072, 419486, -2827208, 11644844, -26678608, 25849593},
      {1, -72, 2236, -39072, 419486, -2827208, 11644908, -26679888, 25855929},
      {1, -72, 2236, -39072, 419486, -2827176, 11643980, -26670960, 25827417},
      {1, -72, 2236, -39072, 419502, -2827880, 11655340, -26750896, 26034921},
      {1, -72, 2236, -39072, 419502, -2827848, 11654348, -26740688, 26000073},
      {1, -72, 2236, -39072, 419502, -2827848, 11654412, -26741968, 26006409},
      {1, -72, 2236, -39072, 419502, -2827816, 11653420, -26731760, 25971561},
      {1, -72, 2236, -39072, 419502, -2827816, 11653484, -26733040, 25977897},
      {1, -72, 2236, -39072, 419502, -2827784, 11652556, -26724112, 25949385},
      {1, -72, 2236, -39072, 419502, -2827784, 11652620, -26725392, 25955721},
      {1, -72, 2236, -39072, 419518, -2828488, 11663916, -26804048, 26156889},
      {1, -72, 2236, -39072, 419518, -2828488, 11663980, -26805328, 26163225},
      {1, -72, 2236, -39072, 419518, -2828456, 11662924, -26793840, 26122041},
      {1, -72, 2236, -39072, 419518, -2828456, 11662988, -26795120, 26128377},
      {1, -72, 2236, -39072, 419518, -2828456, 11663052, -26796400, 26134713},
      {1, -72, 2236, -39072, 419518, -2828424, 11662060, -26786192, 26099865},
      {1, -72, 2236, -39072, 419518, -2828424, 11662124, -26787472, 26106201},
```

```

{1, -72, 2236, -39 072, 419 518, -2 828 392, 11 661 068, -26 776 112, 26 066 425},
{1, -72, 2236, -39 072, 419 518, -2 828 392, 11 661 196, -26 778 544, 26 077 689},
{1, -72, 2236, -39 072, 419 534, -2 829 064, 11 671 564, -26 848 272, 26 250 345},
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{1, -72, 2236, -39 048, 418 342, -2 805 528, 11 440 700, -25 723 672, 24 074 721},

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{1, -72, 2236, -39 048, 418 374, -2 806 744, 11 457 916, -25 831 256, 24 324 993},
{1, -72, 2236, -39 048, 418 374, -2 806 744, 11 457 980, -25 832 536, 24 331 329},
{1, -72, 2236, -39 048, 418 390, -2 807 384, 11 467 484, -25 894 616, 24 481 809},
{1, -72, 2236, -39 048, 418 390, -2 807 352, 11 466 556, -25 885 688, 24 453 297},
{1, -72, 2236, -39 040, 417 982, -2 799 080, 11 383 244, -25 469 008, 23 625 657}};
```

A // MatrixForm

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( 1 -72 2236 -39 088 420 286 -2 843 016 11 799 180 -27 423 232 27 270 265 )
1 -72 2236 -39 080 419 878 -2 834 808 11 717 788 -27 025 560 26 504 577
1 -72 2236 -39 080 419 878 -2 834 776 11 716 860 -27 016 632 26 476 065
1 -72 2236 -39 080 419 894 -2 835 448 11 727 228 -27 086 360 26 648 721
1 -72 2236 -39 080 419 894 -2 835 448 11 727 292 -27 087 640 26 655 057
1 -72 2236 -39 080 419 894 -2 835 448 11 727 356 -27 088 920 26 661 393
1 -72 2236 -39 080 419 894 -2 835 416 11 726 364 -27 078 712 26 626 545
1 -72 2236 -39 080 419 910 -2 836 056 11 735 804 -27 139 640 26 772 097
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1 -72 2236 -39 064 419 110 -2 820 184 11 579 676 -26 378 440 25 300 737
1 -72 2236 -39 064 419 110 -2 820 152 11 578 812 -26 370 792 25 278 561 )
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Dimensions[A]

{83, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

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Array[c, 9].Transpose[A]

{c[1] - 72 c[2] + 2236 c[3] - 39088 c[4] + 420286 c[5] -
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11717788 c[7] - 27025560 c[8] + 26504577 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39080 c[4] + 419878 c[5] - 2834776 c[6] +
11716860 c[7] - 27016632 c[8] + 26476065 c[9],

$c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,448 c[6] +$
 $11\,727\,228 c[7] - 27\,086\,360 c[8] + 26\,648\,721 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,448 c[6] +$
 $11\,727\,292 c[7] - 27\,087\,640 c[8] + 26\,655\,057 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,448 c[6] +$
 $11\,727\,356 c[7] - 27\,088\,920 c[8] + 26\,661\,393 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,894 c[5] - 2\,835\,416 c[6] + 11\,726\,364 c[7] -$
 $27\,078\,712 c[8] + 26\,626\,545 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,910 c[5] - 2\,836\,056 c[6] + 11\,735\,804 c[7] - 27\,139\,640 c[8] + 26\,772\,097 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,910 c[5] - 2\,836\,056 c[6] + 11\,735\,804 c[7] -$
 $27\,139\,512 c[8] + 26\,770\,689 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] +$
 $419\,910 c[5] - 2\,836\,056 c[6] + 11\,735\,868 c[7] - 27\,140\,792 c[8] + 26\,777\,025 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,910 c[5] - 2\,836\,024 c[6] + 11\,734\,876 c[7] -$
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 $419\,910 c[5] - 2\,836\,024 c[6] + 11\,734\,940 c[7] - 27\,131\,864 c[8] + 26\,748\,513 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,080 c[4] + 419\,926 c[5] - 2\,836\,632 c[6] + 11\,743\,452 c[7] -$
 $27\,183\,864 c[8] + 26\,865\,553 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$
 $419\,486 c[5] - 2\,827\,208 c[6] + 11\,644\,844 c[7] - 26\,678\,608 c[8] + 25\,849\,593 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,486 c[5] - 2\,827\,208 c[6] + 11\,644\,908 c[7] -$
 $26\,679\,888 c[8] + 25\,855\,929 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$
 $419\,486 c[5] - 2\,827\,176 c[6] + 11\,643\,980 c[7] - 26\,670\,960 c[8] + 25\,827\,417 c[9],$
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 $419\,502 c[5] - 2\,827\,816 c[6] + 11\,653\,420 c[7] - 26\,731\,760 c[8] + 25\,971\,561 c[9],$
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 $26\,733\,040 c[8] + 25\,977\,897 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$
 $419\,502 c[5] - 2\,827\,784 c[6] + 11\,652\,556 c[7] - 26\,724\,112 c[8] + 25\,949\,385 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,502 c[5] - 2\,827\,784 c[6] + 11\,652\,620 c[7] -$
 $26\,725\,392 c[8] + 25\,955\,721 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$
 $419\,518 c[5] - 2\,828\,488 c[6] + 11\,663\,916 c[7] - 26\,804\,048 c[8] + 26\,156\,889 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,488 c[6] + 11\,663\,980 c[7] -$
 $26\,805\,328 c[8] + 26\,163\,225 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$
 $419\,518 c[5] - 2\,828\,456 c[6] + 11\,662\,924 c[7] - 26\,793\,840 c[8] + 26\,122\,041 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,456 c[6] + 11\,662\,988 c[7] -$
 $26\,795\,120 c[8] + 26\,128\,377 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$
 $419\,518 c[5] - 2\,828\,456 c[6] + 11\,663\,052 c[7] - 26\,796\,400 c[8] + 26\,134\,713 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,424 c[6] + 11\,662\,060 c[7] -$
 $26\,786\,192 c[8] + 26\,099\,865 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$
 $419\,518 c[5] - 2\,828\,424 c[6] + 11\,662\,124 c[7] - 26\,787\,472 c[8] + 26\,106\,201 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,392 c[6] + 11\,661\,068 c[7] -$
 $26\,776\,112 c[8] + 26\,066\,425 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$
 $419\,518 c[5] - 2\,828\,392 c[6] + 11\,661\,196 c[7] - 26\,778\,544 c[8] + 26\,077\,689 c[9],$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,534 c[5] - 2\,829\,064 c[6] + 11\,671\,564 c[7] -$
 $26\,848\,272 c[8] + 26\,250\,345 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] +$

$$\begin{aligned}
& 419\,534\,c[5] - 2\,829\,064\,c[6] + 11\,671\,628\,c[7] - 26\,849\,552\,c[8] + 26\,256\,681\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,032\,c[6] + 11\,670\,636\,c[7] - \\
& 26\,839\,344\,c[8] + 26\,221\,833\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,534\,c[5] - 2\,829\,032\,c[6] + 11\,670\,700\,c[7] - 26\,840\,624\,c[8] + 26\,228\,169\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,000\,c[6] + 11\,669\,708\,c[7] - \\
& 26\,830\,544\,c[8] + 26\,194\,729\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,550\,c[5] - 2\,829\,672\,c[6] + 11\,680\,140\,c[7] - 26\,901\,424\,c[8] + 26\,372\,313\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,640\,c[6] + 11\,679\,212\,c[7] - \\
& 26\,892\,496\,c[8] + 26\,343\,801\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,550\,c[5] - 2\,829\,640\,c[6] + 11\,679\,276\,c[7] - 26\,893\,776\,c[8] + 26\,350\,137\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,608\,c[6] + 11\,678\,284\,c[7] - \\
& 26\,883\,696\,c[8] + 26\,316\,697\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + \\
& 419\,566\,c[5] - 2\,830\,248\,c[6] + 11\,687\,788\,c[7] - 26\,945\,648\,c[8] + 26\,465\,769\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,094\,c[5] - 2\,819\,608\,c[6] + 11\,571\,964\,c[7] - \\
& 26\,332\,936\,c[8] + 25\,200\,945\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,110\,c[5] - 2\,820\,216\,c[6] + 11\,580\,604\,c[7] - 26\,387\,368\,c[8] + 25\,329\,249\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,110\,c[5] - 2\,820\,184\,c[6] + 11\,579\,676\,c[7] - \\
& 26\,378\,440\,c[8] + 25\,300\,737\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,110\,c[5] - 2\,820\,152\,c[6] + 11\,578\,812\,c[7] - 26\,370\,792\,c[8] + 25\,278\,561\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,824\,c[6] + 11\,589\,180\,c[7] - \\
& 26\,440\,520\,c[8] + 25\,451\,217\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,126\,c[5] - 2\,820\,824\,c[6] + 11\,589\,244\,c[7] - 26\,441\,800\,c[8] + 25\,457\,553\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,792\,c[6] + 11\,588\,252\,c[7] - \\
& 26\,431\,592\,c[8] + 25\,422\,705\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,126\,c[5] - 2\,820\,792\,c[6] + 11\,588\,316\,c[7] - 26\,432\,872\,c[8] + 25\,429\,041\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,760\,c[6] + 11\,587\,388\,c[7] - \\
& 26\,423\,944\,c[8] + 25\,400\,529\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,142\,c[5] - 2\,821\,432\,c[6] + 11\,597\,820\,c[7] - 26\,494\,952\,c[8] + 25\,579\,521\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,432\,c[6] + 11\,597\,884\,c[7] - \\
& 26\,496\,232\,c[8] + 25\,585\,857\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,142\,c[5] - 2\,821\,400\,c[6] + 11\,596\,892\,c[7] - 26\,486\,024\,c[8] + 25\,551\,009\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,400\,c[6] + 11\,596\,956\,c[7] - \\
& 26\,487\,304\,c[8] + 25\,557\,345\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,142\,c[5] - 2\,821\,368\,c[6] + 11\,595\,964\,c[7] - 26\,477\,096\,c[8] + 25\,522\,497\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,072\,c[6] + 11\,607\,388\,c[7] - \\
& 26\,558\,312\,c[8] + 25\,736\,337\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,158\,c[5] - 2\,822\,040\,c[6] + 11\,606\,396\,c[7] - 26\,548\,104\,c[8] + 25\,701\,489\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,040\,c[6] + 11\,606\,460\,c[7] - \\
& 26\,549\,384\,c[8] + 25\,707\,825\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,158\,c[5] - 2\,822\,040\,c[6] + 11\,606\,524\,c[7] - 26\,550\,664\,c[8] + 25\,714\,161\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,008\,c[6] + 11\,605\,468\,c[7] - \\
& 26\,539\,176\,c[8] + 25\,672\,977\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,158\,c[5] - 2\,822\,008\,c[6] + 11\,605\,532\,c[7] - 26\,540\,456\,c[8] + 25\,679\,313\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,174\,c[5] - 2\,822\,648\,c[6] + 11\,615\,036\,c[7] - \\
& 26\,602\,536\,c[8] + 25\,829\,793\,c[9], \quad c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + \\
& 419\,174\,c[5] - 2\,822\,616\,c[6] + 11\,614\,044\,c[7] - 26\,592\,328\,c[8] + 25\,794\,945\,c[9], \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,734\,c[5] - 2\,813\,192\,c[6] + 11\,515\,436\,c[7] -
\end{aligned}$$

```

26 087 200 c[8] + 24 780 393 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] +
418 734 c[5] - 2 813 160 c[6] + 11 514 508 c[7] - 26 078 272 c[8] + 24 751 881 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 750 c[5] - 2 813 768 c[6] + 11 523 084 c[7] -
26 131 424 c[8] + 24 873 849 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] +
418 750 c[5] - 2 813 768 c[6] + 11 523 148 c[7] - 26 132 704 c[8] + 24 880 185 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 750 c[5] - 2 813 736 c[6] + 11 522 220 c[7] -
26 123 776 c[8] + 24 851 673 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] +
418 766 c[5] - 2 814 408 c[6] + 11 532 652 c[7] - 26 194 784 c[8] + 25 030 665 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 376 c[6] +
11 531 660 c[7] - 26 184 576 c[8] + 24 995 817 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 376 c[6] +
11 531 724 c[7] - 26 185 856 c[8] + 25 002 153 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 782 c[5] - 2 815 048 c[6] +
11 542 220 c[7] - 26 258 144 c[8] + 25 187 481 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 782 c[5] - 2 815 016 c[6] +
11 541 292 c[7] - 26 249 216 c[8] + 25 158 969 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 782 c[5] - 2 814 984 c[6] +
11 540 300 c[7] - 26 239 008 c[8] + 25 124 121 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 798 c[5] - 2 815 656 c[6] +
11 550 860 c[7] - 26 312 576 c[8] + 25 315 785 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 342 c[5] - 2 805 528 c[6] +
11 440 700 c[7] - 25 723 672 c[8] + 24 074 721 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 358 c[5] - 2 806 136 c[6] +
11 449 340 c[7] - 25 778 104 c[8] + 24 203 025 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 374 c[5] - 2 806 744 c[6] +
11 457 916 c[7] - 25 831 256 c[8] + 24 324 993 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 374 c[5] - 2 806 744 c[6] +
11 457 980 c[7] - 25 832 536 c[8] + 24 331 329 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 390 c[5] - 2 807 384 c[6] +
11 467 484 c[7] - 25 894 616 c[8] + 24 481 809 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 390 c[5] - 2 807 352 c[6] +
11 466 556 c[7] - 25 885 688 c[8] + 24 453 297 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] + 417 982 c[5] - 2 799 080 c[6] +
11 383 244 c[7] - 25 469 008 c[8] + 23 625 657 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3528 c[2] + 109 564 c[3] - 1 914 976 c[4] + 20 578 510 c[5] -
139 024 520 c[6] + 575 597 580 c[7] - 1 332 256 976 c[8] + 1 315 837 305 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3528 c[2] + 109 564 c[3] - 1 914 976 c[4] + 20 578 510 c[5] -
139 024 520 c[6] + 575 597 580 c[7] - 1 332 256 976 c[8] + 1 315 837 305 c[9] < 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 088 c[4] + 420 286 c[5] - 2 843 016 c[6] +
11 799 180 c[7] - 27 423 232 c[8] + 27 270 265 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 878 c[5] - 2 834 808 c[6] +
11 717 788 c[7] - 27 025 560 c[8] + 26 504 577 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 878 c[5] - 2 834 776 c[6] +

```

$$\begin{aligned}
& 11\,716\,860\,c[7] - 27\,016\,632\,c[8] + 26\,476\,065\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,894\,c[5] - 2\,835\,448\,c[6] + \\
& 11\,727\,228\,c[7] - 27\,086\,360\,c[8] + 26\,648\,721\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,894\,c[5] - 2\,835\,448\,c[6] + \\
& 11\,727\,292\,c[7] - 27\,087\,640\,c[8] + 26\,655\,057\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,894\,c[5] - 2\,835\,448\,c[6] + \\
& 11\,727\,356\,c[7] - 27\,088\,920\,c[8] + 26\,661\,393\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,894\,c[5] - 2\,835\,416\,c[6] + \\
& 11\,726\,364\,c[7] - 27\,078\,712\,c[8] + 26\,626\,545\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,910\,c[5] - 2\,836\,056\,c[6] + \\
& 11\,735\,804\,c[7] - 27\,139\,640\,c[8] + 26\,772\,097\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,910\,c[5] - 2\,836\,056\,c[6] + \\
& 11\,735\,804\,c[7] - 27\,139\,512\,c[8] + 26\,770\,689\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,910\,c[5] - 2\,836\,056\,c[6] + \\
& 11\,735\,868\,c[7] - 27\,140\,792\,c[8] + 26\,777\,025\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,910\,c[5] - 2\,836\,024\,c[6] + \\
& 11\,734\,876\,c[7] - 27\,130\,712\,c[8] + 26\,743\,585\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,910\,c[5] - 2\,836\,024\,c[6] + \\
& 11\,734\,940\,c[7] - 27\,131\,864\,c[8] + 26\,748\,513\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,080\,c[4] + 419\,926\,c[5] - 2\,836\,632\,c[6] + \\
& 11\,743\,452\,c[7] - 27\,183\,864\,c[8] + 26\,865\,553\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,486\,c[5] - 2\,827\,208\,c[6] + \\
& 11\,644\,844\,c[7] - 26\,678\,608\,c[8] + 25\,849\,593\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,486\,c[5] - 2\,827\,208\,c[6] + \\
& 11\,644\,908\,c[7] - 26\,679\,888\,c[8] + 25\,855\,929\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,486\,c[5] - 2\,827\,176\,c[6] + \\
& 11\,643\,980\,c[7] - 26\,670\,960\,c[8] + 25\,827\,417\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,502\,c[5] - 2\,827\,880\,c[6] + \\
& 11\,655\,340\,c[7] - 26\,750\,896\,c[8] + 26\,034\,921\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,502\,c[5] - 2\,827\,848\,c[6] + \\
& 11\,654\,348\,c[7] - 26\,740\,688\,c[8] + 26\,000\,073\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,502\,c[5] - 2\,827\,848\,c[6] + \\
& 11\,654\,412\,c[7] - 26\,741\,968\,c[8] + 26\,006\,409\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,502\,c[5] - 2\,827\,816\,c[6] + \\
& 11\,653\,420\,c[7] - 26\,731\,760\,c[8] + 25\,971\,561\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,502\,c[5] - 2\,827\,816\,c[6] + \\
& 11\,653\,484\,c[7] - 26\,733\,040\,c[8] + 25\,977\,897\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,502\,c[5] - 2\,827\,784\,c[6] + \\
& 11\,652\,556\,c[7] - 26\,724\,112\,c[8] + 25\,949\,385\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,502\,c[5] - 2\,827\,784\,c[6] + \\
& 11\,652\,620\,c[7] - 26\,725\,392\,c[8] + 25\,955\,721\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,518\,c[5] - 2\,828\,488\,c[6] + \\
& 11\,663\,916\,c[7] - 26\,804\,048\,c[8] + 26\,156\,889\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,518\,c[5] - 2\,828\,488\,c[6] + \\
& 11\,663\,980\,c[7] - 26\,805\,328\,c[8] + 26\,163\,225\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,518\,c[5] - 2\,828\,456\,c[6] + \\
& 11\,662\,924\,c[7] - 26\,793\,840\,c[8] + 26\,122\,041\,c[9] \geq 0 \&\&
\end{aligned}$$

$c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,456 c[6] +$
 $11\,662\,988 c[7] - 26\,795\,120 c[8] + 26\,128\,377 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,456 c[6] +$
 $11\,663\,052 c[7] - 26\,796\,400 c[8] + 26\,134\,713 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,424 c[6] +$
 $11\,662\,060 c[7] - 26\,786\,192 c[8] + 26\,099\,865 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,424 c[6] +$
 $11\,662\,124 c[7] - 26\,787\,472 c[8] + 26\,106\,201 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,392 c[6] +$
 $11\,661\,068 c[7] - 26\,776\,112 c[8] + 26\,066\,425 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,518 c[5] - 2\,828\,392 c[6] +$
 $11\,661\,196 c[7] - 26\,778\,544 c[8] + 26\,077\,689 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,534 c[5] - 2\,829\,064 c[6] +$
 $11\,671\,564 c[7] - 26\,848\,272 c[8] + 26\,250\,345 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,534 c[5] - 2\,829\,064 c[6] +$
 $11\,671\,628 c[7] - 26\,849\,552 c[8] + 26\,256\,681 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,534 c[5] - 2\,829\,032 c[6] +$
 $11\,670\,636 c[7] - 26\,839\,344 c[8] + 26\,221\,833 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,534 c[5] - 2\,829\,032 c[6] +$
 $11\,670\,700 c[7] - 26\,840\,624 c[8] + 26\,228\,169 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,534 c[5] - 2\,829\,000 c[6] +$
 $11\,669\,708 c[7] - 26\,830\,544 c[8] + 26\,194\,729 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,550 c[5] - 2\,829\,672 c[6] +$
 $11\,680\,140 c[7] - 26\,901\,424 c[8] + 26\,372\,313 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,550 c[5] - 2\,829\,640 c[6] +$
 $11\,679\,212 c[7] - 26\,892\,496 c[8] + 26\,343\,801 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,550 c[5] - 2\,829\,640 c[6] +$
 $11\,679\,276 c[7] - 26\,893\,776 c[8] + 26\,350\,137 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,550 c[5] - 2\,829\,608 c[6] +$
 $11\,678\,284 c[7] - 26\,883\,696 c[8] + 26\,316\,697 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,072 c[4] + 419\,566 c[5] - 2\,830\,248 c[6] +$
 $11\,687\,788 c[7] - 26\,945\,648 c[8] + 26\,465\,769 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,094 c[5] - 2\,819\,608 c[6] +$
 $11\,571\,964 c[7] - 26\,332\,936 c[8] + 25\,200\,945 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,110 c[5] - 2\,820\,216 c[6] +$
 $11\,580\,604 c[7] - 26\,387\,368 c[8] + 25\,329\,249 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,110 c[5] - 2\,820\,184 c[6] +$
 $11\,579\,676 c[7] - 26\,378\,440 c[8] + 25\,300\,737 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,110 c[5] - 2\,820\,152 c[6] +$
 $11\,578\,812 c[7] - 26\,370\,792 c[8] + 25\,278\,561 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,126 c[5] - 2\,820\,824 c[6] +$
 $11\,589\,180 c[7] - 26\,440\,520 c[8] + 25\,451\,217 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,126 c[5] - 2\,820\,824 c[6] +$
 $11\,589\,244 c[7] - 26\,441\,800 c[8] + 25\,457\,553 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,126 c[5] - 2\,820\,792 c[6] +$
 $11\,588\,252 c[7] - 26\,431\,592 c[8] + 25\,422\,705 c[9] \geq 0 \&\&$
 $c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,126 c[5] - 2\,820\,792 c[6] +$

$$\begin{aligned}
& 11\,588\,316\,c[7] - 26\,432\,872\,c[8] + 25\,429\,041\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,760\,c[6] + \\
& 11\,587\,388\,c[7] - 26\,423\,944\,c[8] + 25\,400\,529\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,432\,c[6] + \\
& 11\,597\,820\,c[7] - 26\,494\,952\,c[8] + 25\,579\,521\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,432\,c[6] + \\
& 11\,597\,884\,c[7] - 26\,496\,232\,c[8] + 25\,585\,857\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,400\,c[6] + \\
& 11\,596\,892\,c[7] - 26\,486\,024\,c[8] + 25\,551\,009\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,400\,c[6] + \\
& 11\,596\,956\,c[7] - 26\,487\,304\,c[8] + 25\,557\,345\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,368\,c[6] + \\
& 11\,595\,964\,c[7] - 26\,477\,096\,c[8] + 25\,522\,497\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,072\,c[6] + \\
& 11\,607\,388\,c[7] - 26\,558\,312\,c[8] + 25\,736\,337\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,040\,c[6] + \\
& 11\,606\,396\,c[7] - 26\,548\,104\,c[8] + 25\,701\,489\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,040\,c[6] + \\
& 11\,606\,460\,c[7] - 26\,549\,384\,c[8] + 25\,707\,825\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,040\,c[6] + \\
& 11\,606\,524\,c[7] - 26\,550\,664\,c[8] + 25\,714\,161\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,008\,c[6] + \\
& 11\,605\,468\,c[7] - 26\,539\,176\,c[8] + 25\,672\,977\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,008\,c[6] + \\
& 11\,605\,532\,c[7] - 26\,540\,456\,c[8] + 25\,679\,313\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,174\,c[5] - 2\,822\,648\,c[6] + \\
& 11\,615\,036\,c[7] - 26\,602\,536\,c[8] + 25\,829\,793\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,174\,c[5] - 2\,822\,616\,c[6] + \\
& 11\,614\,044\,c[7] - 26\,592\,328\,c[8] + 25\,794\,945\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,734\,c[5] - 2\,813\,192\,c[6] + \\
& 11\,515\,436\,c[7] - 26\,087\,200\,c[8] + 24\,780\,393\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,734\,c[5] - 2\,813\,160\,c[6] + \\
& 11\,514\,508\,c[7] - 26\,078\,272\,c[8] + 24\,751\,881\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,750\,c[5] - 2\,813\,768\,c[6] + \\
& 11\,523\,084\,c[7] - 26\,131\,424\,c[8] + 24\,873\,849\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,750\,c[5] - 2\,813\,768\,c[6] + \\
& 11\,523\,148\,c[7] - 26\,132\,704\,c[8] + 24\,880\,185\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,750\,c[5] - 2\,813\,736\,c[6] + \\
& 11\,522\,220\,c[7] - 26\,123\,776\,c[8] + 24\,851\,673\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,766\,c[5] - 2\,814\,408\,c[6] + \\
& 11\,532\,652\,c[7] - 26\,194\,784\,c[8] + 25\,030\,665\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,766\,c[5] - 2\,814\,376\,c[6] + \\
& 11\,531\,660\,c[7] - 26\,184\,576\,c[8] + 24\,995\,817\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,766\,c[5] - 2\,814\,376\,c[6] + \\
& 11\,531\,724\,c[7] - 26\,185\,856\,c[8] + 25\,002\,153\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,782\,c[5] - 2\,815\,048\,c[6] + \\
& 11\,542\,220\,c[7] - 26\,258\,144\,c[8] + 25\,187\,481\,c[9] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 782 c[5] - 2 815 016 c[6] +
  11 541 292 c[7] - 26 249 216 c[8] + 25 158 969 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 782 c[5] - 2 814 984 c[6] +
  11 540 300 c[7] - 26 239 008 c[8] + 25 124 121 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 798 c[5] - 2 815 656 c[6] +
  11 550 860 c[7] - 26 312 576 c[8] + 25 315 785 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 342 c[5] - 2 805 528 c[6] +
  11 440 700 c[7] - 25 723 672 c[8] + 24 074 721 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 358 c[5] - 2 806 136 c[6] +
  11 449 340 c[7] - 25 778 104 c[8] + 24 203 025 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 374 c[5] - 2 806 744 c[6] +
  11 457 916 c[7] - 25 831 256 c[8] + 24 324 993 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 374 c[5] - 2 806 744 c[6] +
  11 457 980 c[7] - 25 832 536 c[8] + 24 331 329 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 390 c[5] - 2 807 384 c[6] +
  11 467 484 c[7] - 25 894 616 c[8] + 24 481 809 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 390 c[5] - 2 807 352 c[6] +
  11 466 556 c[7] - 25 885 688 c[8] + 24 453 297 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] + 417 982 c[5] - 2 799 080 c[6] +
  11 383 244 c[7] - 25 469 008 c[8] + 23 625 657 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 0, 6 344 046, 3 245 585, 956 303, 218 771}

```

```
GCD[0, 0, 0, 0, 0, 0, 6 344 046, 3 245 585, 956 303, 218 771]
```

```
1
```

```
cert.g
```

```
-1 378 191 193
```

```
{0, 0, 0, 0, 0, 0, 6 344 046, 3 245 585, 956 303, 218 771}.Reverse[gpart[listdim17[[119]]]
```

```
-1 378 191 193
```

```
cert.Transpose[A]
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```

{41 450 583, 733 322 999, 224 704 023, 702 760 583, 1 072 543 239, 1 442 325 895,
 563 924 263, 718 984 631, 533 361 847, 903 144 503, 210 365 655, 394 525 527,
 40 966 919, 701 854 151, 1 071 636 807, 563 017 831, 1 919 476 023, 1 041 074 391,
 1 410 857 047, 532 455 415, 902 238 071, 393 619 095, 763 401 751, 1 750 077 287,
 2 119 859 943, 871 675 655, 1 241 458 311, 1 611 240 967, 732 839 335, 1 102 621 991,
 40 060 487, 594 003 015, 1 072 059 575, 1 441 842 231, 563 440 599, 933 223 255,
 240 444 407, 902 660 839, 394 041 863, 763 824 519, 71 045 671, 224 643 127,
 1 040 167 959, 1 240 551 879, 731 932 903, 593 096 583, 1 071 153 143, 1 440 935 799,
 562 534 167, 932 316 823, 423 697 847, 1 271 537 063, 1 641 319 719, 762 918 087,
 1 132 700 743, 254 299 111, 1 980 539 959, 1 102 138 327, 1 471 920 983,
 1 841 703 639, 593 519 351, 963 302 007, 1 302 522 247, 424 120 615, 1 270 630 631,
 762 011 655, 592 612 919, 962 395 575, 453 776 599, 1 301 615 815, 423 214 183,
 792 996 839, 2 010 618 711, 1 501 999 735, 623 598 103, 2 211 002 631, 591 706 487,
 792 090 407, 622 691 671, 992 474 327, 1 331 694 567, 823 075 591, 313 550 183}

```

```
chi = listdim17[[120]]
```

$$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (73 - 18x + x^2) (-892 + 289x - 30x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

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A = {{1, -63, 1669, -24067, 203683, -1009869, 2710423, -3030449},
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      {1, -63, 1669, -24051, 203059, -1000893, 2654087, -2900689},
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{1, -63, 1669, -24 051, 203 059, -1 000 861, 2 653 511, -2 898 225},
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```

```
A // MatrixForm
```

```

1 -63 1669 -24 067 203 683 -1 009 869 2 710 423 -3 030 449
1 -63 1669 -24 067 203 683 -1 009 837 2 709 783 -3 027 409
1 -63 1669 -24 067 203 683 -1 009 837 2 709 847 -3 028 113
1 -63 1669 -24 067 203 699 -1 010 301 2 714 183 -3 040 961
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1 -63 1669 -24 059 203 363 -1 005 149 2 680 023 -2 958 505
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1 -63 1669 -24 059 203 363 -1 005 149 2 680 087 -2 959 209
1 -63 1669 -24 059 203 363 -1 005 149 2 680 087 -2 959 081
1 -63 1669 -24 059 203 363 -1 005 149 2 680 151 -2 959 785
1 -63 1669 -24 059 203 363 -1 005 117 2 679 447 -2 956 041
1 -63 1669 -24 059 203 379 -1 005 613 2 684 359 -2 971 353
1 -63 1669 -24 059 203 379 -1 005 613 2 684 423 -2 972 057
1 -63 1669 -24 059 203 379 -1 005 613 2 684 487 -2 972 633
1 -63 1669 -24 059 203 379 -1 005 581 2 683 783 -2 968 889
1 -63 1669 -24 059 203 379 -1 005 581 2 683 847 -2 969 593
1 -63 1669 -24 059 203 379 -1 005 581 2 683 911 -2 970 297

```

1	-63	1669	-24 059	203 395	-1 006 045	2 688 183	-2 982 441
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1	-63	1669	-24 051	203 027	-999 997	2 645 991	-2 877 201
1	-63	1669	-24 051	203 027	-999 965	2 645 287	-2 873 457
1	-63	1669	-24 051	203 027	-999 965	2 645 351	-2 874 033
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1	-63	1669	-24 051	203 043	-1 000 461	2 650 327	-2 890 305
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1	-63	1669	-24 051	203 043	-1 000 461	2 650 391	-2 890 881
1	-63	1669	-24 051	203 043	-1 000 461	2 650 455	-2 891 457
1	-63	1669	-24 051	203 043	-1 000 429	2 649 623	-2 886 433
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1	-63	1669	-24 051	203 043	-1 000 397	2 649 047	-2 883 969
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1	-63	1669	-24 051	203 059	-1 000 925	2 654 727	-2 903 857
1	-63	1669	-24 051	203 059	-1 000 893	2 654 023	-2 899 985
1	-63	1669	-24 051	203 059	-1 000 893	2 654 087	-2 900 689
1	-63	1669	-24 051	203 059	-1 000 893	2 654 151	-2 901 393
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1	-63	1669	-24 051	203 059	-1 000 861	2 653 511	-2 898 225
1	-63	1669	-24 051	203 059	-1 000 829	2 652 871	-2 895 057
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1	-63	1669	-24 043	202 755	-996 637	2 628 215	-2 843 577
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1	-63	1669	-24 043	202 755	-996 605	2 627 511	-2 839 705

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1 -63 1669 -24 043 202 755 -996 605 2 627 575 -2 840 409
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1 -63 1669 -24 019 201 827 -983 309 2 544 023 -2 646 369
1 -63 1669 -24 019 201 843 -983 805 2 549 127 -2 663 793

```

Dimensions[A]

{115, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1178947, 9967987, -49312637, 131786599, -146222513}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
203 683 c[5] - 1 009 869 c[6] + 2 710 423 c[7] - 3 030 449 c[8],

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,683 c[5] - 1\,009\,837 c[6] + \\
& \quad 2\,709\,783 c[7] - 3\,027\,409 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + \\
& \quad 203\,683 c[5] - 1\,009\,837 c[6] + 2\,709\,847 c[7] - 3\,028\,113 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,067 c[4] + 203\,699 c[5] - 1\,010\,301 c[6] + \\
& \quad 2\,714\,183 c[7] - 3\,040\,961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,347 c[5] - 1\,004\,653 c[6] + 2\,675\,047 c[7] - 2\,942\,361 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,149 c[6] + \\
& \quad 2\,680\,023 c[7] - 2\,958\,505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,149 c[6] + 2\,680\,023 c[7] - 2\,958\,377 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,149 c[6] + \\
& \quad 2\,680\,087 c[7] - 2\,959\,209 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,149 c[6] + 2\,680\,087 c[7] - 2\,959\,081 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,149 c[6] + \\
& \quad 2\,680\,151 c[7] - 2\,959\,785 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,117 c[6] + 2\,679\,447 c[7] - 2\,956\,041 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,379 c[5] - 1\,005\,613 c[6] + \\
& \quad 2\,684\,359 c[7] - 2\,971\,353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,379 c[5] - 1\,005\,613 c[6] + 2\,684\,423 c[7] - 2\,972\,057 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,379 c[5] - 1\,005\,613 c[6] + \\
& \quad 2\,684\,487 c[7] - 2\,972\,633 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,379 c[5] - 1\,005\,581 c[6] + 2\,683\,783 c[7] - 2\,968\,889 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,379 c[5] - 1\,005\,581 c[6] + \\
& \quad 2\,683\,847 c[7] - 2\,969\,593 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,379 c[5] - 1\,005\,581 c[6] + 2\,683\,911 c[7] - 2\,970\,297 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,395 c[5] - 1\,006\,045 c[6] + \\
& \quad 2\,688\,183 c[7] - 2\,982\,441 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,395 c[5] - 1\,006\,045 c[6] + 2\,688\,247 c[7] - 2\,983\,145 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,997 c[6] + \\
& \quad 2\,645\,991 c[7] - 2\,877\,201 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,965 c[6] + 2\,645\,287 c[7] - 2\,873\,457 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,965 c[6] + \\
& \quad 2\,645\,351 c[7] - 2\,874\,033 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,263 c[7] - 2\,889\,601 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,461 c[6] + \\
& \quad 2\,650\,327 c[7] - 2\,890\,305 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,327 c[7] - 2\,890\,177 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,461 c[6] + \\
& \quad 2\,650\,391 c[7] - 2\,890\,881 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,455 c[7] - 2\,891\,457 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& \quad 2\,649\,623 c[7] - 2\,886\,433 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,687 c[7] - 2\,887\,137 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& \quad 2\,649\,687 c[7] - 2\,887\,009 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,751 c[7] - 2\,887\,713 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] + \\
& \quad 2\,649\,047 c[7] - 2\,883\,969 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 203\,043\,c[5] - 1\,000\,397\,c[6] + 2\,649\,111\,c[7] - 2\,884\,545\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,925\,c[6] + \\
& 2\,654\,727\,c[7] - 2\,903\,857\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,893\,c[6] + 2\,654\,023\,c[7] - 2\,899\,985\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& 2\,654\,087\,c[7] - 2\,900\,689\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,893\,c[6] + 2\,654\,151\,c[7] - 2\,901\,393\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& 2\,654\,151\,c[7] - 2\,901\,265\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,893\,c[6] + 2\,654\,215\,c[7] - 2\,901\,969\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,861\,c[6] + \\
& 2\,653\,447\,c[7] - 2\,897\,521\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,861\,c[6] + 2\,653\,511\,c[7] - 2\,898\,225\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,829\,c[6] + \\
& 2\,652\,871\,c[7] - 2\,895\,057\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,357\,c[6] + 2\,658\,487\,c[7] - 2\,914\,241\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& 2\,657\,847\,c[7] - 2\,911\,073\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,911\,c[7] - 2\,911\,777\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& 2\,657\,975\,c[7] - 2\,912\,481\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,789\,c[6] + 2\,662\,247\,c[7] - 2\,924\,625\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,789\,c[6] + \\
& 2\,662\,311\,c[7] - 2\,925\,329\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,245\,c[6] + 2\,614\,887\,c[7] - 2\,801\,385\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,773\,c[6] + \\
& 2\,620\,567\,c[7] - 2\,821\,401\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,741\,c[6] + 2\,619\,927\,c[7] - 2\,818\,233\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,741\,c[6] + \\
& 2\,619\,991\,c[7] - 2\,818\,809\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,223\,c[7] - 2\,814\,361\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] + \\
& 2\,619\,287\,c[7] - 2\,815\,065\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,351\,c[7] - 2\,815\,641\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,647\,c[7] - 2\,811\,897\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,711\,c[7] - 2\,812\,473\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,205\,c[6] + \\
& 2\,624\,391\,c[7] - 2\,832\,489\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,205\,c[6] + 2\,624\,455\,c[7] - 2\,833\,065\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& 2\,623\,687\,c[7] - 2\,828\,617\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,751\,c[7] - 2\,829\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& 2\,623\,815\,c[7] - 2\,829\,897\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,047\,c[7] - 2\,825\,449\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,623\,111\,c[7] - 2\,826\,153\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,111\,c[7] - 2\,826\,025\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& 2\,623\,175\,c[7] - 2\,826\,729\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,471\,c[7] - 2\,822\,985\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,669\,c[6] + \\
& 2\,628\,791\,c[7] - 2\,846\,041\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,151\,c[7] - 2\,842\,873\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,215\,c[7] - 2\,843\,577\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,279\,c[7] - 2\,844\,153\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,511\,c[7] - 2\,839\,705\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,575\,c[7] - 2\,840\,409\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,871\,c[7] - 2\,836\,537\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,935\,c[7] - 2\,837\,241\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& 2\,631\,911\,c[7] - 2\,853\,257\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,069\,c[6] + 2\,631\,975\,c[7] - 2\,853\,961\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& 2\,632\,039\,c[7] - 2\,854\,665\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,037\,c[6] + 2\,631\,271\,c[7] - 2\,850\,089\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,533\,c[6] + \\
& 2\,636\,375\,c[7] - 2\,867\,513\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,989\,c[6] + 2\,588\,887\,c[7] - 2\,742\,993\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,485\,c[6] + \\
& 2\,593\,991\,c[7] - 2\,760\,417\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,453\,c[6] + 2\,593\,351\,c[7] - 2\,757\,249\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,421\,c[6] + \\
& 2\,592\,711\,c[7] - 2\,754\,081\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,421\,c[6] + 2\,592\,775\,c[7] - 2\,754\,657\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,135\,c[7] - 2\,751\,489\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,949\,c[6] + 2\,598\,455\,c[7] - 2\,774\,673\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,917\,c[6] + \\
& 2\,597\,815\,c[7] - 2\,771\,505\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,111\,c[7] - 2\,767\,633\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,175\,c[7] - 2\,768\,337\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,239\,c[7] - 2\,768\,913\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,471\,c[7] - 2\,764\,465\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,535\,c[7] - 2\,765\,169\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,381\,c[6] + \\
& 2\,602\,279\,c[7] - 2\,785\,761\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,343\,c[7] - 2\,786\,337\,c[8],
\end{aligned}$$

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c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 349 c[6] +
  2 601 575 c[7] - 2 781 889 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
  202 451 c[5] - 992 349 c[6] + 2 601 639 c[7] - 2 782 593 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 317 c[6] +
  2 600 935 c[7] - 2 778 721 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
  202 451 c[5] - 992 317 c[6] + 2 600 999 c[7] - 2 779 425 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 285 c[6] +
  2 600 295 c[7] - 2 775 553 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
  202 467 c[5] - 992 813 c[6] + 2 606 039 c[7] - 2 796 145 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 813 c[6] +
  2 606 103 c[7] - 2 796 849 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 115 c[5] - 987 165 c[6] + 2 566 775 c[7] - 2 696 265 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 133 c[6] +
  2 566 135 c[7] - 2 693 097 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 131 c[5] - 987 629 c[6] + 2 571 239 c[7] - 2 710 521 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 597 c[6] +
  2 570 599 c[7] - 2 707 353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 131 c[5] - 987 565 c[6] + 2 569 959 c[7] - 2 704 185 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 125 c[6] +
  2 576 343 c[7] - 2 727 945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 147 c[5] - 988 093 c[6] + 2 575 703 c[7] - 2 724 777 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 061 c[6] +
  2 575 063 c[7] - 2 721 609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 147 c[5] - 988 029 c[6] + 2 574 359 c[7] - 2 717 737 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 163 c[5] - 988 557 c[6] +
  2 580 167 c[7] - 2 739 033 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 811 c[5] - 982 845 c[6] + 2 539 559 c[7] - 2 632 113 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 309 c[6] +
  2 544 023 c[7] - 2 646 369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 843 c[5] - 983 805 c[6] + 2 549 127 c[7] - 2 663 793 c[8] }

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Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 947 c[4] +
  9 967 987 c[5] - 49 312 637 c[6] + 131 786 599 c[7] - 146 222 513 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 947 c[4] +
  9 967 987 c[5] - 49 312 637 c[6] + 131 786 599 c[7] - 146 222 513 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 683 c[5] - 1 009 869 c[6] +
  2 710 423 c[7] - 3 030 449 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 683 c[5] - 1 009 837 c[6] + 2 709 783 c[7] - 3 027 409 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 683 c[5] - 1 009 837 c[6] +
  2 709 847 c[7] - 3 028 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] +
  203 699 c[5] - 1 010 301 c[6] + 2 714 183 c[7] - 3 040 961 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 347 c[5] - 1 004 653 c[6] +
  2 675 047 c[7] - 2 942 361 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 363 c[5] - 1 005 149 c[6] + 2 680 023 c[7] - 2 958 505 c[8] ≥ 0 &&

```


$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,149 c[6] + \\
& \quad 2\,680\,023 c[7] - 2\,958\,377 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,149 c[6] + 2\,680\,087 c[7] - 2\,959\,209 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,149 c[6] + \\
& \quad 2\,680\,087 c[7] - 2\,959\,081 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,363 c[5] - 1\,005\,149 c[6] + 2\,680\,151 c[7] - 2\,959\,785 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,363 c[5] - 1\,005\,117 c[6] + \\
& \quad 2\,679\,447 c[7] - 2\,956\,041 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,379 c[5] - 1\,005\,613 c[6] + 2\,684\,359 c[7] - 2\,971\,353 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,379 c[5] - 1\,005\,613 c[6] + \\
& \quad 2\,684\,423 c[7] - 2\,972\,057 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,379 c[5] - 1\,005\,613 c[6] + 2\,684\,487 c[7] - 2\,972\,633 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,379 c[5] - 1\,005\,581 c[6] + \\
& \quad 2\,683\,783 c[7] - 2\,968\,889 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,379 c[5] - 1\,005\,581 c[6] + 2\,683\,847 c[7] - 2\,969\,593 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,379 c[5] - 1\,005\,581 c[6] + \\
& \quad 2\,683\,911 c[7] - 2\,970\,297 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& \quad 203\,395 c[5] - 1\,006\,045 c[6] + 2\,688\,183 c[7] - 2\,982\,441 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,395 c[5] - 1\,006\,045 c[6] + \\
& \quad 2\,688\,247 c[7] - 2\,983\,145 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,997 c[6] + 2\,645\,991 c[7] - 2\,877\,201 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,965 c[6] + \\
& \quad 2\,645\,287 c[7] - 2\,873\,457 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,965 c[6] + 2\,645\,351 c[7] - 2\,874\,033 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,461 c[6] + \\
& \quad 2\,650\,263 c[7] - 2\,889\,601 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,327 c[7] - 2\,890\,305 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,461 c[6] + \\
& \quad 2\,650\,327 c[7] - 2\,890\,177 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,391 c[7] - 2\,890\,881 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,461 c[6] + \\
& \quad 2\,650\,455 c[7] - 2\,891\,457 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,623 c[7] - 2\,886\,433 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& \quad 2\,649\,687 c[7] - 2\,887\,137 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,687 c[7] - 2\,887\,009 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& \quad 2\,649\,751 c[7] - 2\,887\,713 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,397 c[6] + 2\,649\,047 c[7] - 2\,883\,969 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] + \\
& \quad 2\,649\,111 c[7] - 2\,884\,545 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,925 c[6] + 2\,654\,727 c[7] - 2\,903\,857 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,893 c[6] + \\
& \quad 2\,654\,023 c[7] - 2\,899\,985 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,893 c[6] + 2\,654\,087 c[7] - 2\,900\,689 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,893 c[6] + \\
& \quad 2\,654\,151 c[7] - 2\,901\,393 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 203\,059\,c[5] - 1\,000\,893\,c[6] + 2\,654\,151\,c[7] - 2\,901\,265\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& \quad 2\,654\,215\,c[7] - 2\,901\,969\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,861\,c[6] + 2\,653\,447\,c[7] - 2\,897\,521\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,861\,c[6] + \\
& \quad 2\,653\,511\,c[7] - 2\,898\,225\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,829\,c[6] + 2\,652\,871\,c[7] - 2\,895\,057\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,357\,c[6] + \\
& \quad 2\,658\,487\,c[7] - 2\,914\,241\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,847\,c[7] - 2\,911\,073\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& \quad 2\,657\,911\,c[7] - 2\,911\,777\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,975\,c[7] - 2\,912\,481\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,789\,c[6] + \\
& \quad 2\,662\,247\,c[7] - 2\,924\,625\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,091\,c[5] - 1\,001\,789\,c[6] + 2\,662\,311\,c[7] - 2\,925\,329\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,245\,c[6] + \\
& \quad 2\,614\,887\,c[7] - 2\,801\,385\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,773\,c[6] + 2\,620\,567\,c[7] - 2\,821\,401\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,741\,c[6] + \\
& \quad 2\,619\,927\,c[7] - 2\,818\,233\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,741\,c[6] + 2\,619\,991\,c[7] - 2\,818\,809\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] + \\
& \quad 2\,619\,223\,c[7] - 2\,814\,361\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,287\,c[7] - 2\,815\,065\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] + \\
& \quad 2\,619\,351\,c[7] - 2\,815\,641\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,647\,c[7] - 2\,811\,897\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& \quad 2\,618\,711\,c[7] - 2\,812\,473\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,205\,c[6] + 2\,624\,391\,c[7] - 2\,832\,489\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,205\,c[6] + \\
& \quad 2\,624\,455\,c[7] - 2\,833\,065\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,687\,c[7] - 2\,828\,617\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& \quad 2\,623\,751\,c[7] - 2\,829\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,815\,c[7] - 2\,829\,897\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& \quad 2\,623\,047\,c[7] - 2\,825\,449\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,111\,c[7] - 2\,826\,153\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& \quad 2\,623\,111\,c[7] - 2\,826\,025\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,175\,c[7] - 2\,826\,729\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& \quad 2\,622\,471\,c[7] - 2\,822\,985\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,669\,c[6] + 2\,628\,791\,c[7] - 2\,846\,041\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,628\,151\,c[7] - 2\,842\,873\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,215\,c[7] - 2\,843\,577\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,279\,c[7] - 2\,844\,153\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,511\,c[7] - 2\,839\,705\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,575\,c[7] - 2\,840\,409\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,871\,c[7] - 2\,836\,537\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,935\,c[7] - 2\,837\,241\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,069\,c[6] + 2\,631\,911\,c[7] - 2\,853\,257\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& 2\,631\,975\,c[7] - 2\,853\,961\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,069\,c[6] + 2\,632\,039\,c[7] - 2\,854\,665\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,037\,c[6] + \\
& 2\,631\,271\,c[7] - 2\,850\,089\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,533\,c[6] + 2\,636\,375\,c[7] - 2\,867\,513\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,989\,c[6] + \\
& 2\,588\,887\,c[7] - 2\,742\,993\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,485\,c[6] + 2\,593\,991\,c[7] - 2\,760\,417\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,453\,c[6] + \\
& 2\,593\,351\,c[7] - 2\,757\,249\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,421\,c[6] + 2\,592\,711\,c[7] - 2\,754\,081\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,421\,c[6] + \\
& 2\,592\,775\,c[7] - 2\,754\,657\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,135\,c[7] - 2\,751\,489\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,949\,c[6] + \\
& 2\,598\,455\,c[7] - 2\,774\,673\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,815\,c[7] - 2\,771\,505\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,111\,c[7] - 2\,767\,633\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,175\,c[7] - 2\,768\,337\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,239\,c[7] - 2\,768\,913\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,471\,c[7] - 2\,764\,465\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,535\,c[7] - 2\,765\,169\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,279\,c[7] - 2\,785\,761\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,381\,c[6] + \\
& 2\,602\,343\,c[7] - 2\,786\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,349\,c[6] + 2\,601\,575\,c[7] - 2\,781\,889\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,639\,c[7] - 2\,782\,593\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,935\,c[7] - 2\,778\,721\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,317\,c[6] + \\
& 2\,600\,999\,c[7] - 2\,779\,425\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,285\,c[6] + 2\,600\,295\,c[7] - 2\,775\,553\,c[8] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 813 c[6] +
  2 606 039 c[7] - 2 796 145 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
  202 467 c[5] - 992 813 c[6] + 2 606 103 c[7] - 2 796 849 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 165 c[6] +
  2 566 775 c[7] - 2 696 265 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 115 c[5] - 987 133 c[6] + 2 566 135 c[7] - 2 693 097 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 629 c[6] +
  2 571 239 c[7] - 2 710 521 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 131 c[5] - 987 597 c[6] + 2 570 599 c[7] - 2 707 353 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 565 c[6] +
  2 569 959 c[7] - 2 704 185 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 147 c[5] - 988 125 c[6] + 2 576 343 c[7] - 2 727 945 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 093 c[6] +
  2 575 703 c[7] - 2 724 777 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 147 c[5] - 988 061 c[6] + 2 575 063 c[7] - 2 721 609 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 029 c[6] +
  2 574 359 c[7] - 2 717 737 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 163 c[5] - 988 557 c[6] + 2 580 167 c[7] - 2 739 033 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 845 c[6] +
  2 539 559 c[7] - 2 632 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 827 c[5] - 983 309 c[6] + 2 544 023 c[7] - 2 646 369 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 805 c[6] +
  2 549 127 c[7] - 2 663 793 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -495 338 005, -121 177 788, -17 614 437, -2 088 461, -208 847}

GCD[0, 0, 0, -495 338 005, -121 177 788, -17 614 437, -2 088 461, -208 847]
1

cert.g
-61 913 280

{0, 0, 0, -495 338 005, -121 177 788, -17 614 437, -2 088 461, -208 847}.
Reverse[gpart[listdim17[[120]]]]
-61 913 280

```

cert.Transpose[A]

```
{5 705 184, 143 763 360, 157 130 144, 19 083 664, 366 316 320, 143 676 496,
 116 944 080, 157 043 280, 130 310 864, 143 677 648, 268 369 040, 5 630 016,
 18 996 800, 5 631 168, 130 322 560, 143 689 344, 157 056 128, 5 642 864, 19 009 648,
 241 538 064, 366 229 456, 352 863 824, 143 589 632, 156 956 416, 130 224 000,
 143 590 784, 130 225 152, 254 915 392, 268 282 176, 241 549 760, 254 916 544,
 379 607 936, 366 242 304, 32 276 720, 130 235 696, 143 602 480, 156 969 264,
 130 236 848, 143 603 632, 254 928 240, 268 295 024, 379 620 784, 18 922 784,
 130 248 544, 143 615 328, 156 982 112, 5 568 848, 18 935 632, 477 468 352,
 156 869 552, 268 195 312, 254 829 680, 366 154 288, 379 521 072, 366 155 440,
 490 846 832, 477 481 200, 156 882 400, 143 516 768, 254 841 376, 268 208 160,
 254 842 528, 366 167 136, 379 533 920, 352 801 504, 366 168 288, 490 859 680,
 32 202 704, 143 528 464, 156 895 248, 143 529 616, 254 854 224, 268 221 008,
 366 179 984, 379 546 768, 130 174 528, 143 541 312, 156 908 096, 241 500 288,
 18 861 616, 490 759 968, 268 121 296, 379 447 056, 490 772 816, 477 407 184,
 588 732 944, 156 808 384, 268 134 144, 366 093 120, 379 459 904, 366 094 272,
 477 418 880, 490 785 664, 156 821 232, 143 455 600, 254 780 208, 268 146 992,
 366 105 968, 379 472 752, 477 431 728, 143 467 296, 156 834 080, 490 698 800,
 602 024 560, 379 385 888, 490 711 648, 602 037 408, 156 747 216, 268 072 976,
 379 398 736, 477 357 712, 156 760 064, 713 276 304, 601 963 392, 379 324 720}
```

chi = listdim17[[121]]

$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-65084 + 37153x - 8284x^2 + 902x^3 - 48x^4 + x^5)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

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A = {{1, -63, 1669, -24067, 203683, -1009805, 2709271, -3025521},
      {1, -63, 1669, -24067, 203699, -1010269, 2713671, -3039201},
      {1, -63, 1669, -24059, 203363, -1005149, 2680215, -2960361},
      {1, -63, 1669, -24059, 203363, -1005117, 2679511, -2956617},
      {1, -63, 1669, -24059, 203363, -1005117, 2679511, -2956489},
      {1, -63, 1669, -24059, 203363, -1005117, 2679575, -2957193},
      {1, -63, 1669, -24059, 203363, -1005085, 2678871, -2953449},
      {1, -63, 1669, -24059, 203379, -1005613, 2684551, -2973465},
      {1, -63, 1669, -24059, 203379, -1005613, 2684551, -2973337},
      {1, -63, 1669, -24059, 203379, -1005581, 2683847, -2969593},
      {1, -63, 1669, -24059, 203379, -1005581, 2683911, -2970297},
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      {1, -63, 1669, -24059, 203379, -1005581, 2683975, -2970873},
      {1, -63, 1669, -24059, 203379, -1005549, 2683271, -2967129},
      {1, -63, 1669, -24059, 203379, -1005549, 2683271, -2967001},
      {1, -63, 1669, -24059, 203395, -1006045, 2688311, -2983849},
```

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{1, -63, 1669, -24 059, 203 395, -1 006 013, 2 687 671, -2 980 681},
{1, -63, 1669, -24 051, 203 011, -999 437, 2 639 735, -2 854 593},
{1, -63, 1669, -24 051, 203 027, -999 933, 2 644 775, -2 871 441},
{1, -63, 1669, -24 051, 203 027, -999 901, 2 644 071, -2 867 697},
{1, -63, 1669, -24 051, 203 027, -999 901, 2 644 135, -2 868 273},
{1, -63, 1669, -24 051, 203 043, -1 000 429, 2 649 815, -2 888 289},
{1, -63, 1669, -24 051, 203 043, -1 000 429, 2 649 879, -2 888 865},
{1, -63, 1669, -24 051, 203 043, -1 000 397, 2 649 111, -2 884 545},
{1, -63, 1669, -24 051, 203 043, -1 000 397, 2 649 175, -2 885 121},
{1, -63, 1669, -24 051, 203 043, -1 000 365, 2 648 407, -2 880 801},
{1, -63, 1669, -24 051, 203 043, -1 000 365, 2 648 471, -2 881 377},
{1, -63, 1669, -24 051, 203 043, -1 000 365, 2 648 535, -2 881 953},
{1, -63, 1669, -24 051, 203 059, -1 000 925, 2 654 855, -2 905 137},
{1, -63, 1669, -24 051, 203 059, -1 000 925, 2 654 919, -2 905 713},
{1, -63, 1669, -24 051, 203 059, -1 000 893, 2 654 087, -2 900 689},
{1, -63, 1669, -24 051, 203 059, -1 000 893, 2 654 151, -2 901 393},
{1, -63, 1669, -24 051, 203 059, -1 000 893, 2 654 215, -2 901 969},
{1, -63, 1669, -24 051, 203 059, -1 000 893, 2 654 279, -2 902 545},
{1, -63, 1669, -24 051, 203 059, -1 000 861, 2 653 447, -2 897 521},
{1, -63, 1669, -24 051, 203 059, -1 000 861, 2 653 511, -2 898 225},
{1, -63, 1669, -24 051, 203 059, -1 000 861, 2 653 575, -2 898 801},
{1, -63, 1669, -24 051, 203 059, -1 000 829, 2 652 807, -2 894 353},
{1, -63, 1669, -24 051, 203 059, -1 000 829, 2 652 871, -2 895 057},
{1, -63, 1669, -24 051, 203 059, -1 000 829, 2 652 871, -2 894 929},
{1, -63, 1669, -24 051, 203 059, -1 000 829, 2 652 935, -2 895 633},
{1, -63, 1669, -24 051, 203 059, -1 000 797, 2 652 231, -2 891 889},
{1, -63, 1669, -24 051, 203 075, -1 001 357, 2 658 551, -2 914 945},
{1, -63, 1669, -24 051, 203 075, -1 001 357, 2 658 615, -2 915 649},
{1, -63, 1669, -24 051, 203 075, -1 001 357, 2 658 679, -2 916 225},
{1, -63, 1669, -24 051, 203 075, -1 001 325, 2 657 911, -2 911 777},
{1, -63, 1669, -24 051, 203 075, -1 001 325, 2 657 975, -2 912 481},
{1, -63, 1669, -24 051, 203 075, -1 001 325, 2 658 039, -2 913 057},
{1, -63, 1669, -24 051, 203 075, -1 001 293, 2 657 271, -2 908 609},
{1, -63, 1669, -24 051, 203 075, -1 001 293, 2 657 335, -2 909 313},
{1, -63, 1669, -24 051, 203 091, -1 001 789, 2 662 375, -2 926 033},
{1, -63, 1669, -24 043, 202 707, -995 181, 2 613 671, -2 795 625},
{1, -63, 1669, -24 043, 202 707, -995 181, 2 613 735, -2 796 201},
{1, -63, 1669, -24 043, 202 707, -995 149, 2 613 095, -2 793 033},
{1, -63, 1669, -24 043, 202 723, -995 709, 2 619 351, -2 815 641},
{1, -63, 1669, -24 043, 202 723, -995 677, 2 618 647, -2 811 897},
{1, -63, 1669, -24 043, 202 723, -995 677, 2 618 711, -2 812 473},
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  203363 c[5] - 1005117 c[6] + 2679511 c[7] - 2956489 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203363 c[5] - 1005117 c[6] +
  2679575 c[7] - 2957193 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203363 c[5] - 1005085 c[6] + 2678871 c[7] - 2953449 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005613 c[6] +
  2684551 c[7] - 2973465 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203379 c[5] - 1005613 c[6] + 2684551 c[7] - 2973337 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005581 c[6] +
  2683847 c[7] - 2969593 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203379 c[5] - 1005581 c[6] + 2683911 c[7] - 2970297 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005581 c[6] +
  2683911 c[7] - 2970169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203379 c[5] - 1005581 c[6] + 2683975 c[7] - 2970873 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005549 c[6] +
  2683271 c[7] - 2967129 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203379 c[5] - 1005549 c[6] + 2683271 c[7] - 2967001 c[8],

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$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,395 c[5] - 1\,006\,045 c[6] + \\
& 2\,688\,311 c[7] - 2\,983\,849 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + \\
& 203\,395 c[5] - 1\,006\,013 c[6] + 2\,687\,671 c[7] - 2\,980\,681 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,011 c[5] - 999\,437 c[6] + \\
& 2\,639\,735 c[7] - 2\,854\,593 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,933 c[6] + 2\,644\,775 c[7] - 2\,871\,441 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,901 c[6] + \\
& 2\,644\,071 c[7] - 2\,867\,697 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,027 c[5] - 999\,901 c[6] + 2\,644\,135 c[7] - 2\,868\,273 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& 2\,649\,815 c[7] - 2\,888\,289 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,429 c[6] + 2\,649\,879 c[7] - 2\,888\,865 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,397 c[6] + \\
& 2\,649\,111 c[7] - 2\,884\,545 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,397 c[6] + 2\,649\,175 c[7] - 2\,885\,121 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,365 c[6] + \\
& 2\,648\,407 c[7] - 2\,880\,801 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,043 c[5] - 1\,000\,365 c[6] + 2\,648\,471 c[7] - 2\,881\,377 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,365 c[6] + \\
& 2\,648\,535 c[7] - 2\,881\,953 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,925 c[6] + 2\,654\,855 c[7] - 2\,905\,137 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,925 c[6] + \\
& 2\,654\,919 c[7] - 2\,905\,713 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,893 c[6] + 2\,654\,087 c[7] - 2\,900\,689 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,893 c[6] + \\
& 2\,654\,151 c[7] - 2\,901\,393 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,893 c[6] + 2\,654\,215 c[7] - 2\,901\,969 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,893 c[6] + \\
& 2\,654\,279 c[7] - 2\,902\,545 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,861 c[6] + 2\,653\,447 c[7] - 2\,897\,521 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,861 c[6] + \\
& 2\,653\,511 c[7] - 2\,898\,225 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,861 c[6] + 2\,653\,575 c[7] - 2\,898\,801 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,829 c[6] + \\
& 2\,652\,807 c[7] - 2\,894\,353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,829 c[6] + 2\,652\,871 c[7] - 2\,895\,057 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,829 c[6] + \\
& 2\,652\,871 c[7] - 2\,894\,929 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,059 c[5] - 1\,000\,829 c[6] + 2\,652\,935 c[7] - 2\,895\,633 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,797 c[6] + \\
& 2\,652\,231 c[7] - 2\,891\,889 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,075 c[5] - 1\,001\,357 c[6] + 2\,658\,551 c[7] - 2\,914\,945 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,075 c[5] - 1\,001\,357 c[6] + \\
& 2\,658\,615 c[7] - 2\,915\,649 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& 203\,075 c[5] - 1\,001\,357 c[6] + 2\,658\,679 c[7] - 2\,916\,225 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,075 c[5] - 1\,001\,325 c[6] + \\
& 2\,657\,911 c[7] - 2\,911\,777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,975\,c[7] - 2\,912\,481\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& \quad 2\,658\,039\,c[7] - 2\,913\,057\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,293\,c[6] + 2\,657\,271\,c[7] - 2\,908\,609\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,293\,c[6] + \\
& \quad 2\,657\,335\,c[7] - 2\,909\,313\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,091\,c[5] - 1\,001\,789\,c[6] + 2\,662\,375\,c[7] - 2\,926\,033\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& \quad 2\,613\,671\,c[7] - 2\,795\,625\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,181\,c[6] + 2\,613\,735\,c[7] - 2\,796\,201\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,149\,c[6] + \\
& \quad 2\,613\,095\,c[7] - 2\,793\,033\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,351\,c[7] - 2\,815\,641\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& \quad 2\,618\,647\,c[7] - 2\,811\,897\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,711\,c[7] - 2\,812\,473\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& \quad 2\,618\,775\,c[7] - 2\,813\,049\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,007\,c[7] - 2\,808\,729\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] + \\
& \quad 2\,618\,071\,c[7] - 2\,809\,305\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,135\,c[7] - 2\,809\,881\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,613\,c[6] + \\
& \quad 2\,617\,431\,c[7] - 2\,806\,137\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,613\,c[6] + 2\,617\,495\,c[7] - 2\,806\,713\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,205\,c[6] + \\
& \quad 2\,624\,391\,c[7] - 2\,832\,489\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,205\,c[6] + 2\,624\,455\,c[7] - 2\,833\,065\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& \quad 2\,623\,751\,c[7] - 2\,829\,321\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,815\,c[7] - 2\,829\,897\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& \quad 2\,623\,111\,c[7] - 2\,826\,153\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,175\,c[7] - 2\,826\,729\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& \quad 2\,623\,239\,c[7] - 2\,827\,305\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,471\,c[7] - 2\,822\,985\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& \quad 2\,622\,535\,c[7] - 2\,823\,561\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,831\,c[7] - 2\,819\,817\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,077\,c[6] + \\
& \quad 2\,621\,895\,c[7] - 2\,820\,393\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,701\,c[6] + 2\,629\,495\,c[7] - 2\,849\,913\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,669\,c[6] + \\
& \quad 2\,628\,855\,c[7] - 2\,846\,745\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,669\,c[6] + 2\,628\,919\,c[7] - 2\,847\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,628\,215\,c[7] - 2\,843\,577\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,279\,c[7] - 2\,844\,153\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,343\,c[7] - 2\,844\,729\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,575\,c[7] - 2\,840\,409\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,639\,c[7] - 2\,840\,985\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,871\,c[7] - 2\,836\,537\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,935\,c[7] - 2\,837\,241\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,999\,c[7] - 2\,837\,817\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,541\,c[6] + \\
& 2\,626\,231\,c[7] - 2\,833\,369\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,295\,c[7] - 2\,834\,073\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,101\,c[6] + \\
& 2\,632\,679\,c[7] - 2\,857\,833\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,101\,c[6] + 2\,632\,743\,c[7] - 2\,858\,409\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& 2\,632\,039\,c[7] - 2\,854\,665\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,037\,c[6] + 2\,631\,335\,c[7] - 2\,850\,793\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,037\,c[6] + \\
& 2\,631\,399\,c[7] - 2\,851\,497\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,207\,c[7] - 2\,722\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,957\,c[6] + \\
& 2\,588\,247\,c[7] - 2\,739\,825\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,925\,c[6] + 2\,587\,607\,c[7] - 2\,736\,657\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,925\,c[6] + \\
& 2\,587\,671\,c[7] - 2\,737\,233\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,893\,c[6] + 2\,587\,031\,c[7] - 2\,734\,065\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,893\,c[6] + \\
& 2\,587\,095\,c[7] - 2\,734\,641\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,453\,c[6] + 2\,593\,351\,c[7] - 2\,757\,249\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,421\,c[6] + \\
& 2\,592\,711\,c[7] - 2\,754\,081\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,421\,c[6] + 2\,592\,775\,c[7] - 2\,754\,657\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,071\,c[7] - 2\,750\,913\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,135\,c[7] - 2\,751\,489\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,431\,c[7] - 2\,747\,745\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,495\,c[7] - 2\,748\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,559\,c[7] - 2\,748\,897\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,325\,c[6] + 2\,590\,855\,c[7] - 2\,745\,153\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,917\,c[6] + \\
& 2\,597\,815\,c[7] - 2\,771\,505\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,175\,c[7] - 2\,768\,337\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,885 c[6] + \\
& \quad 2\,597\,239 c[7] - 2\,768\,913 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,853 c[6] + 2\,596\,535 c[7] - 2\,765\,169 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,853 c[6] + \\
& \quad 2\,596\,599 c[7] - 2\,765\,745 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,821 c[6] + 2\,595\,895 c[7] - 2\,762\,001 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,821 c[6] + \\
& \quad 2\,595\,959 c[7] - 2\,762\,577 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,789 c[6] + 2\,595\,255 c[7] - 2\,758\,833 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,381 c[6] + \\
& \quad 2\,602\,279 c[7] - 2\,785\,761 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,349 c[6] + 2\,601\,639 c[7] - 2\,782\,593 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,349 c[6] + \\
& \quad 2\,601\,703 c[7] - 2\,783\,169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,317 c[6] + 2\,600\,999 c[7] - 2\,779\,425 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,285 c[6] + \\
& \quad 2\,600\,359 c[7] - 2\,776\,257 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,845 c[6] + 2\,606\,743 c[7] - 2\,800\,017 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,813 c[6] + \\
& \quad 2\,606\,103 c[7] - 2\,796\,849 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,173 c[6] + 2\,556\,567 c[7] - 2\,661\,417 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,669 c[6] + \\
& \quad 2\,561\,671 c[7] - 2\,678\,841 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,637 c[6] + 2\,561\,031 c[7] - 2\,675\,673 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,605 c[6] + \\
& \quad 2\,560\,391 c[7] - 2\,672\,505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,605 c[6] + 2\,560\,455 c[7] - 2\,673\,081 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,133 c[6] + \\
& \quad 2\,566\,135 c[7] - 2\,693\,097 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,101 c[6] + 2\,565\,495 c[7] - 2\,689\,929 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,101 c[6] + \\
& \quad 2\,565\,559 c[7] - 2\,690\,505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,069 c[6] + 2\,564\,855 c[7] - 2\,686\,761 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,069 c[6] + \\
& \quad 2\,564\,919 c[7] - 2\,687\,337 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,597 c[6] + 2\,570\,599 c[7] - 2\,707\,353 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,565 c[6] + \\
& \quad 2\,569\,959 c[7] - 2\,704\,185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,533 c[6] + 2\,569\,319 c[7] - 2\,701\,017 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,061 c[6] + \\
& \quad 2\,575\,063 c[7] - 2\,721\,609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,163 c[5] - 988\,557 c[6] + 2\,580\,167 c[7] - 2\,739\,033 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,779 c[5] - 981\,885 c[6] + \\
& \quad 2\,529\,991 c[7] - 2\,600\,433 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,795 c[5] - 982\,349 c[6] + 2\,534\,455 c[7] - 2\,614\,689 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,317 c[6] + \\
& \quad 2\,533\,815 c[7] - 2\,611\,521 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] +
\end{aligned}$$

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201811 c[5] - 982813 c[6] + 2538919 c[7] - 2628945 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24019 c[4] + 201811 c[5] - 982781 c[6] +
2538279 c[7] - 2625777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] +
201491 c[5] - 978029 c[6] + 2507239 c[7] - 2550537 c[8] }

```

```
Array[c, 8].g
```

```

49 c[1] - 3087 c[2] + 81781 c[3] - 1178947 c[4] +
9967987 c[5] - 49311229 c[6] + 131763943 c[7] - 146141617 c[8]

```

```
cert =
```

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81781 c[3] - 1178947 c[4] +
9967987 c[5] - 49311229 c[6] + 131763943 c[7] - 146141617 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203683 c[5] - 1009805 c[6] +
2709271 c[7] - 3025521 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] +
203699 c[5] - 1010269 c[6] + 2713671 c[7] - 3039201 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203363 c[5] - 1005149 c[6] +
2680215 c[7] - 2960361 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
203363 c[5] - 1005117 c[6] + 2679511 c[7] - 2956617 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203363 c[5] - 1005117 c[6] +
2679511 c[7] - 2956489 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
203363 c[5] - 1005117 c[6] + 2679575 c[7] - 2957193 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203363 c[5] - 1005085 c[6] +
2678871 c[7] - 2953449 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
203379 c[5] - 1005613 c[6] + 2684551 c[7] - 2973465 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005613 c[6] +
2684551 c[7] - 2973337 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
203379 c[5] - 1005581 c[6] + 2683847 c[7] - 2969593 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005581 c[6] +
2683911 c[7] - 2970297 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
203379 c[5] - 1005581 c[6] + 2683911 c[7] - 2970169 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005581 c[6] +
2683975 c[7] - 2970873 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
203379 c[5] - 1005549 c[6] + 2683271 c[7] - 2967129 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005549 c[6] +
2683271 c[7] - 2967001 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
203395 c[5] - 1006045 c[6] + 2688311 c[7] - 2983849 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203395 c[5] - 1006013 c[6] +
2687671 c[7] - 2980681 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203011 c[5] - 999437 c[6] + 2639735 c[7] - 2854593 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203027 c[5] - 999933 c[6] +
2644775 c[7] - 2871441 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203027 c[5] - 999901 c[6] + 2644071 c[7] - 2867697 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203027 c[5] - 999901 c[6] +
2644135 c[7] - 2868273 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203043 c[5] - 1000429 c[6] + 2649815 c[7] - 2888289 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203043 c[5] - 1000429 c[6] +
2649879 c[7] - 2888865 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +

```


$$\begin{aligned}
& 203\,043\,c[5] - 1\,000\,397\,c[6] + 2\,649\,111\,c[7] - 2\,884\,545\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,397\,c[6] + \\
& \quad 2\,649\,175\,c[7] - 2\,885\,121\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,365\,c[6] + 2\,648\,407\,c[7] - 2\,880\,801\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,365\,c[6] + \\
& \quad 2\,648\,471\,c[7] - 2\,881\,377\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,365\,c[6] + 2\,648\,535\,c[7] - 2\,881\,953\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,925\,c[6] + \\
& \quad 2\,654\,855\,c[7] - 2\,905\,137\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,925\,c[6] + 2\,654\,919\,c[7] - 2\,905\,713\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& \quad 2\,654\,087\,c[7] - 2\,900\,689\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,893\,c[6] + 2\,654\,151\,c[7] - 2\,901\,393\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& \quad 2\,654\,215\,c[7] - 2\,901\,969\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,893\,c[6] + 2\,654\,279\,c[7] - 2\,902\,545\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,861\,c[6] + \\
& \quad 2\,653\,447\,c[7] - 2\,897\,521\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,861\,c[6] + 2\,653\,511\,c[7] - 2\,898\,225\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,861\,c[6] + \\
& \quad 2\,653\,575\,c[7] - 2\,898\,801\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,829\,c[6] + 2\,652\,807\,c[7] - 2\,894\,353\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,829\,c[6] + \\
& \quad 2\,652\,871\,c[7] - 2\,895\,057\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,829\,c[6] + 2\,652\,871\,c[7] - 2\,894\,929\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,829\,c[6] + \\
& \quad 2\,652\,935\,c[7] - 2\,895\,633\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,797\,c[6] + 2\,652\,231\,c[7] - 2\,891\,889\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,357\,c[6] + \\
& \quad 2\,658\,551\,c[7] - 2\,914\,945\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,357\,c[6] + 2\,658\,615\,c[7] - 2\,915\,649\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,357\,c[6] + \\
& \quad 2\,658\,679\,c[7] - 2\,916\,225\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,911\,c[7] - 2\,911\,777\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& \quad 2\,657\,975\,c[7] - 2\,912\,481\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,658\,039\,c[7] - 2\,913\,057\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,293\,c[6] + \\
& \quad 2\,657\,271\,c[7] - 2\,908\,609\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,293\,c[6] + 2\,657\,335\,c[7] - 2\,909\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,789\,c[6] + \\
& \quad 2\,662\,375\,c[7] - 2\,926\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,181\,c[6] + 2\,613\,671\,c[7] - 2\,795\,625\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& \quad 2\,613\,735\,c[7] - 2\,796\,201\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,149\,c[6] + 2\,613\,095\,c[7] - 2\,793\,033\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,619\,351\,c[7] - 2\,815\,641\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,647\,c[7] - 2\,811\,897\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,711\,c[7] - 2\,812\,473\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,775\,c[7] - 2\,813\,049\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] + \\
& 2\,618\,007\,c[7] - 2\,808\,729\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,071\,c[7] - 2\,809\,305\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,645\,c[6] + \\
& 2\,618\,135\,c[7] - 2\,809\,881\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,613\,c[6] + 2\,617\,431\,c[7] - 2\,806\,137\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,613\,c[6] + \\
& 2\,617\,495\,c[7] - 2\,806\,713\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,205\,c[6] + 2\,624\,391\,c[7] - 2\,832\,489\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,205\,c[6] + \\
& 2\,624\,455\,c[7] - 2\,833\,065\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,751\,c[7] - 2\,829\,321\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& 2\,623\,815\,c[7] - 2\,829\,897\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,111\,c[7] - 2\,826\,153\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& 2\,623\,175\,c[7] - 2\,826\,729\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,239\,c[7] - 2\,827\,305\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& 2\,622\,471\,c[7] - 2\,822\,985\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,535\,c[7] - 2\,823\,561\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,077\,c[6] + \\
& 2\,621\,831\,c[7] - 2\,819\,817\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,895\,c[7] - 2\,820\,393\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,701\,c[6] + \\
& 2\,629\,495\,c[7] - 2\,849\,913\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,669\,c[6] + 2\,628\,855\,c[7] - 2\,846\,745\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,669\,c[6] + \\
& 2\,628\,919\,c[7] - 2\,847\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,215\,c[7] - 2\,843\,577\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,279\,c[7] - 2\,844\,153\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,343\,c[7] - 2\,844\,729\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,575\,c[7] - 2\,840\,409\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,639\,c[7] - 2\,840\,985\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,871\,c[7] - 2\,836\,537\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,935\,c[7] - 2\,837\,241\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,999\,c[7] - 2\,837\,817\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,231\,c[7] - 2\,833\,369\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,541 c[6] + \\
& \quad 2\,626\,295 c[7] - 2\,834\,073 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,101 c[6] + 2\,632\,679 c[7] - 2\,857\,833 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,101 c[6] + \\
& \quad 2\,632\,743 c[7] - 2\,858\,409 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,069 c[6] + 2\,632\,039 c[7] - 2\,854\,665 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,037 c[6] + \\
& \quad 2\,631\,335 c[7] - 2\,850\,793 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,037 c[6] + 2\,631\,399 c[7] - 2\,851\,497 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,387 c[5] - 990\,461 c[6] + \\
& \quad 2\,583\,207 c[7] - 2\,722\,977 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,957 c[6] + 2\,588\,247 c[7] - 2\,739\,825 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,925 c[6] + \\
& \quad 2\,587\,607 c[7] - 2\,736\,657 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,925 c[6] + 2\,587\,671 c[7] - 2\,737\,233 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,893 c[6] + \\
& \quad 2\,587\,031 c[7] - 2\,734\,065 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,893 c[6] + 2\,587\,095 c[7] - 2\,734\,641 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,453 c[6] + \\
& \quad 2\,593\,351 c[7] - 2\,757\,249 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,421 c[6] + 2\,592\,711 c[7] - 2\,754\,081 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,421 c[6] + \\
& \quad 2\,592\,775 c[7] - 2\,754\,657 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,389 c[6] + 2\,592\,071 c[7] - 2\,750\,913 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,389 c[6] + \\
& \quad 2\,592\,135 c[7] - 2\,751\,489 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,357 c[6] + 2\,591\,431 c[7] - 2\,747\,745 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,357 c[6] + \\
& \quad 2\,591\,495 c[7] - 2\,748\,321 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,357 c[6] + 2\,591\,559 c[7] - 2\,748\,897 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,325 c[6] + \\
& \quad 2\,590\,855 c[7] - 2\,745\,153 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,917 c[6] + 2\,597\,815 c[7] - 2\,771\,505 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,885 c[6] + \\
& \quad 2\,597\,175 c[7] - 2\,768\,337 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,885 c[6] + 2\,597\,239 c[7] - 2\,768\,913 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,853 c[6] + \\
& \quad 2\,596\,535 c[7] - 2\,765\,169 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,853 c[6] + 2\,596\,599 c[7] - 2\,765\,745 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,821 c[6] + \\
& \quad 2\,595\,895 c[7] - 2\,762\,001 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,821 c[6] + 2\,595\,959 c[7] - 2\,762\,577 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,789 c[6] + \\
& \quad 2\,595\,255 c[7] - 2\,758\,833 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,381 c[6] + 2\,602\,279 c[7] - 2\,785\,761 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,349 c[6] + \\
& \quad 2\,601\,639 c[7] - 2\,782\,593 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] +
\end{aligned}$$

```

202 451 c[5] - 992 349 c[6] + 2 601 703 c[7] - 2 783 169 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 317 c[6] +
2 600 999 c[7] - 2 779 425 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 451 c[5] - 992 285 c[6] + 2 600 359 c[7] - 2 776 257 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 845 c[6] +
2 606 743 c[7] - 2 800 017 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 467 c[5] - 992 813 c[6] + 2 606 103 c[7] - 2 796 849 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 083 c[5] - 986 173 c[6] +
2 556 567 c[7] - 2 661 417 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 099 c[5] - 986 669 c[6] + 2 561 671 c[7] - 2 678 841 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 637 c[6] +
2 561 031 c[7] - 2 675 673 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 099 c[5] - 986 605 c[6] + 2 560 391 c[7] - 2 672 505 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 099 c[5] - 986 605 c[6] +
2 560 455 c[7] - 2 673 081 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 133 c[6] + 2 566 135 c[7] - 2 693 097 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 101 c[6] +
2 565 495 c[7] - 2 689 929 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 101 c[6] + 2 565 559 c[7] - 2 690 505 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 069 c[6] +
2 564 855 c[7] - 2 686 761 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 069 c[6] + 2 564 919 c[7] - 2 687 337 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 597 c[6] +
2 570 599 c[7] - 2 707 353 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 131 c[5] - 987 565 c[6] + 2 569 959 c[7] - 2 704 185 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 533 c[6] +
2 569 319 c[7] - 2 701 017 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 147 c[5] - 988 061 c[6] + 2 575 063 c[7] - 2 721 609 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 163 c[5] - 988 557 c[6] +
2 580 167 c[7] - 2 739 033 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 779 c[5] - 981 885 c[6] + 2 529 991 c[7] - 2 600 433 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 349 c[6] +
2 534 455 c[7] - 2 614 689 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 795 c[5] - 982 317 c[6] + 2 533 815 c[7] - 2 611 521 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 813 c[6] +
2 538 919 c[7] - 2 628 945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 781 c[6] + 2 538 279 c[7] - 2 625 777 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 029 c[6] +
2 507 239 c[7] - 2 550 537 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -393 778 194, -103 398 759, -16 911 081, -2 371 948, -308 363}

GCD[0, 0, 0, -393 778 194, -103 398 759, -16 911 081, -2 371 948, -308 363]
1

cert.g
-230 845 859

```

```
{0, 0, 0, -393 778 194, -103 398 759, -16 911 081, -2 371 948, -308 363}.
```

```
Reverse[gpart[listdim17[[121]]]]
```

```
-230 845 859
```

```
cert.Transpose[A]
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{93 317 021, 67 513 101, 119 089 221, 93 274 949, 53 804 485, 119 087 365,
 93 273 093, 67 472 885, 28 002 421, 2 188 149, 67 471 029, 28 000 565, 93 283 445,
 67 469 173, 27 998 709, 2 196 645, 2 194 789, 170 649 421, 144 847 357, 119 033 085,
 144 845 501, 119 045 293, 144 857 709, 93 231 021, 119 043 437, 67 416 749,
 93 229 165, 119 041 581, 93 243 229, 119 055 645, 2 146 077, 67 428 957, 93 241 373,
 119 053 789, 2 144 221, 67 427 101, 93 239 517, 2 142 365, 67 425 245, 27 954 781,
 93 237 661, 67 423 389, 2 154 573, 67 437 453, 93 249 869, 2 152 717, 67 435 597,
 93 248 013, 2 150 861, 67 433 741, 2 161 213, 118 989 157, 144 801 573, 144 799 717,
 93 188 949, 67 374 677, 93 187 093, 118 999 509, 67 372 821, 93 185 237,
 118 997 653, 93 183 381, 118 995 797, 67 386 885, 93 199 301, 67 385 029,
 93 197 445, 67 383 173, 93 195 589, 119 008 005, 67 381 317, 93 193 733, 67 379 461,
 93 191 877, 67 397 237, 67 395 381, 93 207 797, 67 393 525, 93 205 941, 119 018 357,
 67 391 669, 93 204 085, 2 106 933, 67 389 813, 93 202 229, 2 105 077, 67 387 957,
 67 402 021, 93 214 437, 67 400 165, 2 115 429, 67 398 309, 93 132 813, 67 330 749,
 67 328 893, 93 141 309, 93 139 453, 118 951 869, 67 341 101, 67 339 245, 93 151 661,
 67 337 389, 93 149 805, 67 335 533, 93 147 949, 118 960 365, 93 146 093, 67 349 597,
 67 347 741, 93 160 157, 67 345 885, 93 158 301, 67 344 029, 93 156 445, 67 342 173,
 67 358 093, 67 356 237, 93 168 653, 67 354 381, 67 352 525, 67 366 589, 67 364 733,
 67 283 109, 67 293 461, 67 291 605, 67 289 749, 93 102 165, 67 301 957, 67 300 101,
 93 112 517, 67 298 245, 93 110 661, 67 310 453, 67 308 597, 67 306 741, 67 318 949,
 67 329 301, 67 245 821, 67 254 317, 67 252 461, 67 262 813, 67 260 957, 67 215 173}
```

```
chi = listdim17[[122]]
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```
(-13 + x) (-11 + x)2 (-9 + x)11 (5 + x)32 (-556 + 213 x - 26 x2 + x3)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
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{297 009, -251 494, 81 679, -13 380, 1183, -54, 1},
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{298 881, -251 846, 81 695, -13 380, 1183, -54, 1},
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{298 177, -251 782, 81 695, -13 380, 1183, -54, 1},
{300 465, -252 166, 81 711, -13 380, 1183, -54, 1},
{287 001, -248 654, 81 415, -13 372, 1183, -54, 1},
{288 585, -248 974, 81 431, -13 372, 1183, -54, 1},
{288 233, -248 942, 81 431, -13 372, 1183, -54, 1},
{288 297, -248 942, 81 431, -13 372, 1183, -54, 1},
{290 169, -249 294, 81 447, -13 372, 1183, -54, 1}

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A = {{336 297, -263 678, 82 903, -13 420, 1183, -54, 1},
      {329 121, -261 254, 82 655, -13 412, 1183, -54, 1},
      {328 705, -261 222, 82 655, -13 412, 1183, -54, 1},
      {328 289, -261 190, 82 655, -13 412, 1183, -54, 1},
      {330 161, -261 542, 82 671, -13 412, 1183, -54, 1},
      {329 745, -261 510, 82 671, -13 412, 1183, -54, 1},
      {329 809, -261 510, 82 671, -13 412, 1183, -54, 1},
      {331 617, -261 862, 82 687, -13 412, 1183, -54, 1},
      {331 265, -261 830, 82 687, -13 412, 1183, -54, 1},

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{316 953, -258 030, 82 375, -13 404, 1183, -54, 1},
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{318 409, -258 350, 82 391, -13 404, 1183, -54, 1},
{320 697, -258 734, 82 407, -13 404, 1183, -54, 1},
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{321 737, -259 022, 82 423, -13 404, 1183, -54, 1},
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{321 385, -258 990, 82 423, -13 404, 1183, -54, 1},
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{322 905, -259 310, 82 439, -13 404, 1183, -54, 1},
{325 193, -259 694, 82 455, -13 404, 1183, -54, 1},
{308 529, -255 510, 82 127, -13 396, 1183, -54, 1},
{310 401, -255 862, 82 143, -13 396, 1183, -54, 1},
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{312 273, -256 214, 82 159, -13 396, 1183, -54, 1},
{311 857, -256 182, 82 159, -13 396, 1183, -54, 1},
{311 921, -256 182, 82 159, -13 396, 1183, -54, 1},
{311 505, -256 150, 82 159, -13 396, 1183, -54, 1},
{314 145, -256 566, 82 175, -13 396, 1183, -54, 1},
{313 729, -256 534, 82 175, -13 396, 1183, -54, 1},
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{313 025, -256 470, 82 175, -13 396, 1183, -54, 1},
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{315 601, -256 886, 82 191, -13 396, 1183, -54, 1},
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{315 313, -256 854, 82 191, -13 396, 1183, -54, 1},
{314 897, -256 822, 82 191, -13 396, 1183, -54, 1},
{317 889, -257 270, 82 207, -13 396, 1183, -54, 1},
{317 537, -257 238, 82 207, -13 396, 1183, -54, 1},
{317 601, -257 238, 82 207, -13 396, 1183, -54, 1},
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{316833, -257174, 82207, -13396, 1183, -54, 1},
{319121, -257558, 82223, -13396, 1183, -54, 1},
{301977, -253342, 81895, -13388, 1183, -54, 1},
{303849, -253694, 81911, -13388, 1183, -54, 1},
{303433, -253662, 81911, -13388, 1183, -54, 1},
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{305305, -254014, 81927, -13388, 1183, -54, 1},
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{305433, -254014, 81927, -13388, 1183, -54, 1},
{304953, -253982, 81927, -13388, 1183, -54, 1},
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{307241, -254366, 81943, -13388, 1183, -54, 1},
{307305, -254366, 81943, -13388, 1183, -54, 1},
{306889, -254334, 81943, -13388, 1183, -54, 1},
{306953, -254334, 81943, -13388, 1183, -54, 1},
{306537, -254302, 81943, -13388, 1183, -54, 1},
{309177, -254718, 81959, -13388, 1183, -54, 1},
{308825, -254686, 81959, -13388, 1183, -54, 1},
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{297009, -251494, 81679, -13380, 1183, -54, 1},
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{298881, -251846, 81695, -13380, 1183, -54, 1},
{298529, -251814, 81695, -13380, 1183, -54, 1},
{298177, -251782, 81695, -13380, 1183, -54, 1},
{300465, -252166, 81711, -13380, 1183, -54, 1},
{287001, -248654, 81415, -13372, 1183, -54, 1},
{288585, -248974, 81431, -13372, 1183, -54, 1},
{288233, -248942, 81431, -13372, 1183, -54, 1},
{288297, -248942, 81431, -13372, 1183, -54, 1},
{290169, -249294, 81447, -13372, 1183, -54, 1}];

```

A // MatrixForm

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( 336297 -263678 82903 -13420 1183 -54 1 )
( 329121 -261254 82655 -13412 1183 -54 1 )
( 328705 -261222 82655 -13412 1183 -54 1 )
( 328289 -261190 82655 -13412 1183 -54 1 )
( 330161 -261542 82671 -13412 1183 -54 1 )
( 329745 -261510 82671 -13412 1183 -54 1 )
( 329809 -261510 82671 -13412 1183 -54 1 )
( 331617 -261862 82687 -13412 1183 -54 1 )
( 331265 -261830 82687 -13412 1183 -54 1 )

```

316 953	-258 030	82 375	-13 404	1183	-54	1
318 825	-258 382	82 391	-13 404	1183	-54	1
318 409	-258 350	82 391	-13 404	1183	-54	1
320 697	-258 734	82 407	-13 404	1183	-54	1
320 281	-258 702	82 407	-13 404	1183	-54	1
319 865	-258 670	82 407	-13 404	1183	-54	1
319 929	-258 670	82 407	-13 404	1183	-54	1
322 569	-259 086	82 423	-13 404	1183	-54	1
322 153	-259 054	82 423	-13 404	1183	-54	1
322 217	-259 054	82 423	-13 404	1183	-54	1
321 737	-259 022	82 423	-13 404	1183	-54	1
321 801	-259 022	82 423	-13 404	1183	-54	1
321 385	-258 990	82 423	-13 404	1183	-54	1
324 025	-259 406	82 439	-13 404	1183	-54	1
324 089	-259 406	82 439	-13 404	1183	-54	1
323 609	-259 374	82 439	-13 404	1183	-54	1
323 673	-259 374	82 439	-13 404	1183	-54	1
323 257	-259 342	82 439	-13 404	1183	-54	1
323 321	-259 342	82 439	-13 404	1183	-54	1
322 905	-259 310	82 439	-13 404	1183	-54	1
325 193	-259 694	82 455	-13 404	1183	-54	1
308 529	-255 510	82 127	-13 396	1183	-54	1
310 401	-255 862	82 143	-13 396	1183	-54	1
310 049	-255 830	82 143	-13 396	1183	-54	1
312 273	-256 214	82 159	-13 396	1183	-54	1
311 857	-256 182	82 159	-13 396	1183	-54	1
311 921	-256 182	82 159	-13 396	1183	-54	1
311 505	-256 150	82 159	-13 396	1183	-54	1
314 145	-256 566	82 175	-13 396	1183	-54	1
313 729	-256 534	82 175	-13 396	1183	-54	1
313 793	-256 534	82 175	-13 396	1183	-54	1
313 857	-256 534	82 175	-13 396	1183	-54	1
313 313	-256 502	82 175	-13 396	1183	-54	1
313 377	-256 502	82 175	-13 396	1183	-54	1
313 441	-256 502	82 175	-13 396	1183	-54	1
313 025	-256 470	82 175	-13 396	1183	-54	1
316 017	-256 918	82 191	-13 396	1183	-54	1
315 601	-256 886	82 191	-13 396	1183	-54	1
315 665	-256 886	82 191	-13 396	1183	-54	1
315 729	-256 886	82 191	-13 396	1183	-54	1
315 249	-256 854	82 191	-13 396	1183	-54	1
315 313	-256 854	82 191	-13 396	1183	-54	1
314 897	-256 822	82 191	-13 396	1183	-54	1
317 889	-257 270	82 207	-13 396	1183	-54	1
317 537	-257 238	82 207	-13 396	1183	-54	1
317 601	-257 238	82 207	-13 396	1183	-54	1
317 185	-257 206	82 207	-13 396	1183	-54	1
316 833	-257 174	82 207	-13 396	1183	-54	1
319 121	-257 558	82 223	-13 396	1183	-54	1
301 977	-253 342	81 895	-13 388	1183	-54	1
303 849	-253 694	81 911	-13 388	1183	-54	1
303 433	-253 662	81 911	-13 388	1183	-54	1
303 497	-253 662	81 911	-13 388	1183	-54	1
303 561	-253 662	81 911	-13 388	1183	-54	1
305 721	-254 046	81 927	-13 388	1183	-54	1

305 305	-254 014	81 927	-13 388	1183	-54	1
305 369	-254 014	81 927	-13 388	1183	-54	1
305 433	-254 014	81 927	-13 388	1183	-54	1
304 953	-253 982	81 927	-13 388	1183	-54	1
305 017	-253 982	81 927	-13 388	1183	-54	1
307 593	-254 398	81 943	-13 388	1183	-54	1
307 241	-254 366	81 943	-13 388	1183	-54	1
307 305	-254 366	81 943	-13 388	1183	-54	1
306 889	-254 334	81 943	-13 388	1183	-54	1
306 953	-254 334	81 943	-13 388	1183	-54	1
306 537	-254 302	81 943	-13 388	1183	-54	1
309 177	-254 718	81 959	-13 388	1183	-54	1
308 825	-254 686	81 959	-13 388	1183	-54	1
295 425	-251 174	81 663	-13 380	1183	-54	1
295 073	-251 142	81 663	-13 380	1183	-54	1
295 137	-251 142	81 663	-13 380	1183	-54	1
297 297	-251 526	81 679	-13 380	1183	-54	1
296 945	-251 494	81 679	-13 380	1183	-54	1
297 009	-251 494	81 679	-13 380	1183	-54	1
296 593	-251 462	81 679	-13 380	1183	-54	1
296 657	-251 462	81 679	-13 380	1183	-54	1
298 881	-251 846	81 695	-13 380	1183	-54	1
298 529	-251 814	81 695	-13 380	1183	-54	1
298 177	-251 782	81 695	-13 380	1183	-54	1
300 465	-252 166	81 711	-13 380	1183	-54	1
287 001	-248 654	81 415	-13 372	1183	-54	1
288 585	-248 974	81 431	-13 372	1183	-54	1
288 233	-248 942	81 431	-13 372	1183	-54	1
288 297	-248 942	81 431	-13 372	1183	-54	1
290 169	-249 294	81 447	-13 372	1183	-54	1

Dimensions[A]

{94, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{16 228 969, -12 834 702, 4 052 791, -657 244, 57 967, -2646, 49}

Array[c, 7].Transpose[A]

{336 297 c[1] - 263 678 c[2] + 82 903 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7],
 329 121 c[1] - 261 254 c[2] + 82 655 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 328 705 c[1] - 261 222 c[2] + 82 655 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 328 289 c[1] - 261 190 c[2] + 82 655 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 330 161 c[1] - 261 542 c[2] + 82 671 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 329 745 c[1] - 261 510 c[2] + 82 671 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 329 809 c[1] - 261 510 c[2] + 82 671 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 331 617 c[1] - 261 862 c[2] + 82 687 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 331 265 c[1] - 261 830 c[2] + 82 687 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7],
 316 953 c[1] - 258 030 c[2] + 82 375 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 318 825 c[1] - 258 382 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 318 409 c[1] - 258 350 c[2] + 82 391 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],
 320 697 c[1] - 258 734 c[2] + 82 407 c[3] - 13 404 c[4] + 1183 c[5] - 54 c[6] + c[7],

[illegible]

```

303 433 c[1] - 253 662 c[2] + 81 911 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
303 497 c[1] - 253 662 c[2] + 81 911 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
303 561 c[1] - 253 662 c[2] + 81 911 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
305 721 c[1] - 254 046 c[2] + 81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
305 305 c[1] - 254 014 c[2] + 81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
305 369 c[1] - 254 014 c[2] + 81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
305 433 c[1] - 254 014 c[2] + 81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
304 953 c[1] - 253 982 c[2] + 81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
305 017 c[1] - 253 982 c[2] + 81 927 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
307 593 c[1] - 254 398 c[2] + 81 943 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
307 241 c[1] - 254 366 c[2] + 81 943 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
307 305 c[1] - 254 366 c[2] + 81 943 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
306 889 c[1] - 254 334 c[2] + 81 943 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
306 953 c[1] - 254 334 c[2] + 81 943 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
306 537 c[1] - 254 302 c[2] + 81 943 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
309 177 c[1] - 254 718 c[2] + 81 959 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
308 825 c[1] - 254 686 c[2] + 81 959 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
295 425 c[1] - 251 174 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
295 073 c[1] - 251 142 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
295 137 c[1] - 251 142 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
297 297 c[1] - 251 526 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
296 945 c[1] - 251 494 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
297 009 c[1] - 251 494 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
296 593 c[1] - 251 462 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
296 657 c[1] - 251 462 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
298 881 c[1] - 251 846 c[2] + 81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
298 529 c[1] - 251 814 c[2] + 81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
298 177 c[1] - 251 782 c[2] + 81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
300 465 c[1] - 252 166 c[2] + 81 711 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
287 001 c[1] - 248 654 c[2] + 81 415 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
288 585 c[1] - 248 974 c[2] + 81 431 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
288 233 c[1] - 248 942 c[2] + 81 431 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
288 297 c[1] - 248 942 c[2] + 81 431 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ,
290 169 c[1] - 249 294 c[2] + 81 447 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] }

```

Array[c, 7].g

```

16 228 969 c[1] - 12 834 702 c[2] + 4 052 791 c[3] -
657 244 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[16 228 969 c[1] - 12 834 702 c[2] + 4 052 791 c[3] -
657 244 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7] < 0 &&
336 297 c[1] - 263 678 c[2] + 82 903 c[3] - 13 420 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 329 121 c[1] - 261 254 c[2] + 82 655 c[3] - 13 412 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 328 705 c[1] - 261 222 c[2] +
82 655 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
328 289 c[1] - 261 190 c[2] + 82 655 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥

```

$$\begin{aligned}
& 0 \&\& 330\,161\,c[1] - 261\,542\,c[2] + 82\,671\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 329\,745\,c[1] - 261\,510\,c[2] + \\
& 82\,671\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 329\,809\,c[1] - 261\,510\,c[2] + 82\,671\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 331\,617\,c[1] - 261\,862\,c[2] + 82\,687\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 331\,265\,c[1] - 261\,830\,c[2] + \\
& 82\,687\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 316\,953\,c[1] - 258\,030\,c[2] + 82\,375\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 318\,825\,c[1] - 258\,382\,c[2] + 82\,391\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 318\,409\,c[1] - 258\,350\,c[2] + \\
& 82\,391\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 320\,697\,c[1] - 258\,734\,c[2] + 82\,407\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 320\,281\,c[1] - 258\,702\,c[2] + 82\,407\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 319\,865\,c[1] - 258\,670\,c[2] + \\
& 82\,407\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 319\,929\,c[1] - 258\,670\,c[2] + 82\,407\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 322\,569\,c[1] - 259\,086\,c[2] + 82\,423\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 322\,153\,c[1] - 259\,054\,c[2] + \\
& 82\,423\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 322\,217\,c[1] - 259\,054\,c[2] + 82\,423\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 321\,737\,c[1] - 259\,022\,c[2] + 82\,423\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 321\,801\,c[1] - 259\,022\,c[2] + \\
& 82\,423\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 321\,385\,c[1] - 258\,990\,c[2] + 82\,423\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 324\,025\,c[1] - 259\,406\,c[2] + 82\,439\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 324\,089\,c[1] - 259\,406\,c[2] + \\
& 82\,439\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 323\,609\,c[1] - 259\,374\,c[2] + 82\,439\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 323\,673\,c[1] - 259\,374\,c[2] + 82\,439\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 323\,257\,c[1] - 259\,342\,c[2] + \\
& 82\,439\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 323\,321\,c[1] - 259\,342\,c[2] + 82\,439\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 322\,905\,c[1] - 259\,310\,c[2] + 82\,439\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 325\,193\,c[1] - 259\,694\,c[2] + \\
& 82\,455\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 308\,529\,c[1] - 255\,510\,c[2] + 82\,127\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 310\,401\,c[1] - 255\,862\,c[2] + 82\,143\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 310\,049\,c[1] - 255\,830\,c[2] + \\
& 82\,143\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 312\,273\,c[1] - 256\,214\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 311\,857\,c[1] - 256\,182\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 311\,921\,c[1] - 256\,182\,c[2] + \\
& 82\,159\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 311\,505\,c[1] - 256\,150\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 314\,145\,c[1] - 256\,566\,c[2] + 82\,175\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 313\,729\,c[1] - 256\,534\,c[2] + \\
& 82\,175\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\&
\end{aligned}$$


```

      81 943 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
309 177 c[1] - 254 718 c[2] + 81 959 c[3] - 13 388 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 308 825 c[1] - 254 686 c[2] + 81 959 c[3] - 13 388 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 295 425 c[1] - 251 174 c[2] +
81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
295 073 c[1] - 251 142 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 295 137 c[1] - 251 142 c[2] + 81 663 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 297 297 c[1] - 251 526 c[2] +
81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
296 945 c[1] - 251 494 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 297 009 c[1] - 251 494 c[2] + 81 679 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 296 593 c[1] - 251 462 c[2] +
81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
296 657 c[1] - 251 462 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 298 881 c[1] - 251 846 c[2] + 81 695 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 298 529 c[1] - 251 814 c[2] +
81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
298 177 c[1] - 251 782 c[2] + 81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 300 465 c[1] - 252 166 c[2] + 81 711 c[3] - 13 380 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 287 001 c[1] - 248 654 c[2] +
81 415 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
288 585 c[1] - 248 974 c[2] + 81 431 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 288 233 c[1] - 248 942 c[2] + 81 431 c[3] -
13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
288 297 c[1] - 248 942 c[2] + 81 431 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 290 169 c[1] - 249 294 c[2] + 81 447 c[3] - 13 372 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6], c[7]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[123]]
```

```
(-11 + x)3 (-9 + x)8 (-7 + x) (5 + x)32 (-68 668 + 38 309 x - 8404 x2 + 906 x3 - 48 x4 + x5)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```



```

A = {{1, -70, 2114, -35950, 376180, -2477234, 10009454, -22638746, 21875931},
      {1, -70, 2114, -35950, 376180, -2477202, 10008590, -22631098, 21853755},
      {1, -70, 2114, -35950, 376196, -2477778, 10016302, -22676602, 21953547},
      {1, -70, 2114, -35950, 376196, -2477746, 10015438, -22668954, 21931371},
      {1, -70, 2114, -35950, 376212, -2478322, 10023150, -22714458, 22031163},
      {1, -70, 2114, -35942, 375804, -2470242, 9945150, -22346226, 21349251},
      {1, -70, 2114, -35942, 375804, -2470210, 9944286, -22338578, 21327075},
      {1, -70, 2114, -35942, 375820, -2470818, 9952862, -22391730, 21449043},
      {1, -70, 2114, -35942, 375820, -2470786, 9951998, -22384082, 21426867},
      {1, -70, 2114, -35942, 375820, -2470754, 9951134, -22376434, 21404691},
      {1, -70, 2114, -35942, 375836, -2471394, 9960574, -22437234, 21548835},
      {1, -70, 2114, -35942, 375836, -2471362, 9959710, -22429586, 21526659},
      {1, -70, 2114, -35942, 375836, -2471330, 9958846, -22421938, 21504483},
      {1, -70, 2114, -35942, 375852, -2471938, 9967422, -22475090, 21626451},
      {1, -70, 2114, -35942, 375852, -2471906, 9966558, -22467442, 21604275},
      {1, -70, 2114, -35934, 375444, -2463794, 9887694, -22091562, 20900187},
      {1, -70, 2114, -35934, 375460, -2464370, 9895406, -22137066, 20999979},
      {1, -70, 2114, -35934, 375460, -2464338, 9894542, -22129418, 20977803},
      {1, -70, 2114, -35934, 375476, -2464946, 9903118, -22182570, 21099771},
      {1, -70, 2114, -35934, 375476, -2464914, 9902254, -22174922, 21077595},
      {1, -70, 2114, -35934, 375476, -2464882, 9901390, -22167274, 21055419},
      {1, -70, 2114, -35934, 375492, -2465522, 9910830, -22228074, 21199563},
      {1, -70, 2114, -35926, 375084, -2457346, 9830238, -21836898, 20451123},
      {1, -70, 2114, -35926, 375100, -2457922, 9837950, -21882402, 20550915},
      {1, -70, 2114, -35926, 375116, -2458498, 9845662, -21927906, 20650707},
      {1, -70, 2114, -35926, 375132, -2459106, 9854238, -21981058, 20772675},
      {1, -70, 2114, -35918, 374740, -2451474, 9780494, -21627738, 20101851}};

```

A // MatrixForm

```
( 1 -70 2114 -35950 376180 -2477234 10009454 -22638746 21875931
 1 -70 2114 -35950 376180 -2477202 10008590 -22631098 21853755
 1 -70 2114 -35950 376196 -2477778 10016302 -22676602 21953547
 1 -70 2114 -35950 376196 -2477746 10015438 -22668954 21931371
 1 -70 2114 -35950 376212 -2478322 10023150 -22714458 22031163
 1 -70 2114 -35942 375804 -2470242 9945150 -22346226 21349251
 1 -70 2114 -35942 375804 -2470210 9944286 -22338578 21327075
 1 -70 2114 -35942 375820 -2470818 9952862 -22391730 21449043
 1 -70 2114 -35942 375820 -2470786 9951998 -22384082 21426867
 1 -70 2114 -35942 375820 -2470754 9951134 -22376434 21404691
 1 -70 2114 -35942 375836 -2471394 9960574 -22437234 21548835
 1 -70 2114 -35942 375836 -2471362 9959710 -22429586 21526659
 1 -70 2114 -35942 375836 -2471330 9958846 -22421938 21504483
 1 -70 2114 -35942 375852 -2471938 9967422 -22475090 21626451
 1 -70 2114 -35942 375852 -2471906 9966558 -22467442 21604275
 1 -70 2114 -35934 375444 -2463794 9887694 -22091562 20900187
 1 -70 2114 -35934 375460 -2464370 9895406 -22137066 20999979
 1 -70 2114 -35934 375460 -2464338 9894542 -22129418 20977803
 1 -70 2114 -35934 375476 -2464946 9903118 -22182570 21099771
 1 -70 2114 -35934 375476 -2464914 9902254 -22174922 21077595
 1 -70 2114 -35934 375476 -2464882 9901390 -22167274 21055419
 1 -70 2114 -35934 375492 -2465522 9910830 -22228074 21199563
 1 -70 2114 -35926 375084 -2457346 9830238 -21836898 20451123
 1 -70 2114 -35926 375100 -2457922 9837950 -21882402 20550915
 1 -70 2114 -35926 375116 -2458498 9845662 -21927906 20650707
 1 -70 2114 -35926 375132 -2459106 9854238 -21981058 20772675
 1 -70 2114 -35918 374740 -2451474 9780494 -21627738 20101851)
```

Dimensions[A]

```
{27, 9}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3430, 103586, -1761606, 18436348,
-121463554, 491287390, -1113373522, 1079661523}
```

Array[c, 9].Transpose[A]

```

{c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 180 c[5] -
  2 477 234 c[6] + 10 009 454 c[7] - 22 638 746 c[8] + 21 875 931 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 180 c[5] - 2 477 202 c[6] +
  10 008 590 c[7] - 22 631 098 c[8] + 21 853 755 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 196 c[5] - 2 477 778 c[6] +
  10 016 302 c[7] - 22 676 602 c[8] + 21 953 547 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 196 c[5] - 2 477 746 c[6] +
  10 015 438 c[7] - 22 668 954 c[8] + 21 931 371 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 212 c[5] - 2 478 322 c[6] +
  10 023 150 c[7] - 22 714 458 c[8] + 22 031 163 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 804 c[5] - 2 470 242 c[6] + 9 945 150 c[7] -
  22 346 226 c[8] + 21 349 251 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] +
  375 804 c[5] - 2 470 210 c[6] + 9 944 286 c[7] - 22 338 578 c[8] + 21 327 075 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 820 c[5] - 2 470 818 c[6] + 9 952 862 c[7] -
  22 391 730 c[8] + 21 449 043 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] +
  375 820 c[5] - 2 470 786 c[6] + 9 951 998 c[7] - 22 384 082 c[8] + 21 426 867 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 820 c[5] - 2 470 754 c[6] + 9 951 134 c[7] -
  22 376 434 c[8] + 21 404 691 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] +
  375 836 c[5] - 2 471 394 c[6] + 9 960 574 c[7] - 22 437 234 c[8] + 21 548 835 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 836 c[5] - 2 471 362 c[6] + 9 959 710 c[7] -
  22 429 586 c[8] + 21 526 659 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] +
  375 836 c[5] - 2 471 330 c[6] + 9 958 846 c[7] - 22 421 938 c[8] + 21 504 483 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 852 c[5] - 2 471 938 c[6] + 9 967 422 c[7] -
  22 475 090 c[8] + 21 626 451 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] +
  375 852 c[5] - 2 471 906 c[6] + 9 966 558 c[7] - 22 467 442 c[8] + 21 604 275 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 444 c[5] - 2 463 794 c[6] + 9 887 694 c[7] -
  22 091 562 c[8] + 20 900 187 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] +
  375 460 c[5] - 2 464 370 c[6] + 9 895 406 c[7] - 22 137 066 c[8] + 20 999 979 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 460 c[5] - 2 464 338 c[6] + 9 894 542 c[7] -
  22 129 418 c[8] + 20 977 803 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] +
  375 476 c[5] - 2 464 946 c[6] + 9 903 118 c[7] - 22 182 570 c[8] + 21 099 771 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 476 c[5] - 2 464 914 c[6] + 9 902 254 c[7] -
  22 174 922 c[8] + 21 077 595 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] +
  375 476 c[5] - 2 464 882 c[6] + 9 901 390 c[7] - 22 167 274 c[8] + 21 055 419 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 492 c[5] - 2 465 522 c[6] + 9 910 830 c[7] -
  22 228 074 c[8] + 21 199 563 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] +
  375 084 c[5] - 2 457 346 c[6] + 9 830 238 c[7] - 21 836 898 c[8] + 20 451 123 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 100 c[5] - 2 457 922 c[6] + 9 837 950 c[7] -
  21 882 402 c[8] + 20 550 915 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] +
  375 116 c[5] - 2 458 498 c[6] + 9 845 662 c[7] - 21 927 906 c[8] + 20 650 707 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 132 c[5] - 2 459 106 c[6] + 9 854 238 c[7] -
  21 981 058 c[8] + 20 772 675 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] +
  374 740 c[5] - 2 451 474 c[6] + 9 780 494 c[7] - 21 627 738 c[8] + 20 101 851 c[9]}

```

Array[c, 9].g

49 c[1] - 3430 c[2] + 103 586 c[3] - 1 761 606 c[4] + 18 436 348 c[5] -
121 463 554 c[6] + 491 287 390 c[7] - 1 113 373 522 c[8] + 1 079 661 523 c[9]

cert = Flatten[Array[c, 9] /.

FindInstance[49 c[1] - 3430 c[2] + 103 586 c[3] - 1 761 606 c[4] + 18 436 348 c[5] -
121 463 554 c[6] + 491 287 390 c[7] - 1 113 373 522 c[8] + 1 079 661 523 c[9] < 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 180 c[5] - 2 477 234 c[6] +
10 009 454 c[7] - 22 638 746 c[8] + 21 875 931 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 180 c[5] - 2 477 202 c[6] +
10 008 590 c[7] - 22 631 098 c[8] + 21 853 755 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 196 c[5] - 2 477 778 c[6] +
10 016 302 c[7] - 22 676 602 c[8] + 21 953 547 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 196 c[5] - 2 477 746 c[6] +
10 015 438 c[7] - 22 668 954 c[8] + 21 931 371 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 212 c[5] - 2 478 322 c[6] +
10 023 150 c[7] - 22 714 458 c[8] + 22 031 163 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 804 c[5] - 2 470 242 c[6] +
9 945 150 c[7] - 22 346 226 c[8] + 21 349 251 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 804 c[5] - 2 470 210 c[6] +
9 944 286 c[7] - 22 338 578 c[8] + 21 327 075 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 820 c[5] - 2 470 818 c[6] +
9 952 862 c[7] - 22 391 730 c[8] + 21 449 043 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 820 c[5] - 2 470 786 c[6] +
9 951 998 c[7] - 22 384 082 c[8] + 21 426 867 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 820 c[5] - 2 470 754 c[6] +
9 951 134 c[7] - 22 376 434 c[8] + 21 404 691 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 836 c[5] - 2 471 394 c[6] +
9 960 574 c[7] - 22 437 234 c[8] + 21 548 835 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 836 c[5] - 2 471 362 c[6] +
9 959 710 c[7] - 22 429 586 c[8] + 21 526 659 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 836 c[5] - 2 471 330 c[6] +
9 958 846 c[7] - 22 421 938 c[8] + 21 504 483 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 852 c[5] - 2 471 938 c[6] +
9 967 422 c[7] - 22 475 090 c[8] + 21 626 451 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 852 c[5] - 2 471 906 c[6] +
9 966 558 c[7] - 22 467 442 c[8] + 21 604 275 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 444 c[5] - 2 463 794 c[6] +
9 887 694 c[7] - 22 091 562 c[8] + 20 900 187 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 460 c[5] - 2 464 370 c[6] +
9 895 406 c[7] - 22 137 066 c[8] + 20 999 979 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 460 c[5] - 2 464 338 c[6] +
9 894 542 c[7] - 22 129 418 c[8] + 20 977 803 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 476 c[5] - 2 464 946 c[6] +
9 903 118 c[7] - 22 182 570 c[8] + 21 099 771 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 476 c[5] - 2 464 914 c[6] +
9 902 254 c[7] - 22 174 922 c[8] + 21 077 595 c[9] ≥ 0 &&

```

c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 476 c[5] - 2 464 882 c[6] +
  9 901 390 c[7] - 22 167 274 c[8] + 21 055 419 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 934 c[4] + 375 492 c[5] - 2 465 522 c[6] +
  9 910 830 c[7] - 22 228 074 c[8] + 21 199 563 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 084 c[5] - 2 457 346 c[6] +
  9 830 238 c[7] - 21 836 898 c[8] + 20 451 123 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 100 c[5] - 2 457 922 c[6] +
  9 837 950 c[7] - 21 882 402 c[8] + 20 550 915 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 116 c[5] - 2 458 498 c[6] +
  9 845 662 c[7] - 21 927 906 c[8] + 20 650 707 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 132 c[5] - 2 459 106 c[6] +
  9 854 238 c[7] - 21 981 058 c[8] + 20 772 675 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] + 374 740 c[5] - 2 451 474 c[6] +
  9 780 494 c[7] - 21 627 738 c[8] + 20 101 851 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 0, 0, 49 716, 32 652, 11 048}

GCD[0, 0, 0, 0, 0, 0, 0, 49 716, 32 652, 11 048]
4

cert = cert / 4
{0, 0, 0, 0, 0, 0, 0, 12 429, 8163, 2762}

cert.g
-231 963 250

{0, 0, 0, 0, 0, 0, 0, 12 429, 8163, 2762}.Reverse[gpart[listdim17[[123]]]]
-231 963 250

cert.Transpose[A]
{28 741 590, 19 183 446, 19 212 246, 9 654 102, 9 682 902, 162 657 774, 153 099 630,
  162 686 574, 153 128 430, 143 570 286, 162 715 374, 153 157 230, 143 599 086, 153 186 030,
  143 627 886, 287 044 614, 287 073 414, 277 515 270, 287 102 214, 277 544 070, 267 985 926,
  287 131 014, 411 431 454, 411 460 254, 411 489 054, 421 075 998, 535 847 094}

chi = listdim17[[124]]
(-11 + x) (-9 + x)9 (5 + x)32
(-6 456 932 + 4 984 227 x - 1 628 724 x2 + 292 147 x3 - 31 076 x4 + 1961 x5 - 68 x6 + x7)

CoefficientList[feasibleinterlacingpolylist[chi], x]
A = {{1, -83, 3028, -63 676, 849 790, -7 454 938, 42 927 556,
  -156 164 620, 324 877 545, -293 489 163}, {1, -83, 3028, -63 676,
  849 806, -7 455 754, 42 944 036, -156 329 260, 325 690 489, -295 074 747},

```

```

{1, -83, 3028, -63 676, 849 806, -7 455 722, 42 942 756, -156 310 380,
 325 568 889, -294 786 459}, {1, -83, 3028, -63 676, 849 806, -7 455 722,
 42 942 820, -156 312 364, 325 589 305, -294 856 155}, {1, -83, 3028, -63 668,
 849 310, -7 443 058, 42 772 420, -155 038 260, 320 571 081, -286 724 691},
{1, -83, 3028, -63 668, 849 310, -7 443 026, 42 771 076, -155 017 268,
 320 426 505, -286 354 035}, {1, -83, 3028, -63 668, 849 310,
 -7 443 026, 42 771 076, -155 017 140, 320 423 945, -286 341 363},
{1, -83, 3028, -63 668, 849 310, -7 442 994, 42 769 796, -154 998 260,
 320 302 345, -286 053 075}, {1, -83, 3028, -63 668, 849 326,
 -7 443 874, 42 788 964, -155 204 884, 321 404 441, -288 379 971},
{1, -83, 3028, -63 668, 849 326, -7 443 842, 42 787 620, -155 183 892,
 321 259 865, -288 009 315}, {1, -83, 3028, -63 668, 849 326,
 -7 443 842, 42 787 684, -155 185 876, 321 280 281, -288 079 011},
{1, -83, 3028, -63 668, 849 326, -7 443 810, 42 786 340, -155 165 012,
 321 138 265, -287 721 027}, {1, -83, 3028, -63 668, 849 326,
 -7 443 810, 42 786 340, -155 164 884, 321 135 705, -287 708 355},
{1, -83, 3028, -63 668, 849 326, -7 443 778, 42 785 060, -155 145 876,
 321 011 545, -287 407 395}, {1, -83, 3028, -63 668, 849 342,
 -7 444 626, 42 802 820, -155 329 524, 321 948 649, -289 293 939},
{1, -83, 3028, -63 668, 849 342, -7 444 626, 42 802 884, -155 331 508,
 321 969 065, -289 363 635}, {1, -83, 3028, -63 668, 849 342,
 -7 444 594, 42 801 604, -155 312 500, 321 844 905, -289 062 675},
{1, -83, 3028, -63 660, 848 846, -7 431 930, 42 631 140, -154 036 540,
 316 808 825, -280 874 187}, {1, -83, 3028, -63 660, 848 846,
 -7 431 898, 42 629 796, -154 015 548, 316 664 249, -280 503 531},
{1, -83, 3028, -63 660, 848 846, -7 431 898, 42 629 860, -154 017 532,
 316 684 665, -280 573 227}, {1, -83, 3028, -63 660, 848 846,
 -7 431 898, 42 629 860, -154 017 404, 316 682 105, -280 560 555},
{1, -83, 3028, -63 660, 848 846, -7 431 866, 42 628 580, -153 998 396,
 316 557 945, -280 259 595}, {1, -83, 3028, -63 660, 848 862,
 -7 432 746, 42 647 684, -154 203 292, 317 644 745, -282 542 139},
{1, -83, 3028, -63 660, 848 862, -7 432 746, 42 647 748, -154 205 148,
 317 662 601, -282 599 163}, {1, -83, 3028, -63 660, 848 862,
 -7 432 714, 42 646 404, -154 184 156, 317 518 025, -282 228 507},
{1, -83, 3028, -63 660, 848 862, -7 432 682, 42 645 060, -154 163 036,
 317 370 889, -281 845 179}, {1, -83, 3028, -63 660, 848 862, -7 432 682,
 42 645 124, -154 165 020, 317 391 305, -281 914 875}, {1, -83, 3028, -63 652,
 848 350, -7 419 170, 42 456 836, -152 703 428, 311 397 705, -271 770 147},
{1, -83, 3028, -63 652, 848 366, -7 419 986, 42 473 316, -152 868 196,
 312 213 209, -273 368 403}, {1, -83, 3028, -63 652, 848 366,
 -7 419 954, 42 472 100, -152 851 044, 312 106 905, -273 124 467},
{1, -83, 3028, -63 652, 848 382, -7 420 802, 42 489 924, -153 036 804,
 313 066 985, -275 093 379}, {1, -83, 3028, -63 652, 848 382,
 -7 420 770, 42 488 644, -153 017 668, 312 940 265, -274 779 747},
{1, -83, 3028, -63 652, 848 398, -7 421 586, 42 505 252, -153 186 276,
 313 794 041, -276 504 723}, {1, -83, 3028, -63 644, 847 902,
 -7 408 826, 42 330 884, -151 851 180, 308 362 505, -267 330 987}};

```

A // MatrixForm

```

1 -83 3028 -63 676 849 790 -7 454 938 42 927 556 -156 164 620 324 877 545 -293 489 16
1 -83 3028 -63 676 849 806 -7 455 754 42 944 036 -156 329 260 325 690 489 -295 074 74
1 -83 3028 -63 676 849 806 -7 455 722 42 942 756 -156 310 380 325 568 889 -294 786 45
1 -83 3028 -63 676 849 806 -7 455 722 42 942 820 -156 312 364 325 589 305 -294 856 15
1 -83 3028 -63 668 849 310 -7 443 058 42 772 420 -155 038 260 320 571 081 -286 724 69
1 -83 3028 -63 668 849 310 -7 443 026 42 771 076 -155 017 268 320 426 505 -286 354 03
1 -83 3028 -63 668 849 310 -7 443 026 42 771 076 -155 017 140 320 423 945 -286 341 36
1 -83 3028 -63 668 849 310 -7 442 994 42 769 796 -154 998 260 320 302 345 -286 053 07
1 -83 3028 -63 668 849 326 -7 443 874 42 788 964 -155 204 884 321 404 441 -288 379 97
1 -83 3028 -63 668 849 326 -7 443 842 42 787 620 -155 183 892 321 259 865 -288 009 31
1 -83 3028 -63 668 849 326 -7 443 842 42 787 684 -155 185 876 321 280 281 -288 079 01
1 -83 3028 -63 668 849 326 -7 443 810 42 786 340 -155 165 012 321 138 265 -287 721 02
1 -83 3028 -63 668 849 326 -7 443 810 42 786 340 -155 164 884 321 135 705 -287 708 35
1 -83 3028 -63 668 849 326 -7 443 778 42 785 060 -155 145 876 321 011 545 -287 407 39
1 -83 3028 -63 668 849 342 -7 444 626 42 802 820 -155 329 524 321 948 649 -289 293 93
1 -83 3028 -63 668 849 342 -7 444 626 42 802 884 -155 331 508 321 969 065 -289 363 63
1 -83 3028 -63 668 849 342 -7 444 594 42 801 604 -155 312 500 321 844 905 -289 062 67
1 -83 3028 -63 660 848 846 -7 431 930 42 631 140 -154 036 540 316 808 825 -280 874 18
1 -83 3028 -63 660 848 846 -7 431 898 42 629 796 -154 015 548 316 664 249 -280 503 53
1 -83 3028 -63 660 848 846 -7 431 898 42 629 860 -154 017 532 316 684 665 -280 573 22
1 -83 3028 -63 660 848 846 -7 431 898 42 629 860 -154 017 404 316 682 105 -280 560 55
1 -83 3028 -63 660 848 846 -7 431 866 42 628 580 -153 998 396 316 557 945 -280 259 59
1 -83 3028 -63 660 848 862 -7 432 746 42 647 684 -154 203 292 317 644 745 -282 542 13
1 -83 3028 -63 660 848 862 -7 432 746 42 647 748 -154 205 148 317 662 601 -282 599 16
1 -83 3028 -63 660 848 862 -7 432 714 42 646 404 -154 184 156 317 518 025 -282 228 56
1 -83 3028 -63 660 848 862 -7 432 682 42 645 060 -154 163 036 317 370 889 -281 845 17
1 -83 3028 -63 660 848 862 -7 432 682 42 645 124 -154 165 020 317 391 305 -281 914 87
1 -83 3028 -63 652 848 350 -7 419 170 42 456 836 -152 703 428 311 397 705 -271 770 14
1 -83 3028 -63 652 848 366 -7 419 986 42 473 316 -152 868 196 312 213 209 -273 368 46
1 -83 3028 -63 652 848 366 -7 419 954 42 472 100 -152 851 044 312 106 905 -273 124 46
1 -83 3028 -63 652 848 382 -7 420 802 42 489 924 -153 036 804 313 066 985 -275 093 37
1 -83 3028 -63 652 848 382 -7 420 770 42 488 644 -153 017 668 312 940 265 -274 779 74
1 -83 3028 -63 652 848 398 -7 421 586 42 505 252 -153 186 276 313 794 041 -276 504 72
1 -83 3028 -63 644 847 902 -7 408 826 42 330 884 -151 851 180 308 362 505 -267 330 98

```

Dimensions[A]

{34, 10}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```

{49, -4067, 148 372, -3 120 180, 41 643 966, -365 419 026,
 2 105 388 228, -7 668 135 924, 15 988 066 105, -14 501 624 931}

```

Array[c, 10].Transpose[A]

```

{c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 790 c[5] - 7 454 938 c[6] +
 42 927 556 c[7] - 156 164 620 c[8] + 324 877 545 c[9] - 293 489 163 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 806 c[5] - 7 455 754 c[6] +
 42 944 036 c[7] - 156 329 260 c[8] + 325 690 489 c[9] - 295 074 747 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 806 c[5] - 7 455 722 c[6] +
 42 942 756 c[7] - 156 310 380 c[8] + 325 568 889 c[9] - 294 786 459 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 806 c[5] - 7 455 722 c[6] +
 42 942 820 c[7] - 156 312 364 c[8] + 325 589 305 c[9] - 294 856 155 c[10],

```

$$\begin{aligned}
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,058 c[6] + \\
& \quad 42\,772\,420 c[7] - 155\,038\,260 c[8] + 320\,571\,081 c[9] - 286\,724\,691 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,026 c[6] + \\
& \quad 42\,771\,076 c[7] - 155\,017\,268 c[8] + 320\,426\,505 c[9] - 286\,354\,035 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,443\,026 c[6] + \\
& \quad 42\,771\,076 c[7] - 155\,017\,140 c[8] + 320\,423\,945 c[9] - 286\,341\,363 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,310 c[5] - 7\,442\,994 c[6] + \\
& \quad 42\,769\,796 c[7] - 154\,998\,260 c[8] + 320\,302\,345 c[9] - 286\,053\,075 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,874 c[6] + \\
& \quad 42\,788\,964 c[7] - 155\,204\,884 c[8] + 321\,404\,441 c[9] - 288\,379\,971 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,842 c[6] + \\
& \quad 42\,787\,620 c[7] - 155\,183\,892 c[8] + 321\,259\,865 c[9] - 288\,009\,315 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,842 c[6] + \\
& \quad 42\,787\,684 c[7] - 155\,185\,876 c[8] + 321\,280\,281 c[9] - 288\,079\,011 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,810 c[6] + \\
& \quad 42\,786\,340 c[7] - 155\,165\,012 c[8] + 321\,138\,265 c[9] - 287\,721\,027 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,810 c[6] + \\
& \quad 42\,786\,340 c[7] - 155\,164\,884 c[8] + 321\,135\,705 c[9] - 287\,708\,355 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,326 c[5] - 7\,443\,778 c[6] + \\
& \quad 42\,785\,060 c[7] - 155\,145\,876 c[8] + 321\,011\,545 c[9] - 287\,407\,395 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,342 c[5] - 7\,444\,626 c[6] + \\
& \quad 42\,802\,820 c[7] - 155\,329\,524 c[8] + 321\,948\,649 c[9] - 289\,293\,939 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,342 c[5] - 7\,444\,626 c[6] + \\
& \quad 42\,802\,884 c[7] - 155\,331\,508 c[8] + 321\,969\,065 c[9] - 289\,363\,635 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,668 c[4] + 849\,342 c[5] - 7\,444\,594 c[6] + \\
& \quad 42\,801\,604 c[7] - 155\,312\,500 c[8] + 321\,844\,905 c[9] - 289\,062\,675 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,930 c[6] + \\
& \quad 42\,631\,140 c[7] - 154\,036\,540 c[8] + 316\,808\,825 c[9] - 280\,874\,187 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,898 c[6] + \\
& \quad 42\,629\,796 c[7] - 154\,015\,548 c[8] + 316\,664\,249 c[9] - 280\,503\,531 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,898 c[6] + \\
& \quad 42\,629\,860 c[7] - 154\,017\,532 c[8] + 316\,684\,665 c[9] - 280\,573\,227 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,898 c[6] + \\
& \quad 42\,629\,860 c[7] - 154\,017\,404 c[8] + 316\,682\,105 c[9] - 280\,560\,555 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,846 c[5] - 7\,431\,866 c[6] + \\
& \quad 42\,628\,580 c[7] - 153\,998\,396 c[8] + 316\,557\,945 c[9] - 280\,259\,595 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,862 c[5] - 7\,432\,746 c[6] + \\
& \quad 42\,647\,684 c[7] - 154\,203\,292 c[8] + 317\,644\,745 c[9] - 282\,542\,139 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,862 c[5] - 7\,432\,746 c[6] + \\
& \quad 42\,647\,748 c[7] - 154\,205\,148 c[8] + 317\,662\,601 c[9] - 282\,599\,163 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,862 c[5] - 7\,432\,714 c[6] + \\
& \quad 42\,646\,404 c[7] - 154\,184\,156 c[8] + 317\,518\,025 c[9] - 282\,228\,507 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,862 c[5] - 7\,432\,682 c[6] + \\
& \quad 42\,645\,060 c[7] - 154\,163\,036 c[8] + 317\,370\,889 c[9] - 281\,845\,179 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,660 c[4] + 848\,862 c[5] - 7\,432\,682 c[6] + \\
& \quad 42\,645\,124 c[7] - 154\,165\,020 c[8] + 317\,391\,305 c[9] - 281\,914\,875 c[10], \\
& c[1] - 83 c[2] + 3028 c[3] - 63\,652 c[4] + 848\,350 c[5] - 7\,419\,170 c[6] +
\end{aligned}$$


```

42 456 836 c[7] - 152 703 428 c[8] + 311 397 705 c[9] - 271 770 147 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 986 c[6] +
42 473 316 c[7] - 152 868 196 c[8] + 312 213 209 c[9] - 273 368 403 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 954 c[6] +
42 472 100 c[7] - 152 851 044 c[8] + 312 106 905 c[9] - 273 124 467 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 802 c[6] +
42 489 924 c[7] - 153 036 804 c[8] + 313 066 985 c[9] - 275 093 379 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 770 c[6] +
42 488 644 c[7] - 153 017 668 c[8] + 312 940 265 c[9] - 274 779 747 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 398 c[5] - 7 421 586 c[6] +
42 505 252 c[7] - 153 186 276 c[8] + 313 794 041 c[9] - 276 504 723 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 902 c[5] - 7 408 826 c[6] +
42 330 884 c[7] - 151 851 180 c[8] + 308 362 505 c[9] - 267 330 987 c[10] }

```

Array[c, 10].g

```

49 c[1] - 4067 c[2] + 148 372 c[3] - 3 120 180 c[4] + 41 643 966 c[5] - 365 419 026 c[6] +
2 105 388 228 c[7] - 7 668 135 924 c[8] + 15 988 066 105 c[9] - 14 501 624 931 c[10]

```

cert = Flatten[Array[c, 10] /. FindInstance[

```

49 c[1] - 4067 c[2] + 148 372 c[3] - 3 120 180 c[4] + 41 643 966 c[5] - 365 419 026 c[6] +
2 105 388 228 c[7] - 7 668 135 924 c[8] + 15 988 066 105 c[9] - 14 501 624 931 c[10] <
0 && c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 790 c[5] - 7 454 938 c[6] +
42 927 556 c[7] - 156 164 620 c[8] + 324 877 545 c[9] - 293 489 163 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 806 c[5] - 7 455 754 c[6] +
42 944 036 c[7] - 156 329 260 c[8] + 325 690 489 c[9] - 295 074 747 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 806 c[5] - 7 455 722 c[6] +
42 942 756 c[7] - 156 310 380 c[8] + 325 568 889 c[9] - 294 786 459 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 806 c[5] - 7 455 722 c[6] +
42 942 820 c[7] - 156 312 364 c[8] + 325 589 305 c[9] - 294 856 155 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 058 c[6] +
42 772 420 c[7] - 155 038 260 c[8] + 320 571 081 c[9] - 286 724 691 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 026 c[6] +
42 771 076 c[7] - 155 017 268 c[8] + 320 426 505 c[9] - 286 354 035 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 443 026 c[6] +
42 771 076 c[7] - 155 017 140 c[8] + 320 423 945 c[9] - 286 341 363 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 310 c[5] - 7 442 994 c[6] +
42 769 796 c[7] - 154 998 260 c[8] + 320 302 345 c[9] - 286 053 075 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 874 c[6] +
42 788 964 c[7] - 155 204 884 c[8] + 321 404 441 c[9] - 288 379 971 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 842 c[6] +
42 787 620 c[7] - 155 183 892 c[8] + 321 259 865 c[9] - 288 009 315 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 842 c[6] +
42 787 684 c[7] - 155 185 876 c[8] + 321 280 281 c[9] - 288 079 011 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 810 c[6] +
42 786 340 c[7] - 155 165 012 c[8] + 321 138 265 c[9] - 287 721 027 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 810 c[6] +
42 786 340 c[7] - 155 164 884 c[8] + 321 135 705 c[9] - 287 708 355 c[10] ≥ 0 &&

```

```

c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 778 c[6] +
  42 785 060 c[7] - 155 145 876 c[8] + 321 011 545 c[9] - 287 407 395 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 626 c[6] +
  42 802 820 c[7] - 155 329 524 c[8] + 321 948 649 c[9] - 289 293 939 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 626 c[6] +
  42 802 884 c[7] - 155 331 508 c[8] + 321 969 065 c[9] - 289 363 635 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 594 c[6] +
  42 801 604 c[7] - 155 312 500 c[8] + 321 844 905 c[9] - 289 062 675 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 930 c[6] +
  42 631 140 c[7] - 154 036 540 c[8] + 316 808 825 c[9] - 280 874 187 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 898 c[6] +
  42 629 796 c[7] - 154 015 548 c[8] + 316 664 249 c[9] - 280 503 531 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 898 c[6] +
  42 629 860 c[7] - 154 017 532 c[8] + 316 684 665 c[9] - 280 573 227 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 898 c[6] +
  42 629 860 c[7] - 154 017 404 c[8] + 316 682 105 c[9] - 280 560 555 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 866 c[6] +
  42 628 580 c[7] - 153 998 396 c[8] + 316 557 945 c[9] - 280 259 595 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 746 c[6] +
  42 647 684 c[7] - 154 203 292 c[8] + 317 644 745 c[9] - 282 542 139 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 746 c[6] +
  42 647 748 c[7] - 154 205 148 c[8] + 317 662 601 c[9] - 282 599 163 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 714 c[6] +
  42 646 404 c[7] - 154 184 156 c[8] + 317 518 025 c[9] - 282 228 507 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 682 c[6] +
  42 645 060 c[7] - 154 163 036 c[8] + 317 370 889 c[9] - 281 845 179 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 682 c[6] +
  42 645 124 c[7] - 154 165 020 c[8] + 317 391 305 c[9] - 281 914 875 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 350 c[5] - 7 419 170 c[6] +
  42 456 836 c[7] - 152 703 428 c[8] + 311 397 705 c[9] - 271 770 147 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 986 c[6] +
  42 473 316 c[7] - 152 868 196 c[8] + 312 213 209 c[9] - 273 368 403 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 954 c[6] +
  42 472 100 c[7] - 152 851 044 c[8] + 312 106 905 c[9] - 273 124 467 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 802 c[6] +
  42 489 924 c[7] - 153 036 804 c[8] + 313 066 985 c[9] - 275 093 379 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 770 c[6] +
  42 488 644 c[7] - 153 017 668 c[8] + 312 940 265 c[9] - 274 779 747 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 398 c[5] - 7 421 586 c[6] +
  42 505 252 c[7] - 153 186 276 c[8] + 313 794 041 c[9] - 276 504 723 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 902 c[5] - 7 408 826 c[6] +
  42 330 884 c[7] - 151 851 180 c[8] + 308 362 505 c[9] -
  267 330 987 c[10] ≥ 0, Array[c, 10], Integers]]

```

```
{0, 0, 0, 0, 0, 0, 0, 0, 0, 2238, 2468}
```

```
GCD[0, 0, 0, 0, 0, 0, 0, 0, 0, 2238, 2468]
```

```
cert = cert / 2
```

```
{0, 0, 0, 0, 0, 0, 0, 0, 0, 1119, 1234}
```

```
cert.g
```

```
-4 359 193 359
```

```
{0, 0, 0, 0, 0, 0, 0, 0, 0, 1119, 1234}.Reverse[gpart[listdim17[[124]]]
```

```
-4 359 193 359
```

```
cert.Transpose[A]
```

```
{1 372 345 713, 325 419 393, 545 096 385, 481 937 025, 4 900 770 945, 5 196 379 905,
 5 209 152 513, 5 428 829 505, 3 790 685 265, 4 086 294 225, 4 023 134 865, 4 305 971 217,
 4 318 743 825, 4 551 193 425, 3 271 817 505, 3 208 658 145, 3 441 107 745, 7 910 328 417,
 8 205 937 377, 8 142 778 017, 8 155 550 625, 8 388 000 225, 6 787 470 129, 6 737 083 377,
 7 032 692 337, 7 341 073 905, 7 277 914 545, 13 089 670 497, 12 029 971 569,
 12 212 034 417, 10 856 726 529, 11 101 948 737, 9 928 703 697, 15 171 205 137}
```

```
chi = listdim17[[125]]
```

$$(-12 + x) (-9 + x)^{10} (5 + x)^{32} (-811 + 271 x - 29 x^2 + x^3)^2$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-41 153, 26 781, -6626, 786, -45, 1},
 {-41 361, 26 797, -6626, 786, -45, 1}, {-40 393, 26 621, -6618, 786, -45, 1},
 {-39 249, 26 429, -6610, 786, -45, 1}, {-39 425, 26 445, -6610, 786, -45, 1},
 {-38 313, 26 253, -6602, 786, -45, 1}, {-37 521, 26 093, -6594, 786, -45, 1}}
```

```
A = {{-41 153, 26 781, -6626, 786, -45, 1},
      {-41 361, 26 797, -6626, 786, -45, 1}, {-40 393, 26 621, -6618, 786, -45, 1},
      {-39 249, 26 429, -6610, 786, -45, 1}, {-39 425, 26 445, -6610, 786, -45, 1},
      {-38 313, 26 253, -6602, 786, -45, 1}, {-37 521, 26 093, -6594, 786, -45, 1}};
```

```
A // MatrixForm
```

$$\begin{pmatrix} -41\,153 & 26\,781 & -6626 & 786 & -45 & 1 \\ -41\,361 & 26\,797 & -6626 & 786 & -45 & 1 \\ -40\,393 & 26\,621 & -6618 & 786 & -45 & 1 \\ -39\,249 & 26\,429 & -6610 & 786 & -45 & 1 \\ -39\,425 & 26\,445 & -6610 & 786 & -45 & 1 \\ -38\,313 & 26\,253 & -6602 & 786 & -45 & 1 \\ -37\,521 & 26\,093 & -6594 & 786 & -45 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1 987 041, 1 305 773, -324 338, 38 514, -2205, 49}
```

Array[c, 6].Transpose[A]

```
{-41 153 c[1] + 26 781 c[2] - 6626 c[3] + 786 c[4] - 45 c[5] + c[6],
 -41 361 c[1] + 26 797 c[2] - 6626 c[3] + 786 c[4] - 45 c[5] + c[6],
 -40 393 c[1] + 26 621 c[2] - 6618 c[3] + 786 c[4] - 45 c[5] + c[6],
 -39 249 c[1] + 26 429 c[2] - 6610 c[3] + 786 c[4] - 45 c[5] + c[6],
 -39 425 c[1] + 26 445 c[2] - 6610 c[3] + 786 c[4] - 45 c[5] + c[6],
 -38 313 c[1] + 26 253 c[2] - 6602 c[3] + 786 c[4] - 45 c[5] + c[6],
 -37 521 c[1] + 26 093 c[2] - 6594 c[3] + 786 c[4] - 45 c[5] + c[6]}
```

Array[c, 6].g

```
-1 987 041 c[1] + 1 305 773 c[2] - 324 338 c[3] + 38 514 c[4] - 2205 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```
-1 987 041 c[1] + 1 305 773 c[2] - 324 338 c[3] + 38 514 c[4] - 2205 c[5] + 49 c[6] < 0 &&
 -41 153 c[1] + 26 781 c[2] - 6626 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -41 361 c[1] + 26 797 c[2] - 6626 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -40 393 c[1] + 26 621 c[2] - 6618 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -39 249 c[1] + 26 429 c[2] - 6610 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -39 425 c[1] + 26 445 c[2] - 6610 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -38 313 c[1] + 26 253 c[2] - 6602 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -37 521 c[1] + 26 093 c[2] - 6594 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0,
```

Array[c, 6], Integers]]

```
{-1, -32 660, -718 522, 0, 0, -3 885 730 122}
```

GCD[-1, -32 660, -718 522, 0, 0, -3 885 730 122]

```
1
```

Reverse[cert]

```
{-3 885 730 122, 0, 0, -718 522, -32 660, -1}
```

cert.g

```
-1 346 681
```

```
{-1, -32 660, -718 522, 0, 0, -3 885 730 122}.gpart[listdim17[[125]]]
```

```
-1 346 681
```

cert.Transpose[A]

```
{570 343, 47 991, 47 007, 568 407, 46 023, 567 455, 44 087}
```

chi = listdim17[[126]]

```
(-12 + x) (-11 + x)2 (-9 + x)8 (-7 + x)2 (5 + x)32 (95 - 20 x + x2)2
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{ {373 065, -282 790, 86 447, -13 700, 1191, -54, 1},
  {363 185, -279 950, 86 183, -13 692, 1191, -54, 1},
  {364 705, -280 270, 86 199, -13 692, 1191, -54, 1},
  {354 825, -277 430, 85 935, -13 684, 1191, -54, 1},
  {356 345, -277 750, 85 951, -13 684, 1191, -54, 1},
  {358 281, -278 102, 85 967, -13 684, 1191, -54, 1},
  {347 985, -275 230, 85 703, -13 676, 1191, -54, 1} }
```

```
A = { {373 065, -282 790, 86 447, -13 700, 1191, -54, 1},
      {363 185, -279 950, 86 183, -13 692, 1191, -54, 1},
      {364 705, -280 270, 86 199, -13 692, 1191, -54, 1},
      {354 825, -277 430, 85 935, -13 684, 1191, -54, 1},
      {356 345, -277 750, 85 951, -13 684, 1191, -54, 1},
      {358 281, -278 102, 85 967, -13 684, 1191, -54, 1},
      {347 985, -275 230, 85 703, -13 676, 1191, -54, 1} };
```

```
A // MatrixForm
```

$$\begin{pmatrix} 373\,065 & -282\,790 & 86\,447 & -13\,700 & 1191 & -54 & 1 \\ 363\,185 & -279\,950 & 86\,183 & -13\,692 & 1191 & -54 & 1 \\ 364\,705 & -280\,270 & 86\,199 & -13\,692 & 1191 & -54 & 1 \\ 354\,825 & -277\,430 & 85\,935 & -13\,684 & 1191 & -54 & 1 \\ 356\,345 & -277\,750 & 85\,951 & -13\,684 & 1191 & -54 & 1 \\ 358\,281 & -278\,102 & 85\,967 & -13\,684 & 1191 & -54 & 1 \\ 347\,985 & -275\,230 & 85\,703 & -13\,676 & 1191 & -54 & 1 \end{pmatrix}$$

```
Dimensions[A]
```

```
{7, 7}
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{17 930 265, -13 750 710, 4 225 471, -670 964, 58 359, -2646, 49}
```

```
Array[c, 7].Transpose[A]
```

```
{ 373 065 c[1] - 282 790 c[2] + 86 447 c[3] - 13 700 c[4] + 1191 c[5] - 54 c[6] + c[7],
  363 185 c[1] - 279 950 c[2] + 86 183 c[3] - 13 692 c[4] + 1191 c[5] - 54 c[6] + c[7],
  364 705 c[1] - 280 270 c[2] + 86 199 c[3] - 13 692 c[4] + 1191 c[5] - 54 c[6] + c[7],
  354 825 c[1] - 277 430 c[2] + 85 935 c[3] - 13 684 c[4] + 1191 c[5] - 54 c[6] + c[7],
  356 345 c[1] - 277 750 c[2] + 85 951 c[3] - 13 684 c[4] + 1191 c[5] - 54 c[6] + c[7],
  358 281 c[1] - 278 102 c[2] + 85 967 c[3] - 13 684 c[4] + 1191 c[5] - 54 c[6] + c[7],
  347 985 c[1] - 275 230 c[2] + 85 703 c[3] - 13 676 c[4] + 1191 c[5] - 54 c[6] + c[7] }
```

```
Array[c, 7].g
```

```
17 930 265 c[1] - 13 750 710 c[2] + 4 225 471 c[3] -
670 964 c[4] + 58 359 c[5] - 2646 c[6] + 49 c[7]
```

```
cert =
  Flatten[Array[c, 7] /. FindInstance[17 930 265 c[1] - 13 750 710 c[2] + 4 225 471 c[3] -
    670 964 c[4] + 58 359 c[5] - 2646 c[6] + 49 c[7] < 0 &&
    373 065 c[1] - 282 790 c[2] + 86 447 c[3] - 13 700 c[4] + 1191 c[5] - 54 c[6] + c[7] ≥
    0 && 363 185 c[1] - 279 950 c[2] + 86 183 c[3] - 13 692 c[4] +
    1191 c[5] - 54 c[6] + c[7] ≥ 0 && 364 705 c[1] - 280 270 c[2] +
    86 199 c[3] - 13 692 c[4] + 1191 c[5] - 54 c[6] + c[7] ≥ 0 &&
    354 825 c[1] - 277 430 c[2] + 85 935 c[3] - 13 684 c[4] + 1191 c[5] - 54 c[6] + c[7] ≥
    0 && 356 345 c[1] - 277 750 c[2] + 85 951 c[3] -
    13 684 c[4] + 1191 c[5] - 54 c[6] + c[7] ≥ 0 &&
    358 281 c[1] - 278 102 c[2] + 85 967 c[3] - 13 684 c[4] + 1191 c[5] - 54 c[6] + c[7] ≥
    0 && 347 985 c[1] - 275 230 c[2] + 85 703 c[3] - 13 676 c[4] +
    1191 c[5] - 54 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-57 247, -744 219, -9 445 854, -118 216 298, 0, 0, -992 098 071 642}
```

```
GCD[-57 247, -744 219, -9 445 854, -118 216 298, 0, 0, -992 098 071 642]
```

```
1
```

```
Reverse[cert]
```

```
{-992 098 071 642, 0, 0, -118 216 298, -9 445 854, -744 219, -57 247}
```

```
cert.g
```

```
-21 721 385
```

```
{-57 247, -744 219, -9 445 854, -118 216 298, 0, 0, -992 098 071 642}.
```

```
gpart[listdim17[[126]]
```

```
-21 721 385
```

```
cert.Transpose[A]
```

```
{309 175, 302 647, 303 623, 297 095, 298 071, 299 303, 292 519}
```

```
chi = listdim17[[127]]
```

```
 $(-11 + x)^3 (-9 + x)^{12} (5 + x)^{32} (72 - 19 x + x^2)$ 
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {3291, -1966, 404, -34, 1}, {3307, -1966, 404, -34, 1},
  {3323, -1966, 404, -34, 1}, {3339, -1966, 404, -34, 1}, {3187, -1958, 404, -34, 1},
  {3203, -1958, 404, -34, 1}, {3219, -1958, 404, -34, 1}, {3235, -1958, 404, -34, 1},
  {3251, -1958, 404, -34, 1}, {3267, -1958, 404, -34, 1}, {3083, -1950, 404, -34, 1},
  {3099, -1950, 404, -34, 1}, {3115, -1950, 404, -34, 1}, {3131, -1950, 404, -34, 1},
  {3147, -1950, 404, -34, 1}, {3163, -1950, 404, -34, 1}, {3179, -1950, 404, -34, 1},
  {2979, -1942, 404, -34, 1}, {2995, -1942, 404, -34, 1}, {3011, -1942, 404, -34, 1},
  {3027, -1942, 404, -34, 1}, {3043, -1942, 404, -34, 1}, {3059, -1942, 404, -34, 1},
  {3075, -1942, 404, -34, 1}, {3091, -1942, 404, -34, 1}, {2907, -1934, 404, -34, 1},
  {2923, -1934, 404, -34, 1}, {2939, -1934, 404, -34, 1}, {2955, -1934, 404, -34, 1},
  {2971, -1934, 404, -34, 1}, {2987, -1934, 404, -34, 1}, {3003, -1934, 404, -34, 1},
  {2835, -1926, 404, -34, 1}, {2851, -1926, 404, -34, 1}, {2867, -1926, 404, -34, 1},
  {2883, -1926, 404, -34, 1}, {2899, -1926, 404, -34, 1}, {2915, -1926, 404, -34, 1},
  {2763, -1918, 404, -34, 1}, {2779, -1918, 404, -34, 1}, {2795, -1918, 404, -34, 1},
  {2811, -1918, 404, -34, 1}, {2827, -1918, 404, -34, 1}, {2691, -1910, 404, -34, 1},
  {2707, -1910, 404, -34, 1}, {2723, -1910, 404, -34, 1}, {2739, -1910, 404, -34, 1},
  {2619, -1902, 404, -34, 1}, {2635, -1902, 404, -34, 1}, {2651, -1902, 404, -34, 1},
  {2547, -1894, 404, -34, 1}, {2563, -1894, 404, -34, 1}, {2475, -1886, 404, -34, 1}}
```

```
A = { {3291, -1966, 404, -34, 1}, {3307, -1966, 404, -34, 1},
  {3323, -1966, 404, -34, 1}, {3339, -1966, 404, -34, 1},
  {3187, -1958, 404, -34, 1}, {3203, -1958, 404, -34, 1},
  {3219, -1958, 404, -34, 1}, {3235, -1958, 404, -34, 1},
  {3251, -1958, 404, -34, 1}, {3267, -1958, 404, -34, 1},
  {3083, -1950, 404, -34, 1}, {3099, -1950, 404, -34, 1},
  {3115, -1950, 404, -34, 1}, {3131, -1950, 404, -34, 1},
  {3147, -1950, 404, -34, 1}, {3163, -1950, 404, -34, 1},
  {3179, -1950, 404, -34, 1}, {2979, -1942, 404, -34, 1},
  {2995, -1942, 404, -34, 1}, {3011, -1942, 404, -34, 1},
  {3027, -1942, 404, -34, 1}, {3043, -1942, 404, -34, 1},
  {3059, -1942, 404, -34, 1}, {3075, -1942, 404, -34, 1},
  {3091, -1942, 404, -34, 1}, {2907, -1934, 404, -34, 1},
  {2923, -1934, 404, -34, 1}, {2939, -1934, 404, -34, 1},
  {2955, -1934, 404, -34, 1}, {2971, -1934, 404, -34, 1},
  {2987, -1934, 404, -34, 1}, {3003, -1934, 404, -34, 1},
  {2835, -1926, 404, -34, 1}, {2851, -1926, 404, -34, 1},
  {2867, -1926, 404, -34, 1}, {2883, -1926, 404, -34, 1},
  {2899, -1926, 404, -34, 1}, {2915, -1926, 404, -34, 1},
  {2763, -1918, 404, -34, 1}, {2779, -1918, 404, -34, 1},
  {2795, -1918, 404, -34, 1}, {2811, -1918, 404, -34, 1},
  {2827, -1918, 404, -34, 1}, {2691, -1910, 404, -34, 1},
  {2707, -1910, 404, -34, 1}, {2723, -1910, 404, -34, 1},
  {2739, -1910, 404, -34, 1}, {2619, -1902, 404, -34, 1},
  {2635, -1902, 404, -34, 1}, {2651, -1902, 404, -34, 1}, {2547, -1894,
    404, -34, 1}, {2563, -1894, 404, -34, 1}, {2475, -1886, 404, -34, 1}};
```

```
A // MatrixForm
```



```
( 3291 -1966 404 -34 1 )
  3307 -1966 404 -34 1
  3323 -1966 404 -34 1
  3339 -1966 404 -34 1
  3187 -1958 404 -34 1
  3203 -1958 404 -34 1
  3219 -1958 404 -34 1
  3235 -1958 404 -34 1
  3251 -1958 404 -34 1
  3267 -1958 404 -34 1
  3083 -1950 404 -34 1
  3099 -1950 404 -34 1
  3115 -1950 404 -34 1
  3131 -1950 404 -34 1
  3147 -1950 404 -34 1
  3163 -1950 404 -34 1
  3179 -1950 404 -34 1
  2979 -1942 404 -34 1
  2995 -1942 404 -34 1
  3011 -1942 404 -34 1
  3027 -1942 404 -34 1
  3043 -1942 404 -34 1
  3059 -1942 404 -34 1
  3075 -1942 404 -34 1
  3091 -1942 404 -34 1
  2907 -1934 404 -34 1
  2923 -1934 404 -34 1
  2939 -1934 404 -34 1
  2955 -1934 404 -34 1
  2971 -1934 404 -34 1
  2987 -1934 404 -34 1
  3003 -1934 404 -34 1
  2835 -1926 404 -34 1
  2851 -1926 404 -34 1
  2867 -1926 404 -34 1
  2883 -1926 404 -34 1
  2899 -1926 404 -34 1
  2915 -1926 404 -34 1
  2763 -1918 404 -34 1
  2779 -1918 404 -34 1
  2795 -1918 404 -34 1
  2811 -1918 404 -34 1
  2827 -1918 404 -34 1
  2691 -1910 404 -34 1
  2707 -1910 404 -34 1
  2723 -1910 404 -34 1
  2739 -1910 404 -34 1
  2619 -1902 404 -34 1
  2635 -1902 404 -34 1
  2651 -1902 404 -34 1
  2547 -1894 404 -34 1
  2563 -1894 404 -34 1
  2475 -1886 404 -34 1 )
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{161451, -96206, 19796, -1666, 49}
```

```
Array[c, 5].Transpose[A]
```

```
{3291 c[1] - 1966 c[2] + 404 c[3] - 34 c[4] + c[5],
 3307 c[1] - 1966 c[2] + 404 c[3] - 34 c[4] + c[5],
 3323 c[1] - 1966 c[2] + 404 c[3] - 34 c[4] + c[5],
 3339 c[1] - 1966 c[2] + 404 c[3] - 34 c[4] + c[5],
 3187 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5],
 3203 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5],
 3219 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5],
 3235 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5],
 3251 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5],
 3267 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5],
 3083 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5],
 3099 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5],
 3115 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5],
 3131 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5],
 3147 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5],
 3163 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5],
 3179 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5],
 2979 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5],
 2995 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5],
 3011 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5],
 3027 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5],
 3043 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5],
 3059 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5],
 3075 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5],
 3091 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5],
 2907 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5],
 2923 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5],
 2939 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5],
 2955 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5],
 2971 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5],
 2987 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5],
 3003 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5],
 2835 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5],
 2851 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5],
 2867 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5],
 2883 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5],
 2899 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5],
 2915 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5],
 2763 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5],
 2779 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5],
 2795 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5],
 2811 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5],
 2827 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5],
```

```

2691 c[1] - 1910 c[2] + 404 c[3] - 34 c[4] + c[5] ,
2707 c[1] - 1910 c[2] + 404 c[3] - 34 c[4] + c[5] ,
2723 c[1] - 1910 c[2] + 404 c[3] - 34 c[4] + c[5] ,
2739 c[1] - 1910 c[2] + 404 c[3] - 34 c[4] + c[5] ,
2619 c[1] - 1902 c[2] + 404 c[3] - 34 c[4] + c[5] ,
2635 c[1] - 1902 c[2] + 404 c[3] - 34 c[4] + c[5] ,
2651 c[1] - 1902 c[2] + 404 c[3] - 34 c[4] + c[5] ,
2547 c[1] - 1894 c[2] + 404 c[3] - 34 c[4] + c[5] ,
2563 c[1] - 1894 c[2] + 404 c[3] - 34 c[4] + c[5] ,
2475 c[1] - 1886 c[2] + 404 c[3] - 34 c[4] + c[5] }

```

Array[c, 5].g

```
161 451 c[1] - 96 206 c[2] + 19 796 c[3] - 1666 c[4] + 49 c[5]
```

cert = Flatten[Array[c, 5] /.

```

FindInstance[161 451 c[1] - 96 206 c[2] + 19 796 c[3] - 1666 c[4] + 49 c[5] < 0 &&
  3291 c[1] - 1966 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3307 c[1] - 1966 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3323 c[1] - 1966 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3339 c[1] - 1966 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3187 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3203 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3219 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3235 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3251 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3267 c[1] - 1958 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3083 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3099 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3115 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3131 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3147 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3163 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3179 c[1] - 1950 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  2979 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  2995 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3011 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3027 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3043 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3059 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3075 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  3091 c[1] - 1942 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  2907 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  2923 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  2939 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  2955 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  2971 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
  2987 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&

```

```

3003 c[1] - 1934 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2835 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2851 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2867 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2883 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2899 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2915 c[1] - 1926 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2763 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2779 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2795 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2811 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2827 c[1] - 1918 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2691 c[1] - 1910 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2707 c[1] - 1910 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2723 c[1] - 1910 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2739 c[1] - 1910 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2619 c[1] - 1902 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2635 c[1] - 1902 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2651 c[1] - 1902 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2547 c[1] - 1894 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2563 c[1] - 1894 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0 &&
2475 c[1] - 1886 c[2] + 404 c[3] - 34 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{c[1], c[2], c[3], c[4], c[5]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[128]]
```

```
(-11 + x)3 (-9 + x)10 (5 + x)32 (5864 - 2835 x + 495 x2 - 37 x3 + x4)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

{{268523, -218996, 71435, -11992, 1097, -52, 1},
 {268587, -218996, 71435, -11992, 1097, -52, 1},
 {268171, -218964, 71435, -11992, 1097, -52, 1},
 {268235, -218964, 71435, -11992, 1097, -52, 1},
 {270043, -219316, 71451, -11992, 1097, -52, 1},
 {270107, -219316, 71451, -11992, 1097, -52, 1},
 {270171, -219316, 71451, -11992, 1097, -52, 1},
 {269755, -219284, 71451, -11992, 1097, -52, 1},

```

```

{269 819, -219 284, 71 451, -11 992, 1097, -52, 1},
{269 467, -219 252, 71 451, -11 992, 1097, -52, 1},
{270 987, -219 572, 71 467, -11 992, 1097, -52, 1},
{271 051, -219 572, 71 467, -11 992, 1097, -52, 1},
{270 699, -219 540, 71 467, -11 992, 1097, -52, 1},
{260 451, -216 508, 71 187, -11 984, 1097, -52, 1},
{260 099, -216 476, 71 187, -11 984, 1097, -52, 1},
{260 163, -216 476, 71 187, -11 984, 1097, -52, 1},
{259 875, -216 444, 71 187, -11 984, 1097, -52, 1},
{262 323, -216 860, 71 203, -11 984, 1097, -52, 1},
{262 035, -216 828, 71 203, -11 984, 1097, -52, 1},
{261 683, -216 796, 71 203, -11 984, 1097, -52, 1},
{261 747, -216 796, 71 203, -11 984, 1097, -52, 1},
{261 395, -216 764, 71 203, -11 984, 1097, -52, 1},
{261 459, -216 764, 71 203, -11 984, 1097, -52, 1},
{261 107, -216 732, 71 203, -11 984, 1097, -52, 1},
{263 619, -217 148, 71 219, -11 984, 1097, -52, 1},
{263 267, -217 116, 71 219, -11 984, 1097, -52, 1},
{263 331, -217 116, 71 219, -11 984, 1097, -52, 1},
{262 979, -217 084, 71 219, -11 984, 1097, -52, 1},
{263 043, -217 084, 71 219, -11 984, 1097, -52, 1},
{262 627, -217 052, 71 219, -11 984, 1097, -52, 1},
{262 691, -217 052, 71 219, -11 984, 1097, -52, 1},
{265 203, -217 468, 71 235, -11 984, 1097, -52, 1},
{264 915, -217 436, 71 235, -11 984, 1097, -52, 1},
{264 563, -217 404, 71 235, -11 984, 1097, -52, 1},
{264 627, -217 404, 71 235, -11 984, 1097, -52, 1},
{264 211, -217 372, 71 235, -11 984, 1097, -52, 1},
{264 275, -217 372, 71 235, -11 984, 1097, -52, 1},
{263 923, -217 340, 71 235, -11 984, 1097, -52, 1},
{265 795, -217 692, 71 251, -11 984, 1097, -52, 1},
{265 859, -217 692, 71 251, -11 984, 1097, -52, 1},
{265 507, -217 660, 71 251, -11 984, 1097, -52, 1},
{265 155, -217 628, 71 251, -11 984, 1097, -52, 1},
{266 739, -217 948, 71 267, -11 984, 1097, -52, 1},
{252 027, -213 988, 70 939, -11 976, 1097, -52, 1},
{253 611, -214 308, 70 955, -11 976, 1097, -52, 1},
{253 323, -214 276, 70 955, -11 976, 1097, -52, 1},
{253 035, -214 244, 70 955, -11 976, 1097, -52, 1},
{254 907, -214 596, 70 971, -11 976, 1097, -52, 1},
{254 555, -214 564, 70 971, -11 976, 1097, -52, 1},
{254 619, -214 564, 70 971, -11 976, 1097, -52, 1},
{254 331, -214 532, 70 971, -11 976, 1097, -52, 1},
{256 491, -214 916, 70 987, -11 976, 1097, -52, 1},
{256 139, -214 884, 70 987, -11 976, 1097, -52, 1},
{256 203, -214 884, 70 987, -11 976, 1097, -52, 1},
{255 851, -214 852, 70 987, -11 976, 1097, -52, 1},

```

```

{255 915, -214 852, 70 987, -11 976, 1097, -52, 1},
{255 563, -214 820, 70 987, -11 976, 1097, -52, 1},
{258 075, -215 236, 71 003, -11 976, 1097, -52, 1},
{257 787, -215 204, 71 003, -11 976, 1097, -52, 1},
{257 435, -215 172, 71 003, -11 976, 1097, -52, 1},
{257 499, -215 172, 71 003, -11 976, 1097, -52, 1},
{257 083, -215 140, 71 003, -11 976, 1097, -52, 1},
{257 147, -215 140, 71 003, -11 976, 1097, -52, 1},
{259 371, -215 524, 71 019, -11 976, 1097, -52, 1},
{259 019, -215 492, 71 019, -11 976, 1097, -52, 1},
{259 083, -215 492, 71 019, -11 976, 1097, -52, 1},
{258 731, -215 460, 71 019, -11 976, 1097, -52, 1},
{258 379, -215 428, 71 019, -11 976, 1097, -52, 1},
{260 955, -215 844, 71 035, -11 976, 1097, -52, 1},
{260 603, -215 812, 71 035, -11 976, 1097, -52, 1},
{260 667, -215 812, 71 035, -11 976, 1097, -52, 1},
{260 315, -215 780, 71 035, -11 976, 1097, -52, 1},
{259 963, -215 748, 71 035, -11 976, 1097, -52, 1},
{259 611, -215 716, 71 035, -11 976, 1097, -52, 1},
{261 899, -216 100, 71 051, -11 976, 1097, -52, 1},
{261 547, -216 068, 71 051, -11 976, 1097, -52, 1},
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{247 779, -212 364, 70 739, -11 968, 1097, -52, 1},
{247 491, -212 332, 70 739, -11 968, 1097, -52, 1},
{249 363, -212 684, 70 755, -11 968, 1097, -52, 1},
{249 075, -212 652, 70 755, -11 968, 1097, -52, 1},
{248 723, -212 620, 70 755, -11 968, 1097, -52, 1},
{248 787, -212 620, 70 755, -11 968, 1097, -52, 1},
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{250 659, -212 972, 70 771, -11 968, 1097, -52, 1},
{250 307, -212 940, 70 771, -11 968, 1097, -52, 1},
{250 371, -212 940, 70 771, -11 968, 1097, -52, 1},
{250 019, -212 908, 70 771, -11 968, 1097, -52, 1},
{252 243, -213 292, 70 787, -11 968, 1097, -52, 1},
{251 891, -213 260, 70 787, -11 968, 1097, -52, 1},
{251 955, -213 260, 70 787, -11 968, 1097, -52, 1},
{251 603, -213 228, 70 787, -11 968, 1097, -52, 1},
{251 251, -213 196, 70 787, -11 968, 1097, -52, 1},
{253 827, -213 612, 70 803, -11 968, 1097, -52, 1},
{253 539, -213 580, 70 803, -11 968, 1097, -52, 1},
{253 187, -213 548, 70 803, -11 968, 1097, -52, 1},
{252 835, -213 516, 70 803, -11 968, 1097, -52, 1},
{255 411, -213 932, 70 819, -11 968, 1097, -52, 1},
{255 123, -213 900, 70 819, -11 968, 1097, -52, 1},
{254 771, -213 868, 70 819, -11 968, 1097, -52, 1},
{254 419, -213 836, 70 819, -11 968, 1097, -52, 1},
{256 707, -214 220, 70 835, -11 968, 1097, -52, 1},

```

```

{256 355, -214 188, 70 835, -11 968, 1097, -52, 1},
{240 651, -210 132, 70 507, -11 960, 1097, -52, 1},
{242 235, -210 452, 70 523, -11 960, 1097, -52, 1},
{241 947, -210 420, 70 523, -11 960, 1097, -52, 1},
{241 659, -210 388, 70 523, -11 960, 1097, -52, 1},
{243 531, -210 740, 70 539, -11 960, 1097, -52, 1},
{243 179, -210 708, 70 539, -11 960, 1097, -52, 1},
{243 243, -210 708, 70 539, -11 960, 1097, -52, 1},
{245 115, -211 060, 70 555, -11 960, 1097, -52, 1},
{244 827, -211 028, 70 555, -11 960, 1097, -52, 1},
{244 475, -210 996, 70 555, -11 960, 1097, -52, 1},
{246 699, -211 380, 70 571, -11 960, 1097, -52, 1},
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233 739	-207 204	70 123	-11 944	1097	-52	1
235 323	-207 524	70 139	-11 944	1097	-52	1
225 027	-204 652	69 875	-11 936	1097	-52	1
226 611	-204 972	69 891	-11 936	1097	-52	1
217 899	-202 420	69 643	-11 928	1097	-52	1

Dimensions[A]

{142, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{13 156 987, -10 721 588, 3 498 075, -587 480, 53 753, -2548, 49}

Array[c, 7].Transpose[A]

{268 523 c[1] - 218 996 c[2] + 71 435 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
268 587 c[1] - 218 996 c[2] + 71 435 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
268 171 c[1] - 218 964 c[2] + 71 435 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
268 235 c[1] - 218 964 c[2] + 71 435 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
270 043 c[1] - 219 316 c[2] + 71 451 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
270 107 c[1] - 219 316 c[2] + 71 451 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
270 171 c[1] - 219 316 c[2] + 71 451 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
269 755 c[1] - 219 284 c[2] + 71 451 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
269 819 c[1] - 219 284 c[2] + 71 451 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
269 467 c[1] - 219 252 c[2] + 71 451 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
270 987 c[1] - 219 572 c[2] + 71 467 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
271 051 c[1] - 219 572 c[2] + 71 467 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
270 699 c[1] - 219 540 c[2] + 71 467 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
260 451 c[1] - 216 508 c[2] + 71 187 c[3] - 11 984 c[4] + 1097 c[5] - 52 c[6] + c[7],
260 099 c[1] - 216 476 c[2] + 71 187 c[3] - 11 984 c[4] + 1097 c[5] - 52 c[6] + c[7],

[illegible]

$257\,147\,c[1] - 215\,140\,c[2] + 71\,003\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $259\,371\,c[1] - 215\,524\,c[2] + 71\,019\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $259\,019\,c[1] - 215\,492\,c[2] + 71\,019\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $259\,083\,c[1] - 215\,492\,c[2] + 71\,019\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $258\,731\,c[1] - 215\,460\,c[2] + 71\,019\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $258\,379\,c[1] - 215\,428\,c[2] + 71\,019\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $260\,955\,c[1] - 215\,844\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $260\,603\,c[1] - 215\,812\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $260\,667\,c[1] - 215\,812\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $260\,315\,c[1] - 215\,780\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $259\,963\,c[1] - 215\,748\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $259\,611\,c[1] - 215\,716\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $261\,899\,c[1] - 216\,100\,c[2] + 71\,051\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $261\,547\,c[1] - 216\,068\,c[2] + 71\,051\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $246\,195\,c[1] - 212\,044\,c[2] + 70\,723\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $247\,779\,c[1] - 212\,364\,c[2] + 70\,739\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $247\,491\,c[1] - 212\,332\,c[2] + 70\,739\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $249\,363\,c[1] - 212\,684\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $249\,075\,c[1] - 212\,652\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $248\,723\,c[1] - 212\,620\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $248\,787\,c[1] - 212\,620\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $250\,947\,c[1] - 213\,004\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $250\,659\,c[1] - 212\,972\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $250\,307\,c[1] - 212\,940\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $250\,371\,c[1] - 212\,940\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $250\,019\,c[1] - 212\,908\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $252\,243\,c[1] - 213\,292\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $251\,891\,c[1] - 213\,260\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $251\,955\,c[1] - 213\,260\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $251\,603\,c[1] - 213\,228\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $251\,251\,c[1] - 213\,196\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $253\,827\,c[1] - 213\,612\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $253\,539\,c[1] - 213\,580\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $253\,187\,c[1] - 213\,548\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $252\,835\,c[1] - 213\,516\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $255\,411\,c[1] - 213\,932\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $255\,123\,c[1] - 213\,900\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $254\,771\,c[1] - 213\,868\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $254\,419\,c[1] - 213\,836\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $256\,707\,c[1] - 214\,220\,c[2] + 70\,835\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $256\,355\,c[1] - 214\,188\,c[2] + 70\,835\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $240\,651\,c[1] - 210\,132\,c[2] + 70\,507\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $242\,235\,c[1] - 210\,452\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $241\,947\,c[1] - 210\,420\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $241\,659\,c[1] - 210\,388\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $243\,531\,c[1] - 210\,740\,c[2] + 70\,539\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $243\,179\,c[1] - 210\,708\,c[2] + 70\,539\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$

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243 243 c[1] - 210 708 c[2] + 70 539 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
245 115 c[1] - 211 060 c[2] + 70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
244 827 c[1] - 211 028 c[2] + 70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
244 475 c[1] - 210 996 c[2] + 70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
246 699 c[1] - 211 380 c[2] + 70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
246 411 c[1] - 211 348 c[2] + 70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
246 059 c[1] - 211 316 c[2] + 70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
245 707 c[1] - 211 284 c[2] + 70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
247 995 c[1] - 211 668 c[2] + 70 587 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
247 643 c[1] - 211 636 c[2] + 70 587 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
249 579 c[1] - 211 988 c[2] + 70 603 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
249 227 c[1] - 211 956 c[2] + 70 603 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
251 163 c[1] - 212 308 c[2] + 70 619 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7],
236 403 c[1] - 208 508 c[2] + 70 307 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
236 115 c[1] - 208 476 c[2] + 70 307 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
237 987 c[1] - 208 828 c[2] + 70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
237 699 c[1] - 208 796 c[2] + 70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
237 347 c[1] - 208 764 c[2] + 70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
239 283 c[1] - 209 116 c[2] + 70 339 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
238 931 c[1] - 209 084 c[2] + 70 339 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
240 867 c[1] - 209 436 c[2] + 70 355 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
240 515 c[1] - 209 404 c[2] + 70 355 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
242 451 c[1] - 209 756 c[2] + 70 371 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7],
229 275 c[1] - 206 276 c[2] + 70 075 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7],
230 859 c[1] - 206 596 c[2] + 70 091 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7],
230 571 c[1] - 206 564 c[2] + 70 091 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7],
232 155 c[1] - 206 884 c[2] + 70 107 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7],
231 803 c[1] - 206 852 c[2] + 70 107 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7],
233 739 c[1] - 207 204 c[2] + 70 123 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7],
235 323 c[1] - 207 524 c[2] + 70 139 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7],
225 027 c[1] - 204 652 c[2] + 69 875 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7],
226 611 c[1] - 204 972 c[2] + 69 891 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7],
217 899 c[1] - 202 420 c[2] + 69 643 c[3] - 11 928 c[4] + 1097 c[5] - 52 c[6] + c[7] }

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Array[c, 7].g

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13 156 987 c[1] - 10 721 588 c[2] + 3 498 075 c[3] -
587 480 c[4] + 53 753 c[5] - 2548 c[6] + 49 c[7]

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cert =

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Flatten[Array[c, 7] /. FindInstance[13 156 987 c[1] - 10 721 588 c[2] + 3 498 075 c[3] -
587 480 c[4] + 53 753 c[5] - 2548 c[6] + 49 c[7] < 0 &&
268 523 c[1] - 218 996 c[2] + 71 435 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 268 587 c[1] - 218 996 c[2] + 71 435 c[3] - 11 992 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 268 171 c[1] - 218 964 c[2] +
71 435 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
268 235 c[1] - 218 964 c[2] + 71 435 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 270 043 c[1] - 219 316 c[2] + 71 451 c[3] - 11 992 c[4] +

```


$$\begin{aligned}
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 270\,107 c[1] - 219\,316 c[2] + \\
& 71\,451 c[3] - 11\,992 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 270\,171 c[1] - 219\,316 c[2] + 71\,451 c[3] - 11\,992 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 269\,755 c[1] - 219\,284 c[2] + 71\,451 c[3] - 11\,992 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 269\,819 c[1] - 219\,284 c[2] + \\
& 71\,451 c[3] - 11\,992 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 269\,467 c[1] - 219\,252 c[2] + 71\,451 c[3] - 11\,992 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 270\,987 c[1] - 219\,572 c[2] + 71\,467 c[3] - 11\,992 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 271\,051 c[1] - 219\,572 c[2] + \\
& 71\,467 c[3] - 11\,992 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 270\,699 c[1] - 219\,540 c[2] + 71\,467 c[3] - 11\,992 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 260\,451 c[1] - 216\,508 c[2] + 71\,187 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 260\,099 c[1] - 216\,476 c[2] + \\
& 71\,187 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 260\,163 c[1] - 216\,476 c[2] + 71\,187 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 259\,875 c[1] - 216\,444 c[2] + 71\,187 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 262\,323 c[1] - 216\,860 c[2] + \\
& 71\,203 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 262\,035 c[1] - 216\,828 c[2] + 71\,203 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 261\,683 c[1] - 216\,796 c[2] + 71\,203 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 261\,747 c[1] - 216\,796 c[2] + \\
& 71\,203 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 261\,395 c[1] - 216\,764 c[2] + 71\,203 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 261\,459 c[1] - 216\,764 c[2] + 71\,203 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 261\,107 c[1] - 216\,732 c[2] + \\
& 71\,203 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 263\,619 c[1] - 217\,148 c[2] + 71\,219 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 263\,267 c[1] - 217\,116 c[2] + 71\,219 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 263\,331 c[1] - 217\,116 c[2] + \\
& 71\,219 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 262\,979 c[1] - 217\,084 c[2] + 71\,219 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 263\,043 c[1] - 217\,084 c[2] + 71\,219 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 262\,627 c[1] - 217\,052 c[2] + \\
& 71\,219 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 262\,691 c[1] - 217\,052 c[2] + 71\,219 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 265\,203 c[1] - 217\,468 c[2] + 71\,235 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 264\,915 c[1] - 217\,436 c[2] + \\
& 71\,235 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 264\,563 c[1] - 217\,404 c[2] + 71\,235 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 264\,627 c[1] - 217\,404 c[2] + 71\,235 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 264\,211 c[1] - 217\,372 c[2] + \\
& 71\,235 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 264\,275 c[1] - 217\,372 c[2] + 71\,235 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 263\,923 c[1] - 217\,340 c[2] + 71\,235 c[3] - 11\,984 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 265\,795 c[1] - 217\,692 c[2] + \\
& 71\,251 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 265\,859 c[1] - 217\,692 c[2] + 71\,251 c[3] - 11\,984 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq
\end{aligned}$$

$$\begin{aligned}
& 0 \ \&\& 265\,507\,c[1] - 217\,660\,c[2] + 71\,251\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 265\,155\,c[1] - 217\,628\,c[2] + \\
& 71\,251\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 266\,739\,c[1] - 217\,948\,c[2] + 71\,267\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 252\,027\,c[1] - 213\,988\,c[2] + 70\,939\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 253\,611\,c[1] - 214\,308\,c[2] + \\
& 70\,955\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 253\,323\,c[1] - 214\,276\,c[2] + 70\,955\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 253\,035\,c[1] - 214\,244\,c[2] + 70\,955\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 254\,907\,c[1] - 214\,596\,c[2] + \\
& 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 254\,555\,c[1] - 214\,564\,c[2] + 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 254\,619\,c[1] - 214\,564\,c[2] + 70\,971\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 254\,331\,c[1] - 214\,532\,c[2] + \\
& 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 256\,491\,c[1] - 214\,916\,c[2] + 70\,987\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 256\,139\,c[1] - 214\,884\,c[2] + 70\,987\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 256\,203\,c[1] - 214\,884\,c[2] + \\
& 70\,987\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 255\,851\,c[1] - 214\,852\,c[2] + 70\,987\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 255\,915\,c[1] - 214\,852\,c[2] + 70\,987\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 255\,563\,c[1] - 214\,820\,c[2] + \\
& 70\,987\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 258\,075\,c[1] - 215\,236\,c[2] + 71\,003\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 257\,787\,c[1] - 215\,204\,c[2] + 71\,003\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 257\,435\,c[1] - 215\,172\,c[2] + \\
& 71\,003\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 257\,499\,c[1] - 215\,172\,c[2] + 71\,003\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 257\,083\,c[1] - 215\,140\,c[2] + 71\,003\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 257\,147\,c[1] - 215\,140\,c[2] + \\
& 71\,003\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 259\,371\,c[1] - 215\,524\,c[2] + 71\,019\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 259\,019\,c[1] - 215\,492\,c[2] + 71\,019\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 259\,083\,c[1] - 215\,492\,c[2] + \\
& 71\,019\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 258\,731\,c[1] - 215\,460\,c[2] + 71\,019\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 258\,379\,c[1] - 215\,428\,c[2] + 71\,019\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 260\,955\,c[1] - 215\,844\,c[2] + \\
& 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 260\,603\,c[1] - 215\,812\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 260\,667\,c[1] - 215\,812\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 260\,315\,c[1] - 215\,780\,c[2] + \\
& 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& \\
& 259\,963\,c[1] - 215\,748\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \ \&\& 259\,611\,c[1] - 215\,716\,c[2] + 71\,035\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\& 261\,899\,c[1] - 216\,100\,c[2] + \\
& 71\,051\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \ \&\&
\end{aligned}$$

$$\begin{aligned}
& 261\,547\,c[1] - 216\,068\,c[2] + 71\,051\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 246\,195\,c[1] - 212\,044\,c[2] + 70\,723\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 247\,779\,c[1] - 212\,364\,c[2] + \\
& 70\,739\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 247\,491\,c[1] - 212\,332\,c[2] + 70\,739\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 249\,363\,c[1] - 212\,684\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 249\,075\,c[1] - 212\,652\,c[2] + \\
& 70\,755\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 248\,723\,c[1] - 212\,620\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 248\,787\,c[1] - 212\,620\,c[2] + 70\,755\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 250\,947\,c[1] - 213\,004\,c[2] + \\
& 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 250\,659\,c[1] - 212\,972\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 250\,307\,c[1] - 212\,940\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 250\,371\,c[1] - 212\,940\,c[2] + \\
& 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 250\,019\,c[1] - 212\,908\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 252\,243\,c[1] - 213\,292\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 251\,891\,c[1] - 213\,260\,c[2] + \\
& 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 251\,955\,c[1] - 213\,260\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 251\,603\,c[1] - 213\,228\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 251\,251\,c[1] - 213\,196\,c[2] + \\
& 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 253\,827\,c[1] - 213\,612\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 253\,539\,c[1] - 213\,580\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 253\,187\,c[1] - 213\,548\,c[2] + \\
& 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 252\,835\,c[1] - 213\,516\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 255\,411\,c[1] - 213\,932\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 255\,123\,c[1] - 213\,900\,c[2] + \\
& 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 254\,771\,c[1] - 213\,868\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 254\,419\,c[1] - 213\,836\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 256\,707\,c[1] - 214\,220\,c[2] + \\
& 70\,835\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 256\,355\,c[1] - 214\,188\,c[2] + 70\,835\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 240\,651\,c[1] - 210\,132\,c[2] + 70\,507\,c[3] - 11\,960\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 242\,235\,c[1] - 210\,452\,c[2] + \\
& 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 241\,947\,c[1] - 210\,420\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 241\,659\,c[1] - 210\,388\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 243\,531\,c[1] - 210\,740\,c[2] + \\
& 70\,539\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& \\
& 243\,179\,c[1] - 210\,708\,c[2] + 70\,539\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \quad \&\& 243\,243\,c[1] - 210\,708\,c[2] + 70\,539\,c[3] - 11\,960\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \quad \&\& 245\,115\,c[1] - 211\,060\,c[2] +
\end{aligned}$$

```

70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
244 827 c[1] - 211 028 c[2] + 70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 244 475 c[1] - 210 996 c[2] + 70 555 c[3] - 11 960 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 246 699 c[1] - 211 380 c[2] +
70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
246 411 c[1] - 211 348 c[2] + 70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 246 059 c[1] - 211 316 c[2] + 70 571 c[3] - 11 960 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 245 707 c[1] - 211 284 c[2] +
70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
247 995 c[1] - 211 668 c[2] + 70 587 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 247 643 c[1] - 211 636 c[2] + 70 587 c[3] - 11 960 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 249 579 c[1] - 211 988 c[2] +
70 603 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
249 227 c[1] - 211 956 c[2] + 70 603 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 251 163 c[1] - 212 308 c[2] + 70 619 c[3] - 11 960 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 236 403 c[1] - 208 508 c[2] +
70 307 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
236 115 c[1] - 208 476 c[2] + 70 307 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 237 987 c[1] - 208 828 c[2] + 70 323 c[3] - 11 952 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 237 699 c[1] - 208 796 c[2] +
70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
237 347 c[1] - 208 764 c[2] + 70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 239 283 c[1] - 209 116 c[2] + 70 339 c[3] - 11 952 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 238 931 c[1] - 209 084 c[2] +
70 339 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
240 867 c[1] - 209 436 c[2] + 70 355 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 240 515 c[1] - 209 404 c[2] + 70 355 c[3] - 11 952 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 242 451 c[1] - 209 756 c[2] +
70 371 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
229 275 c[1] - 206 276 c[2] + 70 075 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 230 859 c[1] - 206 596 c[2] + 70 091 c[3] - 11 944 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 230 571 c[1] - 206 564 c[2] +
70 091 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
232 155 c[1] - 206 884 c[2] + 70 107 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 231 803 c[1] - 206 852 c[2] + 70 107 c[3] - 11 944 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 233 739 c[1] - 207 204 c[2] +
70 123 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
235 323 c[1] - 207 524 c[2] + 70 139 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 225 027 c[1] - 204 652 c[2] + 69 875 c[3] -
11 936 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
226 611 c[1] - 204 972 c[2] + 69 891 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 217 899 c[1] - 202 420 c[2] + 69 643 c[3] - 11 928 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{109 456, 985 095, 9 084 766, 85 703 268, 0, 0, 565 131 071 791}

GCD[109 456, 985 095, 9 084 766, 85 703 268, 0, 0, 565 131 071 791]

```

Reverse[cert]

{565 131 071 791, 0, 0, 85 703 268, 9 084 766, 985 095, 109 456}

cert.g

-12 103 219

{109 456, 985 095, 9 084 766, 85 703 268, 0, 0, 565 131 071 791}.gpart[listdim17[[128]]]

-12 103 219

cert.Transpose[A]

{7 330 013, 14 335 197, 324 541, 7 329 725, 3 828 989, 10 834 173, 17 839 357, 3 828 701,
10 833 885, 3 828 413, 327 389, 7 332 573, 327 101, 7 321 717, 316 245, 7 321 429,
7 321 141, 10 826 165, 10 825 877, 3 820 405, 10 825 589, 3 820 117, 10 825 301,
3 819 829, 14 330 037, 7 324 565, 14 329 749, 7 324 277, 14 329 461, 318 805, 7 323 989,
17 834 197, 17 833 909, 10 828 437, 17 833 621, 3 822 965, 10 828 149, 3 822 677,
7 327 125, 14 332 309, 7 326 837, 321 365, 3 825 525, 307 949, 3 812 109, 3 811 821,
3 811 533, 7 315 981, 310 509, 7 315 693, 7 315 405, 10 820 141, 3 814 669, 10 819 853,
3 814 381, 10 819 565, 3 814 093, 14 324 301, 14 324 013, 7 318 541, 14 323 725,
313 069, 7 318 253, 17 828 173, 10 822 701, 17 827 885, 10 822 413, 3 816 941,
21 332 333, 14 326 861, 21 332 045, 14 326 573, 7 321 101, 315 629, 17 830 733,
10 825 261, 301 925, 3 806 085, 3 805 797, 7 310 245, 7 309 957, 304 485, 7 309 669,
10 814 405, 10 814 117, 3 808 645, 10 813 829, 3 808 357, 14 318 277, 7 312 805,
14 317 989, 7 312 517, 307 045, 17 822 437, 17 822 149, 10 816 677, 3 811 205,
21 326 597, 21 326 309, 14 320 837, 7 315 365, 24 830 469, 17 824 997, 296 189,
3 800 349, 3 800 061, 3 799 773, 7 304 221, 298 749, 7 303 933, 10 808 381, 10 808 093,
3 802 621, 14 312 541, 14 312 253, 7 306 781, 301 309, 17 816 413, 10 810 941,
21 320 573, 14 315 101, 24 824 733, 3 794 325, 3 794 037, 7 298 485, 7 298 197,
292 725, 10 802 357, 3 796 885, 14 306 517, 7 301 045, 17 810 677, 284 429, 3 788 589,
3 788 301, 7 292 461, 286 989, 10 796 621, 14 300 781, 3 782 565, 7 286 725, 272 669}

chi = listdim17[[129]]

$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-64 472 + 37 049 x - 8280 x^2 + 902 x^3 - 48 x^4 + x^5)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

A = {{1, -63, 1669, -24 059, 203 347, -1 004 717, 2 676 263, -2 948 121},
{1, -63, 1669, -24 059, 203 347, -1 004 685, 2 675 623, -2 944 953},
{1, -63, 1669, -24 059, 203 363, -1 005 277, 2 682 711, -2 972 457},
{1, -63, 1669, -24 059, 203 363, -1 005 245, 2 681 943, -2 968 009},
{1, -63, 1669, -24 059, 203 363, -1 005 245, 2 682 007, -2 968 713},
{1, -63, 1669, -24 059, 203 363, -1 005 213, 2 681 303, -2 964 841},
{1, -63, 1669, -24 059, 203 363, -1 005 213, 2 681 367, -2 965 545},
{1, -63, 1669, -24 059, 203 363, -1 005 181, 2 680 727, -2 962 377},

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{1, -63, 1669, -24 059, 203 363, -1 005 149, 2 680 087, -2 959 209},
{1, -63, 1669, -24 059, 203 379, -1 005 709, 2 686 407, -2 982 265},
{1, -63, 1669, -24 059, 203 379, -1 005 677, 2 685 767, -2 979 097},
{1, -63, 1669, -24 059, 203 379, -1 005 677, 2 685 831, -2 979 801},
{1, -63, 1669, -24 059, 203 379, -1 005 645, 2 685 127, -2 975 929},
{1, -63, 1669, -24 051, 203 011, -999 501, 2 640 823, -2 859 201},
{1, -63, 1669, -24 051, 203 027, -1 000 061, 2 647 207, -2 882 961},
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1	-63	1669	-24 035	202 403	-990 000	2 580 007	-2 717 003

1	-63	1669	-24035	202403	-990957	2588881	-2742993
1	-63	1669	-24035	202403	-990957	2588247	-2739825
1	-63	1669	-24035	202403	-990957	2588311	-2740401
1	-63	1669	-24035	202403	-990925	2587607	-2736657
1	-63	1669	-24035	202403	-990893	2586967	-2733489
1	-63	1669	-24035	202419	-991453	2593351	-2757249
1	-63	1669	-24035	202419	-991421	2592711	-2754081
1	-63	1669	-24035	202419	-991389	2592071	-2750913
1	-63	1669	-24035	202419	-991357	2591431	-2747745
1	-63	1669	-24035	202435	-991949	2598455	-2774673
1	-63	1669	-24035	202435	-991917	2597815	-2771505
1	-63	1669	-24035	202435	-991885	2597175	-2768337
1	-63	1669	-24035	202435	-991853	2596471	-2764465
1	-63	1669	-24035	202435	-991853	2596535	-2765169
1	-63	1669	-24035	202435	-991821	2595831	-2761297
1	-63	1669	-24035	202451	-992413	2602919	-2788929
1	-63	1669	-24035	202451	-992381	2602279	-2785761
1	-63	1669	-24035	202451	-992349	2601639	-2782593
1	-63	1669	-24035	202451	-992317	2600935	-2778721
1	-63	1669	-24035	202467	-992877	2607383	-2803185
1	-63	1669	-24035	202483	-993373	2612487	-2820609
1	-63	1669	-24027	202035	-984781	2543175	-2618649
1	-63	1669	-24027	202051	-985245	2547639	-2632905
1	-63	1669	-24027	202051	-985213	2547063	-2630313
1	-63	1669	-24027	202067	-985709	2552103	-2647161
1	-63	1669	-24027	202067	-985677	2551463	-2643993
1	-63	1669	-24027	202067	-985677	2551527	-2644569
1	-63	1669	-24027	202083	-986205	2557207	-2664585
1	-63	1669	-24027	202083	-986173	2556567	-2661417
1	-63	1669	-24027	202083	-986141	2555927	-2658249
1	-63	1669	-24027	202099	-986669	2561671	-2678841
1	-63	1669	-24027	202099	-986637	2561031	-2675673
1	-63	1669	-24027	202099	-986605	2560391	-2672505
1	-63	1669	-24027	202099	-986573	2559751	-2669337
1	-63	1669	-24027	202115	-987133	2566135	-2693097
1	-63	1669	-24027	202115	-987101	2565495	-2689929
1	-63	1669	-24027	202115	-987069	2564855	-2686761
1	-63	1669	-24027	202131	-987629	2571239	-2710521
1	-63	1669	-24027	202131	-987597	2570599	-2707353
1	-63	1669	-24027	202147	-988093	2575703	-2724777
1	-63	1669	-24019	201747	-980925	2520423	-2568753
1	-63	1669	-24019	201763	-981421	2525527	-2586177
1	-63	1669	-24019	201763	-981389	2524887	-2583009
1	-63	1669	-24019	201779	-981885	2529991	-2600433
1	-63	1669	-24019	201779	-981853	2529351	-2597265
1	-63	1669	-24019	201779	-981821	2528711	-2594097
1	-63	1669	-24019	201795	-982349	2534455	-2614689
1	-63	1669	-24019	201795	-982317	2533815	-2611521
1	-63	1669	-24019	201811	-982845	2539559	-2632113
1	-63	1669	-24019	201811	-982813	2538919	-2628945
1	-63	1669	-24019	201827	-983309	2544023	-2646369
1	-63	1669	-24011	201459	-977101	2498311	-2522025
1	-63	1669	-24011	201459	-977069	2497671	-2518857
1	-63	1669	-24011	201475	-977565	2502775	-2536281
1	-63	1669	-24011	201475	-977533	2502135	-2533113

$$\begin{pmatrix} 1 & -63 & 1669 & -24011 & 201491 & -978029 & 2507239 & -2550537 \\ 1 & -63 & 1669 & -24003 & 201155 & -972781 & 2471095 & -2457873 \\ 1 & -63 & 1669 & -24003 & 201155 & -972749 & 2470455 & -2454705 \\ 1 & -63 & 1669 & -23995 & 200835 & -967997 & 2439415 & -2379465 \end{pmatrix}$$

Dimensions[A]

{157, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1178763, 9960355, -49199005, 131071799, -144645961}

Array[c, 8].Transpose[A]

```
{c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203347 c[5] - 1004717 c[6] + 2676263 c[7] - 2948121 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203347 c[5] - 1004685 c[6] +
  2675623 c[7] - 2944953 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203363 c[5] - 1005277 c[6] + 2682711 c[7] - 2972457 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203363 c[5] - 1005245 c[6] +
  2681943 c[7] - 2968009 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203363 c[5] - 1005245 c[6] + 2682007 c[7] - 2968713 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203363 c[5] - 1005213 c[6] +
  2681303 c[7] - 2964841 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203363 c[5] - 1005213 c[6] + 2681367 c[7] - 2965545 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203363 c[5] - 1005181 c[6] +
  2680727 c[7] - 2962377 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203363 c[5] - 1005149 c[6] + 2680087 c[7] - 2959209 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005709 c[6] +
  2686407 c[7] - 2982265 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203379 c[5] - 1005677 c[6] + 2685767 c[7] - 2979097 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005677 c[6] +
  2685831 c[7] - 2979801 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
  203379 c[5] - 1005645 c[6] + 2685127 c[7] - 2975929 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203011 c[5] - 999501 c[6] +
  2640823 c[7] - 2859201 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203027 c[5] - 1000061 c[6] + 2647207 c[7] - 2882961 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203027 c[5] - 1000029 c[6] +
  2646503 c[7] - 2879217 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203027 c[5] - 1000029 c[6] + 2646567 c[7] - 2879793 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203027 c[5] - 999997 c[6] +
  2645799 c[7] - 2875345 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203027 c[5] - 999997 c[6] + 2645863 c[7] - 2876049 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203027 c[5] - 999997 c[6] +
  2645927 c[7] - 2876625 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203027 c[5] - 999965 c[6] + 2645223 c[7] - 2872881 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203027 c[5] - 999965 c[6] +
  2645223 c[7] - 2872753 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203027 c[5] - 999933 c[6] + 2644583 c[7] - 2869713 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203043 c[5] - 1000557 c[6] +
```

$$\begin{aligned}
& 2\,652\,247\,c[7] - 2\,899\,809\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,525\,c[6] + 2\,651\,607\,c[7] - 2\,896\,641\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,525\,c[6] + \\
& 2\,651\,671\,c[7] - 2\,897\,217\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,493\,c[6] + 2\,650\,967\,c[7] - 2\,893\,473\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,493\,c[6] + \\
& 2\,651\,031\,c[7] - 2\,894\,049\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,461\,c[6] + 2\,650\,263\,c[7] - 2\,889\,601\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,461\,c[6] + \\
& 2\,650\,327\,c[7] - 2\,890\,305\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,429\,c[6] + 2\,649\,687\,c[7] - 2\,887\,137\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,397\,c[6] + \\
& 2\,649\,047\,c[7] - 2\,883\,969\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,001\,053\,c[6] + 2\,657\,351\,c[7] - 2\,917\,233\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,001\,021\,c[6] + \\
& 2\,656\,711\,c[7] - 2\,914\,065\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,989\,c[6] + 2\,656\,071\,c[7] - 2\,910\,897\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,957\,c[6] + \\
& 2\,655\,367\,c[7] - 2\,907\,025\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,957\,c[6] + 2\,655\,431\,c[7] - 2\,907\,729\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,925\,c[6] + \\
& 2\,654\,727\,c[7] - 2\,903\,857\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,925\,c[6] + 2\,654\,791\,c[7] - 2\,904\,561\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& 2\,654\,087\,c[7] - 2\,900\,689\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,893\,c[6] + 2\,654\,151\,c[7] - 2\,901\,393\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,453\,c[6] + \\
& 2\,660\,535\,c[7] - 2\,925\,153\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,421\,c[6] + 2\,659\,831\,c[7] - 2\,921\,281\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,421\,c[6] + \\
& 2\,659\,895\,c[7] - 2\,921\,985\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,389\,c[6] + 2\,659\,191\,c[7] - 2\,918\,113\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,389\,c[6] + \\
& 2\,659\,255\,c[7] - 2\,918\,817\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,885\,c[6] + 2\,664\,295\,c[7] - 2\,935\,537\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,675\,c[5] - 994\,285\,c[6] + \\
& 2\,605\,319\,c[7] - 2\,769\,705\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,781\,c[6] + 2\,610\,359\,c[7] - 2\,786\,553\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,781\,c[6] + \\
& 2\,610\,423\,c[7] - 2\,787\,129\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,749\,c[6] + 2\,609\,719\,c[7] - 2\,783\,385\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,749\,c[6] + \\
& 2\,609\,783\,c[7] - 2\,783\,961\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,691\,c[5] - 994\,717\,c[6] + 2\,609\,143\,c[7] - 2\,780\,793\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,309\,c[6] + \\
& 2\,616\,103\,c[7] - 2\,807\,145\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,707\,c[5] - 995\,277\,c[6] + 2\,615\,463\,c[7] - 2\,803\,977\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,245 c[6] + \\
& \quad 2\,614\,823 c[7] - 2\,800\,809 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,245 c[6] + 2\,614\,887 c[7] - 2\,801\,385 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,707 c[5] - 995\,213 c[6] + \\
& \quad 2\,614\,183 c[7] - 2\,797\,641 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,181 c[6] + 2\,613\,543 c[7] - 2\,794\,473 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,773 c[6] + \\
& \quad 2\,620\,567 c[7] - 2\,821\,401 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,741 c[6] + 2\,619\,927 c[7] - 2\,818\,233 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,741 c[6] + \\
& \quad 2\,619\,991 c[7] - 2\,818\,809 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,709 c[6] + 2\,619\,287 c[7] - 2\,815\,065 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,677 c[6] + \\
& \quad 2\,618\,583 c[7] - 2\,811\,193 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,677 c[6] + 2\,618\,647 c[7] - 2\,811\,897 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,645 c[6] + \\
& \quad 2\,618\,007 c[7] - 2\,808\,729 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,269 c[6] + 2\,625\,671 c[7] - 2\,838\,825 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,237 c[6] + \\
& \quad 2\,625\,031 c[7] - 2\,835\,657 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,205 c[6] + 2\,624\,391 c[7] - 2\,832\,489 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,173 c[6] + \\
& \quad 2\,623\,687 c[7] - 2\,828\,617 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,173 c[6] + 2\,623\,751 c[7] - 2\,829\,321 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,141 c[6] + \\
& \quad 2\,623\,047 c[7] - 2\,825\,449 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,141 c[6] + 2\,623\,111 c[7] - 2\,826\,153 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,109 c[6] + \\
& \quad 2\,622\,471 c[7] - 2\,822\,985 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,733 c[6] + 2\,630\,135 c[7] - 2\,853\,081 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,701 c[6] + \\
& \quad 2\,629\,495 c[7] - 2\,849\,913 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,669 c[6] + 2\,628\,855 c[7] - 2\,846\,745 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,637 c[6] + \\
& \quad 2\,628\,151 c[7] - 2\,842\,873 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,637 c[6] + 2\,628\,215 c[7] - 2\,843\,577 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,605 c[6] + \\
& \quad 2\,627\,511 c[7] - 2\,839\,705 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,197 c[6] + 2\,634\,599 c[7] - 2\,867\,337 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,165 c[6] + \\
& \quad 2\,633\,959 c[7] - 2\,864\,169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,133 c[6] + 2\,633\,319 c[7] - 2\,861\,001 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,101 c[6] + \\
& \quad 2\,632\,615 c[7] - 2\,857\,129 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,661 c[6] + 2\,639\,063 c[7] - 2\,881\,593 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,629 c[6] + \\
& \quad 2\,638\,423 c[7] - 2\,878\,425 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,787\,c[5] - 997\,597\,c[6] + 2\,637\,719\,c[7] - 2\,874\,553\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,355\,c[5] - 989\,565\,c[6] + \\
& 2\,574\,855\,c[7] - 2\,697\,057\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,355\,c[5] - 989\,533\,c[6] + 2\,574\,279\,c[7] - 2\,694\,465\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 990\,029\,c[6] + \\
& 2\,579\,319\,c[7] - 2\,711\,313\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 989\,997\,c[6] + 2\,578\,679\,c[7] - 2\,708\,145\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 989\,997\,c[6] + \\
& 2\,578\,743\,c[7] - 2\,708\,721\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 989\,965\,c[6] + 2\,578\,103\,c[7] - 2\,705\,553\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,525\,c[6] + \\
& 2\,584\,423\,c[7] - 2\,728\,737\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,493\,c[6] + 2\,583\,783\,c[7] - 2\,725\,569\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,461\,c[6] + \\
& 2\,583\,143\,c[7] - 2\,722\,401\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,207\,c[7] - 2\,722\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,429\,c[6] + \\
& 2\,582\,503\,c[7] - 2\,719\,233\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,989\,c[6] + 2\,588\,887\,c[7] - 2\,742\,993\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,957\,c[6] + \\
& 2\,588\,247\,c[7] - 2\,739\,825\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,957\,c[6] + 2\,588\,311\,c[7] - 2\,740\,401\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,925\,c[6] + \\
& 2\,587\,607\,c[7] - 2\,736\,657\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,893\,c[6] + 2\,586\,967\,c[7] - 2\,733\,489\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,453\,c[6] + \\
& 2\,593\,351\,c[7] - 2\,757\,249\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,421\,c[6] + 2\,592\,711\,c[7] - 2\,754\,081\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,071\,c[7] - 2\,750\,913\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,431\,c[7] - 2\,747\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,949\,c[6] + \\
& 2\,598\,455\,c[7] - 2\,774\,673\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,815\,c[7] - 2\,771\,505\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,175\,c[7] - 2\,768\,337\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,471\,c[7] - 2\,764\,465\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,535\,c[7] - 2\,765\,169\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,831\,c[7] - 2\,761\,297\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,413\,c[6] + \\
& 2\,602\,919\,c[7] - 2\,788\,929\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,279\,c[7] - 2\,785\,761\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,639\,c[7] - 2\,782\,593\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,935\,c[7] - 2\,778\,721\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,877\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,607\,383\,c[7] - 2\,803\,185\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,373\,c[6] + 2\,612\,487\,c[7] - 2\,820\,609\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,035\,c[5] - 984\,781\,c[6] + \\
& 2\,543\,175\,c[7] - 2\,618\,649\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,051\,c[5] - 985\,245\,c[6] + 2\,547\,639\,c[7] - 2\,632\,905\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,051\,c[5] - 985\,213\,c[6] + \\
& 2\,547\,063\,c[7] - 2\,630\,313\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,067\,c[5] - 985\,709\,c[6] + 2\,552\,103\,c[7] - 2\,647\,161\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,067\,c[5] - 985\,677\,c[6] + \\
& 2\,551\,463\,c[7] - 2\,643\,993\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,067\,c[5] - 985\,677\,c[6] + 2\,551\,527\,c[7] - 2\,644\,569\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,083\,c[5] - 986\,205\,c[6] + \\
& 2\,557\,207\,c[7] - 2\,664\,585\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,083\,c[5] - 986\,173\,c[6] + 2\,556\,567\,c[7] - 2\,661\,417\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,083\,c[5] - 986\,141\,c[6] + \\
& 2\,555\,927\,c[7] - 2\,658\,249\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,669\,c[6] + 2\,561\,671\,c[7] - 2\,678\,841\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,637\,c[6] + \\
& 2\,561\,031\,c[7] - 2\,675\,673\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,605\,c[6] + 2\,560\,391\,c[7] - 2\,672\,505\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,573\,c[6] + \\
& 2\,559\,751\,c[7] - 2\,669\,337\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,133\,c[6] + 2\,566\,135\,c[7] - 2\,693\,097\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& 2\,565\,495\,c[7] - 2\,689\,929\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,855\,c[7] - 2\,686\,761\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,629\,c[6] + \\
& 2\,571\,239\,c[7] - 2\,710\,521\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,599\,c[7] - 2\,707\,353\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,093\,c[6] + \\
& 2\,575\,703\,c[7] - 2\,724\,777\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,747\,c[5] - 980\,925\,c[6] + 2\,520\,423\,c[7] - 2\,568\,753\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,763\,c[5] - 981\,421\,c[6] + \\
& 2\,525\,527\,c[7] - 2\,586\,177\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,763\,c[5] - 981\,389\,c[6] + 2\,524\,887\,c[7] - 2\,583\,009\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,779\,c[5] - 981\,885\,c[6] + \\
& 2\,529\,991\,c[7] - 2\,600\,433\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,779\,c[5] - 981\,853\,c[6] + 2\,529\,351\,c[7] - 2\,597\,265\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,779\,c[5] - 981\,821\,c[6] + \\
& 2\,528\,711\,c[7] - 2\,594\,097\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,795\,c[5] - 982\,349\,c[6] + 2\,534\,455\,c[7] - 2\,614\,689\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,317\,c[6] + \\
& 2\,533\,815\,c[7] - 2\,611\,521\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,811\,c[5] - 982\,845\,c[6] + 2\,539\,559\,c[7] - 2\,632\,113\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,811\,c[5] - 982\,813\,c[6] + \\
& 2\,538\,919\,c[7] - 2\,628\,945\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,827\,c[5] - 983\,309\,c[6] + 2\,544\,023\,c[7] - 2\,646\,369\,c[8],
\end{aligned}$$


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c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 101 c[6] +
  2 498 311 c[7] - 2 522 025 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 459 c[5] - 977 069 c[6] + 2 497 671 c[7] - 2 518 857 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 565 c[6] +
  2 502 775 c[7] - 2 536 281 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 475 c[5] - 977 533 c[6] + 2 502 135 c[7] - 2 533 113 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 029 c[6] +
  2 507 239 c[7] - 2 550 537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 155 c[5] - 972 781 c[6] + 2 471 095 c[7] - 2 457 873 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 749 c[6] +
  2 470 455 c[7] - 2 454 705 c[8], c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
  200 835 c[5] - 967 997 c[6] + 2 439 415 c[7] - 2 379 465 c[8] }

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Array[c, 8].g

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49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 763 c[4] +
  9 960 355 c[5] - 49 199 005 c[6] + 131 071 799 c[7] - 144 645 961 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 763 c[4] +
  9 960 355 c[5] - 49 199 005 c[6] + 131 071 799 c[7] - 144 645 961 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 347 c[5] - 1 004 717 c[6] +
  2 676 263 c[7] - 2 948 121 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 347 c[5] - 1 004 685 c[6] + 2 675 623 c[7] - 2 944 953 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 363 c[5] - 1 005 277 c[6] +
  2 682 711 c[7] - 2 972 457 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 363 c[5] - 1 005 245 c[6] + 2 681 943 c[7] - 2 968 009 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 363 c[5] - 1 005 245 c[6] +
  2 682 007 c[7] - 2 968 713 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 363 c[5] - 1 005 213 c[6] + 2 681 303 c[7] - 2 964 841 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 363 c[5] - 1 005 213 c[6] +
  2 681 367 c[7] - 2 965 545 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 363 c[5] - 1 005 181 c[6] + 2 680 727 c[7] - 2 962 377 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 363 c[5] - 1 005 149 c[6] +
  2 680 087 c[7] - 2 959 209 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 379 c[5] - 1 005 709 c[6] + 2 686 407 c[7] - 2 982 265 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 379 c[5] - 1 005 677 c[6] +
  2 685 767 c[7] - 2 979 097 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 379 c[5] - 1 005 677 c[6] + 2 685 831 c[7] - 2 979 801 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 379 c[5] - 1 005 645 c[6] +
  2 685 127 c[7] - 2 975 929 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 011 c[5] - 999 501 c[6] + 2 640 823 c[7] - 2 859 201 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 027 c[5] - 1 000 061 c[6] +
  2 647 207 c[7] - 2 882 961 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 027 c[5] - 1 000 029 c[6] + 2 646 503 c[7] - 2 879 217 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 027 c[5] - 1 000 029 c[6] +
  2 646 567 c[7] - 2 879 793 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 027 c[5] - 999 997 c[6] + 2 645 799 c[7] - 2 875 345 c[8] ≥ 0 &&

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$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,997 c[6] + \\
& \quad 2\,645\,863 c[7] - 2\,876\,049 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,997 c[6] + 2\,645\,927 c[7] - 2\,876\,625 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,965 c[6] + \\
& \quad 2\,645\,223 c[7] - 2\,872\,881 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,027 c[5] - 999\,965 c[6] + 2\,645\,223 c[7] - 2\,872\,753 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,027 c[5] - 999\,933 c[6] + \\
& \quad 2\,644\,583 c[7] - 2\,869\,713 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,557 c[6] + 2\,652\,247 c[7] - 2\,899\,809 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,525 c[6] + \\
& \quad 2\,651\,607 c[7] - 2\,896\,641 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,525 c[6] + 2\,651\,671 c[7] - 2\,897\,217 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,493 c[6] + \\
& \quad 2\,650\,967 c[7] - 2\,893\,473 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,493 c[6] + 2\,651\,031 c[7] - 2\,894\,049 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,461 c[6] + \\
& \quad 2\,650\,263 c[7] - 2\,889\,601 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,461 c[6] + 2\,650\,327 c[7] - 2\,890\,305 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,043 c[5] - 1\,000\,429 c[6] + \\
& \quad 2\,649\,687 c[7] - 2\,887\,137 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,043 c[5] - 1\,000\,397 c[6] + 2\,649\,047 c[7] - 2\,883\,969 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,001\,053 c[6] + \\
& \quad 2\,657\,351 c[7] - 2\,917\,233 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,001\,021 c[6] + 2\,656\,711 c[7] - 2\,914\,065 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,989 c[6] + \\
& \quad 2\,656\,071 c[7] - 2\,910\,897 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,957 c[6] + 2\,655\,367 c[7] - 2\,907\,025 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,957 c[6] + \\
& \quad 2\,655\,431 c[7] - 2\,907\,729 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,925 c[6] + 2\,654\,727 c[7] - 2\,903\,857 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,925 c[6] + \\
& \quad 2\,654\,791 c[7] - 2\,904\,561 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,059 c[5] - 1\,000\,893 c[6] + 2\,654\,087 c[7] - 2\,900\,689 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,893 c[6] + \\
& \quad 2\,654\,151 c[7] - 2\,901\,393 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,075 c[5] - 1\,001\,453 c[6] + 2\,660\,535 c[7] - 2\,925\,153 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,075 c[5] - 1\,001\,421 c[6] + \\
& \quad 2\,659\,831 c[7] - 2\,921\,281 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,075 c[5] - 1\,001\,421 c[6] + 2\,659\,895 c[7] - 2\,921\,985 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,075 c[5] - 1\,001\,389 c[6] + \\
& \quad 2\,659\,191 c[7] - 2\,918\,113 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,075 c[5] - 1\,001\,389 c[6] + 2\,659\,255 c[7] - 2\,918\,817 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,091 c[5] - 1\,001\,885 c[6] + \\
& \quad 2\,664\,295 c[7] - 2\,935\,537 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,675 c[5] - 994\,285 c[6] + 2\,605\,319 c[7] - 2\,769\,705 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,691 c[5] - 994\,781 c[6] + \\
& \quad 2\,610\,359 c[7] - 2\,786\,553 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,691\,c[5] - 994\,781\,c[6] + 2\,610\,423\,c[7] - 2\,787\,129\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,749\,c[6] + \\
& \quad 2\,609\,719\,c[7] - 2\,783\,385\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,691\,c[5] - 994\,749\,c[6] + 2\,609\,783\,c[7] - 2\,783\,961\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,717\,c[6] + \\
& \quad 2\,609\,143\,c[7] - 2\,780\,793\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,309\,c[6] + 2\,616\,103\,c[7] - 2\,807\,145\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,277\,c[6] + \\
& \quad 2\,615\,463\,c[7] - 2\,803\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,245\,c[6] + 2\,614\,823\,c[7] - 2\,800\,809\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,245\,c[6] + \\
& \quad 2\,614\,887\,c[7] - 2\,801\,385\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,183\,c[7] - 2\,797\,641\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,181\,c[6] + \\
& \quad 2\,613\,543\,c[7] - 2\,794\,473\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,773\,c[6] + 2\,620\,567\,c[7] - 2\,821\,401\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,741\,c[6] + \\
& \quad 2\,619\,927\,c[7] - 2\,818\,233\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,741\,c[6] + 2\,619\,991\,c[7] - 2\,818\,809\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] + \\
& \quad 2\,619\,287\,c[7] - 2\,815\,065\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,583\,c[7] - 2\,811\,193\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& \quad 2\,618\,647\,c[7] - 2\,811\,897\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,645\,c[6] + 2\,618\,007\,c[7] - 2\,808\,729\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,269\,c[6] + \\
& \quad 2\,625\,671\,c[7] - 2\,838\,825\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,237\,c[6] + 2\,625\,031\,c[7] - 2\,835\,657\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,205\,c[6] + \\
& \quad 2\,624\,391\,c[7] - 2\,832\,489\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,687\,c[7] - 2\,828\,617\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& \quad 2\,623\,751\,c[7] - 2\,829\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,047\,c[7] - 2\,825\,449\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& \quad 2\,623\,111\,c[7] - 2\,826\,153\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,471\,c[7] - 2\,822\,985\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,733\,c[6] + \\
& \quad 2\,630\,135\,c[7] - 2\,853\,081\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,701\,c[6] + 2\,629\,495\,c[7] - 2\,849\,913\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,669\,c[6] + \\
& \quad 2\,628\,855\,c[7] - 2\,846\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,151\,c[7] - 2\,842\,873\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& \quad 2\,628\,215\,c[7] - 2\,843\,577\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,511\,c[7] - 2\,839\,705\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,197\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,634\,599\,c[7] - 2\,867\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,165\,c[6] + 2\,633\,959\,c[7] - 2\,864\,169\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,133\,c[6] + \\
& 2\,633\,319\,c[7] - 2\,861\,001\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,101\,c[6] + 2\,632\,615\,c[7] - 2\,857\,129\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,661\,c[6] + \\
& 2\,639\,063\,c[7] - 2\,881\,593\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,629\,c[6] + 2\,638\,423\,c[7] - 2\,878\,425\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,597\,c[6] + \\
& 2\,637\,719\,c[7] - 2\,874\,553\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,355\,c[5] - 989\,565\,c[6] + 2\,574\,855\,c[7] - 2\,697\,057\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,355\,c[5] - 989\,533\,c[6] + \\
& 2\,574\,279\,c[7] - 2\,694\,465\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 990\,029\,c[6] + 2\,579\,319\,c[7] - 2\,711\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 989\,997\,c[6] + \\
& 2\,578\,679\,c[7] - 2\,708\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 989\,997\,c[6] + 2\,578\,743\,c[7] - 2\,708\,721\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 989\,965\,c[6] + \\
& 2\,578\,103\,c[7] - 2\,705\,553\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,525\,c[6] + 2\,584\,423\,c[7] - 2\,728\,737\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,493\,c[6] + \\
& 2\,583\,783\,c[7] - 2\,725\,569\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,143\,c[7] - 2\,722\,401\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,461\,c[6] + \\
& 2\,583\,207\,c[7] - 2\,722\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,429\,c[6] + 2\,582\,503\,c[7] - 2\,719\,233\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,989\,c[6] + \\
& 2\,588\,887\,c[7] - 2\,742\,993\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,957\,c[6] + 2\,588\,247\,c[7] - 2\,739\,825\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,957\,c[6] + \\
& 2\,588\,311\,c[7] - 2\,740\,401\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,925\,c[6] + 2\,587\,607\,c[7] - 2\,736\,657\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,893\,c[6] + \\
& 2\,586\,967\,c[7] - 2\,733\,489\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,453\,c[6] + 2\,593\,351\,c[7] - 2\,757\,249\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,421\,c[6] + \\
& 2\,592\,711\,c[7] - 2\,754\,081\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,071\,c[7] - 2\,750\,913\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,431\,c[7] - 2\,747\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,949\,c[6] + 2\,598\,455\,c[7] - 2\,774\,673\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,917\,c[6] + \\
& 2\,597\,815\,c[7] - 2\,771\,505\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,175\,c[7] - 2\,768\,337\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,471\,c[7] - 2\,764\,465\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,535\,c[7] - 2\,765\,169\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,821 c[6] + \\
& \quad 2\,595\,831 c[7] - 2\,761\,297 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,413 c[6] + 2\,602\,919 c[7] - 2\,788\,929 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,381 c[6] + \\
& \quad 2\,602\,279 c[7] - 2\,785\,761 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,349 c[6] + 2\,601\,639 c[7] - 2\,782\,593 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,317 c[6] + \\
& \quad 2\,600\,935 c[7] - 2\,778\,721 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,877 c[6] + 2\,607\,383 c[7] - 2\,803\,185 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,373 c[6] + \\
& \quad 2\,612\,487 c[7] - 2\,820\,609 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,035 c[5] - 984\,781 c[6] + 2\,543\,175 c[7] - 2\,618\,649 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,051 c[5] - 985\,245 c[6] + \\
& \quad 2\,547\,639 c[7] - 2\,632\,905 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,051 c[5] - 985\,213 c[6] + 2\,547\,063 c[7] - 2\,630\,313 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,067 c[5] - 985\,709 c[6] + \\
& \quad 2\,552\,103 c[7] - 2\,647\,161 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,067 c[5] - 985\,677 c[6] + 2\,551\,463 c[7] - 2\,643\,993 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,067 c[5] - 985\,677 c[6] + \\
& \quad 2\,551\,527 c[7] - 2\,644\,569 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,205 c[6] + 2\,557\,207 c[7] - 2\,664\,585 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,173 c[6] + \\
& \quad 2\,556\,567 c[7] - 2\,661\,417 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,141 c[6] + 2\,555\,927 c[7] - 2\,658\,249 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,669 c[6] + \\
& \quad 2\,561\,671 c[7] - 2\,678\,841 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,637 c[6] + 2\,561\,031 c[7] - 2\,675\,673 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,605 c[6] + \\
& \quad 2\,560\,391 c[7] - 2\,672\,505 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,573 c[6] + 2\,559\,751 c[7] - 2\,669\,337 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,133 c[6] + \\
& \quad 2\,566\,135 c[7] - 2\,693\,097 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,101 c[6] + 2\,565\,495 c[7] - 2\,689\,929 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,069 c[6] + \\
& \quad 2\,564\,855 c[7] - 2\,686\,761 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,629 c[6] + 2\,571\,239 c[7] - 2\,710\,521 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,597 c[6] + \\
& \quad 2\,570\,599 c[7] - 2\,707\,353 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,147 c[5] - 988\,093 c[6] + 2\,575\,703 c[7] - 2\,724\,777 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,747 c[5] - 980\,925 c[6] + \\
& \quad 2\,520\,423 c[7] - 2\,568\,753 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,763 c[5] - 981\,421 c[6] + 2\,525\,527 c[7] - 2\,586\,177 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,763 c[5] - 981\,389 c[6] + \\
& \quad 2\,524\,887 c[7] - 2\,583\,009 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,779 c[5] - 981\,885 c[6] + 2\,529\,991 c[7] - 2\,600\,433 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,779 c[5] - 981\,853 c[6] + \\
& \quad 2\,529\,351 c[7] - 2\,597\,265 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] +
\end{aligned}$$

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201 779 c[5] - 981 821 c[6] + 2 528 711 c[7] - 2 594 097 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 349 c[6] +
2 534 455 c[7] - 2 614 689 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 795 c[5] - 982 317 c[6] + 2 533 815 c[7] - 2 611 521 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 845 c[6] +
2 539 559 c[7] - 2 632 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 813 c[6] + 2 538 919 c[7] - 2 628 945 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 309 c[6] +
2 544 023 c[7] - 2 646 369 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
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c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 069 c[6] +
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c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 533 c[6] +
2 502 135 c[7] - 2 533 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 491 c[5] - 978 029 c[6] + 2 507 239 c[7] - 2 550 537 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 781 c[6] +
2 471 095 c[7] - 2 457 873 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 155 c[5] - 972 749 c[6] + 2 470 455 c[7] - 2 454 705 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] + 200 835 c[5] - 967 997 c[6] +
2 439 415 c[7] - 2 379 465 c[8] ≥ 0, Array[c, 8], Integers]]
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GCD[0, 0, 0, -138 176 827, -36 282 640, -5 934 101, -832 316, -108 205]
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cert.g
-118 089 173

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Reverse[gpart[listdim17[[129]]]]
-118 089 173

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cert.Transpose[A]

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chi = listdim17[[130]]

$$(-11 + x)^2 (-9 + x)^{11} (5 + x)^{32} (7160 - 3321 x + 551 x^2 - 39 x^3 + x^4)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

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{276 417, -245 750, 81 151, -13 364, 1183, -54, 1},
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{279 873, -246 422, 81 183, -13 364, 1183, -54, 1},
{281 457, -246 742, 81 199, -13 364, 1183, -54, 1},
{281 105, -246 710, 81 199, -13 364, 1183, -54, 1},
{269 577, -243 550, 80 919, -13 356, 1183, -54, 1},
{271 161, -243 870, 80 935, -13 356, 1183, -54, 1},
{272 745, -244 190, 80 951, -13 356, 1183, -54, 1},
{262 449, -241 318, 80 687, -13 348, 1183, -54, 1}};
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A // MatrixForm

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329 217 -261 286 82 655 -13 412 1183 -54 1
331 441 -261 670 82 671 -13 412 1183 -54 1
331 089 -261 638 82 671 -13 412 1183 -54 1
331 153 -261 638 82 671 -13 412 1183 -54 1
330 801 -261 606 82 671 -13 412 1183 -54 1
332 321 -261 926 82 687 -13 412 1183 -54 1
319 689 -258 478 82 391 -13 404 1183 -54 1
319 273 -258 446 82 391 -13 404 1183 -54 1
319 337 -258 446 82 391 -13 404 1183 -54 1
318 985 -258 414 82 391 -13 404 1183 -54 1
321 561 -258 830 82 407 -13 404 1183 -54 1
321 145 -258 798 82 407 -13 404 1183 -54 1
321 209 -258 798 82 407 -13 404 1183 -54 1
321 273 -258 798 82 407 -13 404 1183 -54 1
320 857 -258 766 82 407 -13 404 1183 -54 1
323 433 -259 182 82 423 -13 404 1183 -54 1
323 081 -259 150 82 423 -13 404 1183 -54 1
323 145 -259 150 82 423 -13 404 1183 -54 1
322 729 -259 118 82 423 -13 404 1183 -54 1
322 793 -259 118 82 423 -13 404 1183 -54 1
322 377 -259 086 82 423 -13 404 1183 -54 1
322 441 -259 086 82 423 -13 404 1183 -54 1
325 017 -259 502 82 439 -13 404 1183 -54 1
324 665 -259 470 82 439 -13 404 1183 -54 1
324 729 -259 470 82 439 -13 404 1183 -54 1
324 313 -259 438 82 439 -13 404 1183 -54 1
324 377 -259 438 82 439 -13 404 1183 -54 1
323 961 -259 406 82 439 -13 404 1183 -54 1
326 249 -259 790 82 455 -13 404 1183 -54 1
325 897 -259 758 82 455 -13 404 1183 -54 1
307 521 -255 254 82 111 -13 396 1183 -54 1
309 393 -255 606 82 127 -13 396 1183 -54 1
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311 201	-255 958	82 143	-13 396	1183	-54	1
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310 625	-255 894	82 143	-13 396	1183	-54	1
313 137	-256 310	82 159	-13 396	1183	-54	1
312 785	-256 278	82 159	-13 396	1183	-54	1
312 849	-256 278	82 159	-13 396	1183	-54	1
312 433	-256 246	82 159	-13 396	1183	-54	1
312 497	-256 246	82 159	-13 396	1183	-54	1
312 561	-256 246	82 159	-13 396	1183	-54	1
312 145	-256 214	82 159	-13 396	1183	-54	1
314 721	-256 630	82 175	-13 396	1183	-54	1
314 369	-256 598	82 175	-13 396	1183	-54	1
314 433	-256 598	82 175	-13 396	1183	-54	1
314 017	-256 566	82 175	-13 396	1183	-54	1
314 081	-256 566	82 175	-13 396	1183	-54	1
316 305	-256 950	82 191	-13 396	1183	-54	1
315 953	-256 918	82 191	-13 396	1183	-54	1
316 017	-256 918	82 191	-13 396	1183	-54	1
315 601	-256 886	82 191	-13 396	1183	-54	1
315 249	-256 854	82 191	-13 396	1183	-54	1
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317 537	-257 238	82 207	-13 396	1183	-54	1
317 185	-257 206	82 207	-13 396	1183	-54	1
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309 177	-254 718	81 959	-13 388	1183	-54	1
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290 961 -250 246 81 615 -13 380 1183 -54 1
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294 129 -250 886 81 647 -13 380 1183 -54 1
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262 449 -241 318 80 687 -13 348 1183 -54 1

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Dimensions[A]

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Array[c, 7].Transpose[A]

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314 433 c [1]	- 256 598 c [2]	+ 82 175 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
314 017 c [1]	- 256 566 c [2]	+ 82 175 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
314 081 c [1]	- 256 566 c [2]	+ 82 175 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
316 305 c [1]	- 256 950 c [2]	+ 82 191 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
315 953 c [1]	- 256 918 c [2]	+ 82 191 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
316 017 c [1]	- 256 918 c [2]	+ 82 191 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
315 601 c [1]	- 256 886 c [2]	+ 82 191 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
315 249 c [1]	- 256 854 c [2]	+ 82 191 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
317 889 c [1]	- 257 270 c [2]	+ 82 207 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
317 537 c [1]	- 257 238 c [2]	+ 82 207 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
317 185 c [1]	- 257 206 c [2]	+ 82 207 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
319 473 c [1]	- 257 590 c [2]	+ 82 223 c [3]	- 13 396 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
299 097 c [1]	- 252 734 c [2]	+ 81 863 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
298 809 c [1]	- 252 702 c [2]	+ 81 863 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
300 905 c [1]	- 253 086 c [2]	+ 81 879 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
300 969 c [1]	- 253 086 c [2]	+ 81 879 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
300 617 c [1]	- 253 054 c [2]	+ 81 879 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
300 681 c [1]	- 253 054 c [2]	+ 81 879 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
302 841 c [1]	- 253 438 c [2]	+ 81 895 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
302 489 c [1]	- 253 406 c [2]	+ 81 895 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
302 553 c [1]	- 253 406 c [2]	+ 81 895 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
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304 425 c [1]	- 253 758 c [2]	+ 81 911 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
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304 137 c [1]	- 253 726 c [2]	+ 81 911 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
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303 785 c [1]	- 253 694 c [2]	+ 81 911 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
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305 657 c [1]	- 254 046 c [2]	+ 81 927 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
305 721 c [1]	- 254 046 c [2]	+ 81 927 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
305 305 c [1]	- 254 014 c [2]	+ 81 927 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
305 369 c [1]	- 254 014 c [2]	+ 81 927 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
307 593 c [1]	- 254 398 c [2]	+ 81 943 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
307 241 c [1]	- 254 366 c [2]	+ 81 943 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
306 889 c [1]	- 254 334 c [2]	+ 81 943 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
309 177 c [1]	- 254 718 c [2]	+ 81 959 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
308 825 c [1]	- 254 686 c [2]	+ 81 959 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
310 761 c [1]	- 255 038 c [2]	+ 81 975 c [3]	- 13 388 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
290 961 c [1]	- 250 246 c [2]	+ 81 615 c [3]	- 13 380 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
290 673 c [1]	- 250 214 c [2]	+ 81 615 c [3]	- 13 380 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
292 545 c [1]	- 250 566 c [2]	+ 81 631 c [3]	- 13 380 c [4]	+ 1183 c [5]	- 54 c [6]	+ c [7]
292 257 c [1]	-					

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293 553 c[1] - 250 822 c[2] + 81 647 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7],
295 713 c[1] - 251 206 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7],
295 361 c[1] - 251 174 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7],
295 425 c[1] - 251 174 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7],
295 073 c[1] - 251 142 c[2] + 81 663 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7],
297 297 c[1] - 251 526 c[2] + 81 679 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7],
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298 177 c[1] - 251 782 c[2] + 81 695 c[3] - 13 380 c[4] + 1183 c[5] - 54 c[6] + c[7],
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283 833 c[1] - 248 014 c[2] + 81 383 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7],
283 545 c[1] - 247 982 c[2] + 81 383 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7],
285 417 c[1] - 248 334 c[2] + 81 399 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7],
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286 649 c[1] - 248 622 c[2] + 81 415 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7],
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288 585 c[1] - 248 974 c[2] + 81 431 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7],
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278 289 c[1] - 246 102 c[2] + 81 167 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7],
278 001 c[1] - 246 070 c[2] + 81 167 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7],
279 873 c[1] - 246 422 c[2] + 81 183 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7],
281 457 c[1] - 246 742 c[2] + 81 199 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7],
281 105 c[1] - 246 710 c[2] + 81 199 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7],
269 577 c[1] - 243 550 c[2] + 80 919 c[3] - 13 356 c[4] + 1183 c[5] - 54 c[6] + c[7],
271 161 c[1] - 243 870 c[2] + 80 935 c[3] - 13 356 c[4] + 1183 c[5] - 54 c[6] + c[7],
272 745 c[1] - 244 190 c[2] + 80 951 c[3] - 13 356 c[4] + 1183 c[5] - 54 c[6] + c[7],
262 449 c[1] - 241 318 c[2] + 80 687 c[3] - 13 348 c[4] + 1183 c[5] - 54 c[6] + c[7] }

```

Array[c, 7].g

```

16 062 785 c[1] - 12 776 262 c[2] + 4 046 815 c[3] -
657 060 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[16 062 785 c[1] - 12 776 262 c[2] + 4 046 815 c[3] -
657 060 c[4] + 57 967 c[5] - 2646 c[6] + 49 c[7] < 0 &&
329 633 c[1] - 261 318 c[2] + 82 655 c[3] - 13 412 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 329 217 c[1] - 261 286 c[2] + 82 655 c[3] - 13 412 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 331 441 c[1] - 261 670 c[2] +

```

$$\begin{aligned}
& 82\,671\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 331\,089\,c[1] - 261\,638\,c[2] + 82\,671\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 331\,153\,c[1] - 261\,638\,c[2] + 82\,671\,c[3] - 13\,412\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 330\,801\,c[1] - 261\,606\,c[2] + \\
& 82\,671\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 332\,321\,c[1] - 261\,926\,c[2] + 82\,687\,c[3] - 13\,412\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 319\,689\,c[1] - 258\,478\,c[2] + 82\,391\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 319\,273\,c[1] - 258\,446\,c[2] + \\
& 82\,391\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 319\,337\,c[1] - 258\,446\,c[2] + 82\,391\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 318\,985\,c[1] - 258\,414\,c[2] + 82\,391\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 321\,561\,c[1] - 258\,830\,c[2] + \\
& 82\,407\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 321\,145\,c[1] - 258\,798\,c[2] + 82\,407\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 321\,209\,c[1] - 258\,798\,c[2] + 82\,407\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 321\,273\,c[1] - 258\,798\,c[2] + \\
& 82\,407\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 320\,857\,c[1] - 258\,766\,c[2] + 82\,407\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 323\,433\,c[1] - 259\,182\,c[2] + 82\,423\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 323\,081\,c[1] - 259\,150\,c[2] + \\
& 82\,423\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 323\,145\,c[1] - 259\,150\,c[2] + 82\,423\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 322\,729\,c[1] - 259\,118\,c[2] + 82\,423\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 322\,793\,c[1] - 259\,118\,c[2] + \\
& 82\,423\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 322\,377\,c[1] - 259\,086\,c[2] + 82\,423\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 322\,441\,c[1] - 259\,086\,c[2] + 82\,423\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 325\,017\,c[1] - 259\,502\,c[2] + \\
& 82\,439\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 324\,665\,c[1] - 259\,470\,c[2] + 82\,439\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 324\,729\,c[1] - 259\,470\,c[2] + 82\,439\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 324\,313\,c[1] - 259\,438\,c[2] + \\
& 82\,439\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 324\,377\,c[1] - 259\,438\,c[2] + 82\,439\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 323\,961\,c[1] - 259\,406\,c[2] + 82\,439\,c[3] - 13\,404\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 326\,249\,c[1] - 259\,790\,c[2] + \\
& 82\,455\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 325\,897\,c[1] - 259\,758\,c[2] + 82\,455\,c[3] - 13\,404\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 307\,521\,c[1] - 255\,254\,c[2] + 82\,111\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 309\,393\,c[1] - 255\,606\,c[2] + \\
& 82\,127\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 309\,041\,c[1] - 255\,574\,c[2] + 82\,127\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 311\,201\,c[1] - 255\,958\,c[2] + 82\,143\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 311\,265\,c[1] - 255\,958\,c[2] + \\
& 82\,143\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 310\,849\,c[1] - 255\,926\,c[2] + 82\,143\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 310\,913\,c[1] - 255\,926\,c[2] + 82\,143\,c[3] - 13\,396\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 310\,977\,c[1] - 255\,926\,c[2] + \\
& 82\,143\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 310\,625\,c[1] - 255\,894\,c[2] + 82\,143\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 313\,137\,c[1] - 256\,310\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 312\,785\,c[1] - 256\,278\,c[2] + \\
& 82\,159\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 312\,849\,c[1] - 256\,278\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 312\,433\,c[1] - 256\,246\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 312\,497\,c[1] - 256\,246\,c[2] + \\
& 82\,159\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 312\,561\,c[1] - 256\,246\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 312\,145\,c[1] - 256\,214\,c[2] + 82\,159\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 314\,721\,c[1] - 256\,630\,c[2] + \\
& 82\,175\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 314\,369\,c[1] - 256\,598\,c[2] + 82\,175\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 314\,433\,c[1] - 256\,598\,c[2] + 82\,175\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 314\,017\,c[1] - 256\,566\,c[2] + \\
& 82\,175\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 314\,081\,c[1] - 256\,566\,c[2] + 82\,175\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 316\,305\,c[1] - 256\,950\,c[2] + 82\,191\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 315\,953\,c[1] - 256\,918\,c[2] + \\
& 82\,191\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 316\,017\,c[1] - 256\,918\,c[2] + 82\,191\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 315\,601\,c[1] - 256\,886\,c[2] + 82\,191\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 315\,249\,c[1] - 256\,854\,c[2] + \\
& 82\,191\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 317\,889\,c[1] - 257\,270\,c[2] + 82\,207\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 317\,537\,c[1] - 257\,238\,c[2] + 82\,207\,c[3] - 13\,396\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 317\,185\,c[1] - 257\,206\,c[2] + \\
& 82\,207\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 319\,473\,c[1] - 257\,590\,c[2] + 82\,223\,c[3] - 13\,396\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 299\,097\,c[1] - 252\,734\,c[2] + 81\,863\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 298\,809\,c[1] - 252\,702\,c[2] + \\
& 81\,863\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 300\,905\,c[1] - 253\,086\,c[2] + 81\,879\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 300\,969\,c[1] - 253\,086\,c[2] + 81\,879\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 300\,617\,c[1] - 253\,054\,c[2] + \\
& 81\,879\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 300\,681\,c[1] - 253\,054\,c[2] + 81\,879\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 302\,841\,c[1] - 253\,438\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 302\,489\,c[1] - 253\,406\,c[2] + \\
& 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 302\,553\,c[1] - 253\,406\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \ \&\& 302\,201\,c[1] - 253\,374\,c[2] + 81\,895\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& 302\,265\,c[1] - 253\,374\,c[2] + \\
& 81\,895\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \ \&\& \\
& 304\,425\,c[1] - 253\,758\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq
\end{aligned}$$

$$\begin{aligned}
& 0 \&\& 304\,073\,c[1] - 253\,726\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 304\,137\,c[1] - 253\,726\,c[2] + \\
& 81\,911\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 303\,721\,c[1] - 253\,694\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 303\,785\,c[1] - 253\,694\,c[2] + 81\,911\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 306\,009\,c[1] - 254\,078\,c[2] + \\
& 81\,927\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 305\,657\,c[1] - 254\,046\,c[2] + 81\,927\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 305\,721\,c[1] - 254\,046\,c[2] + 81\,927\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 305\,305\,c[1] - 254\,014\,c[2] + \\
& 81\,927\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 305\,369\,c[1] - 254\,014\,c[2] + 81\,927\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 307\,593\,c[1] - 254\,398\,c[2] + 81\,943\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 307\,241\,c[1] - 254\,366\,c[2] + \\
& 81\,943\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 306\,889\,c[1] - 254\,334\,c[2] + 81\,943\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 309\,177\,c[1] - 254\,718\,c[2] + 81\,959\,c[3] - 13\,388\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 308\,825\,c[1] - 254\,686\,c[2] + \\
& 81\,959\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 310\,761\,c[1] - 255\,038\,c[2] + 81\,975\,c[3] - 13\,388\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 290\,961\,c[1] - 250\,246\,c[2] + 81\,615\,c[3] - 13\,380\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 290\,673\,c[1] - 250\,214\,c[2] + \\
& 81\,615\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 292\,545\,c[1] - 250\,566\,c[2] + 81\,631\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 292\,257\,c[1] - 250\,534\,c[2] + 81\,631\,c[3] - 13\,380\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 291\,969\,c[1] - 250\,502\,c[2] + \\
& 81\,631\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 294\,129\,c[1] - 250\,886\,c[2] + 81\,647\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 293\,777\,c[1] - 250\,854\,c[2] + 81\,647\,c[3] - 13\,380\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 293\,841\,c[1] - 250\,854\,c[2] + \\
& 81\,647\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 293\,553\,c[1] - 250\,822\,c[2] + 81\,647\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 295\,713\,c[1] - 251\,206\,c[2] + 81\,663\,c[3] - 13\,380\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 295\,361\,c[1] - 251\,174\,c[2] + \\
& 81\,663\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 295\,425\,c[1] - 251\,174\,c[2] + 81\,663\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 295\,073\,c[1] - 251\,142\,c[2] + 81\,663\,c[3] - 13\,380\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 297\,297\,c[1] - 251\,526\,c[2] + \\
& 81\,679\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 296\,945\,c[1] - 251\,494\,c[2] + 81\,679\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 297\,009\,c[1] - 251\,494\,c[2] + 81\,679\,c[3] - 13\,380\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 298\,881\,c[1] - 251\,846\,c[2] + \\
& 81\,695\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& \\
& 298\,529\,c[1] - 251\,814\,c[2] + 81\,695\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq \\
& 0 \&\& 298\,177\,c[1] - 251\,782\,c[2] + 81\,695\,c[3] - 13\,380\,c[4] + \\
& 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\& 300\,465\,c[1] - 252\,166\,c[2] + \\
& 81\,711\,c[3] - 13\,380\,c[4] + 1183\,c[5] - 54\,c[6] + c[7] \geq 0 \&\&
\end{aligned}$$

```

282 249 c[1] - 247 694 c[2] + 81 367 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 283 833 c[1] - 248 014 c[2] + 81 383 c[3] - 13 372 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 283 545 c[1] - 247 982 c[2] +
81 383 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
285 417 c[1] - 248 334 c[2] + 81 399 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 285 129 c[1] - 248 302 c[2] + 81 399 c[3] - 13 372 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 287 001 c[1] - 248 654 c[2] +
81 415 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
286 649 c[1] - 248 622 c[2] + 81 415 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 286 713 c[1] - 248 622 c[2] + 81 415 c[3] - 13 372 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 288 585 c[1] - 248 974 c[2] +
81 431 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
288 233 c[1] - 248 942 c[2] + 81 431 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 290 169 c[1] - 249 294 c[2] + 81 447 c[3] - 13 372 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 289 817 c[1] - 249 262 c[2] +
81 447 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
291 753 c[1] - 249 614 c[2] + 81 463 c[3] - 13 372 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 276 705 c[1] - 245 782 c[2] + 81 151 c[3] - 13 364 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 276 417 c[1] - 245 750 c[2] +
81 151 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
278 289 c[1] - 246 102 c[2] + 81 167 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 278 001 c[1] - 246 070 c[2] + 81 167 c[3] - 13 364 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0 && 279 873 c[1] - 246 422 c[2] +
81 183 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
281 457 c[1] - 246 742 c[2] + 81 199 c[3] - 13 364 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 281 105 c[1] - 246 710 c[2] + 81 199 c[3] -
13 364 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
269 577 c[1] - 243 550 c[2] + 80 919 c[3] - 13 356 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 271 161 c[1] - 243 870 c[2] + 80 935 c[3] -
13 356 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥ 0 &&
272 745 c[1] - 244 190 c[2] + 80 951 c[3] - 13 356 c[4] + 1183 c[5] - 54 c[6] + c[7] ≥
0 && 262 449 c[1] - 241 318 c[2] + 80 687 c[3] - 13 348 c[4] +
1183 c[5] - 54 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6], c[7]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[131]]
```

```
(-13 + x) (-11 + x) (-9 + x)11 (5 + x)32 (6056 - 2895 x + 499 x2 - 37 x3 + x4)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -65, 1777, -26425, 230155, -1169403, 3191427, -3579147},
      {1, -65, 1777, -26425, 230171, -1169931, 3197171, -3599739},
      {1, -65, 1777, -26425, 230187, -1170459, 3202915, -3620331},
      {1, -65, 1777, -26425, 230203, -1170987, 3208659, -3640923},
      {1, -65, 1777, -26417, 229819, -1164187, 3155987, -3490227},
      {1, -65, 1777, -26417, 229819, -1164155, 3155283, -3486483},
      {1, -65, 1777, -26417, 229835, -1164715, 3161731, -3510819},
      {1, -65, 1777, -26417, 229835, -1164683, 3161027, -3507075},
      {1, -65, 1777, -26417, 229851, -1165211, 3166771, -3527667},
      {1, -65, 1777, -26417, 229851, -1165179, 3166067, -3523795},
      {1, -65, 1777, -26417, 229867, -1165739, 3172515, -3548259},
      {1, -65, 1777, -26417, 229867, -1165707, 3171811, -3544387},
      {1, -65, 1777, -26417, 229883, -1166267, 3178259, -3568851},
      {1, -65, 1777, -26409, 229467, -1158411, 3114099, -3376971},
      {1, -65, 1777, -26409, 229483, -1158939, 3119843, -3397563},
      {1, -65, 1777, -26409, 229483, -1158907, 3119139, -3393819},
      {1, -65, 1777, -26409, 229499, -1159435, 3124883, -3414411},
      {1, -65, 1777, -26409, 229515, -1159963, 3130627, -3435003},
      {1, -65, 1777, -26409, 229515, -1159931, 3129923, -3431131},
      {1, -65, 1777, -26409, 229531, -1160491, 3136371, -3455595},
      {1, -65, 1777, -26409, 229531, -1160459, 3135667, -3451723},
      {1, -65, 1777, -26409, 229547, -1160987, 3141475, -3473019},
      {1, -65, 1777, -26401, 229131, -1153163, 3077955, -3284307},
      {1, -65, 1777, -26401, 229147, -1153659, 3082995, -3301155},
      {1, -65, 1777, -26401, 229163, -1154187, 3088739, -3321747},
      {1, -65, 1777, -26401, 229179, -1154715, 3094483, -3342339},
      {1, -65, 1777, -26401, 229179, -1154683, 3093843, -3339171},
      {1, -65, 1777, -26401, 229195, -1155211, 3099587, -3359763},
      {1, -65, 1777, -26393, 228795, -1147915, 3041811, -3191643},
      {1, -65, 1777, -26393, 228811, -1148411, 3046851, -3208491},
      {1, -65, 1777, -26393, 228827, -1148939, 3052595, -3229083},
      {1, -65, 1777, -26393, 228827, -1148907, 3051955, -3225915},
      {1, -65, 1777, -26393, 228843, -1149467, 3058339, -3249675},
      {1, -65, 1777, -26393, 228843, -1149435, 3057699, -3246507},
      {1, -65, 1777, -26393, 228859, -1149963, 3063443, -3267099},
      {1, -65, 1777, -26385, 228475, -1143163, 3010707, -3115827},
      {1, -65, 1777, -26385, 228491, -1143691, 3016451, -3136419},
      {1, -65, 1777, -26385, 228491, -1143659, 3015811, -3133251},
      {1, -65, 1777, -26385, 228507, -1144187, 3021555, -3153843},
      {1, -65, 1777, -26377, 228155, -1138411, 2979667, -3040587},
      {1, -65, 1777, -26369, 227819, -1133163, 2943523, -2947923}};
```

A // MatrixForm

```
( 1 -65 1777 -26425 230155 -1169403 3191427 -3579147
 1 -65 1777 -26425 230171 -1169931 3197171 -3599739
 1 -65 1777 -26425 230187 -1170459 3202915 -3620331
 1 -65 1777 -26425 230203 -1170987 3208659 -3640923
 1 -65 1777 -26417 229819 -1164187 3155987 -3490227
 1 -65 1777 -26417 229819 -1164155 3155283 -3486483
 1 -65 1777 -26417 229835 -1164715 3161731 -3510819
 1 -65 1777 -26417 229835 -1164683 3161027 -3507075
 1 -65 1777 -26417 229851 -1165211 3166771 -3527667
 1 -65 1777 -26417 229851 -1165179 3166067 -3523795
 1 -65 1777 -26417 229867 -1165739 3172515 -3548259
 1 -65 1777 -26417 229867 -1165707 3171811 -3544387
 1 -65 1777 -26417 229883 -1166267 3178259 -3568851
 1 -65 1777 -26409 229467 -1158411 3114099 -3376971
 1 -65 1777 -26409 229483 -1158939 3119843 -3397563
 1 -65 1777 -26409 229483 -1158907 3119139 -3393819
 1 -65 1777 -26409 229499 -1159435 3124883 -3414411
 1 -65 1777 -26409 229515 -1159963 3130627 -3435003
 1 -65 1777 -26409 229515 -1159931 3129923 -3431131
 1 -65 1777 -26409 229531 -1160491 3136371 -3455595
 1 -65 1777 -26409 229531 -1160459 3135667 -3451723
 1 -65 1777 -26409 229547 -1160987 3141475 -3473019
 1 -65 1777 -26401 229131 -1153163 3077955 -3284307
 1 -65 1777 -26401 229147 -1153659 3082995 -3301155
 1 -65 1777 -26401 229163 -1154187 3088739 -3321747
 1 -65 1777 -26401 229179 -1154715 3094483 -3342339
 1 -65 1777 -26401 229179 -1154683 3093843 -3339171
 1 -65 1777 -26401 229195 -1155211 3099587 -3359763
 1 -65 1777 -26393 228795 -1147915 3041811 -3191643
 1 -65 1777 -26393 228811 -1148411 3046851 -3208491
 1 -65 1777 -26393 228827 -1148939 3052595 -3229083
 1 -65 1777 -26393 228827 -1148907 3051955 -3225915
 1 -65 1777 -26393 228843 -1149467 3058339 -3249675
 1 -65 1777 -26393 228843 -1149435 3057699 -3246507
 1 -65 1777 -26393 228859 -1149963 3063443 -3267099
 1 -65 1777 -26385 228475 -1143163 3010707 -3115827
 1 -65 1777 -26385 228491 -1143691 3016451 -3136419
 1 -65 1777 -26385 228491 -1143659 3015811 -3133251
 1 -65 1777 -26385 228507 -1144187 3021555 -3153843
 1 -65 1777 -26377 228155 -1138411 2979667 -3040587
 1 -65 1777 -26369 227819 -1133163 2943523 -2947923)
```

Dimensions[A]

```
{41, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3185, 87073, -1294697, 11274475, -57289819, 156578947, -176610059}
```

Array[c, 8].Transpose[A]

```
{c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +
 230155 c[5] - 1169403 c[6] + 3191427 c[7] - 3579147 c[8],
```


$c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230171 c[5] - 1169931 c[6] +$
 $3197171 c[7] - 3599739 c[8], c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] +$
 $230187 c[5] - 1170459 c[6] + 3202915 c[7] - 3620331 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26425 c[4] + 230203 c[5] - 1170987 c[6] +$
 $3208659 c[7] - 3640923 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229819 c[5] - 1164187 c[6] + 3155987 c[7] - 3490227 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229819 c[5] - 1164155 c[6] +$
 $3155283 c[7] - 3486483 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229835 c[5] - 1164715 c[6] + 3161731 c[7] - 3510819 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229835 c[5] - 1164683 c[6] +$
 $3161027 c[7] - 3507075 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229851 c[5] - 1165211 c[6] + 3166771 c[7] - 3527667 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229851 c[5] - 1165179 c[6] +$
 $3166067 c[7] - 3523795 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229867 c[5] - 1165739 c[6] + 3172515 c[7] - 3548259 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] + 229867 c[5] - 1165707 c[6] +$
 $3171811 c[7] - 3544387 c[8], c[1] - 65 c[2] + 1777 c[3] - 26417 c[4] +$
 $229883 c[5] - 1166267 c[6] + 3178259 c[7] - 3568851 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229467 c[5] - 1158411 c[6] +$
 $3114099 c[7] - 3376971 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229483 c[5] - 1158939 c[6] + 3119843 c[7] - 3397563 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229483 c[5] - 1158907 c[6] +$
 $3119139 c[7] - 3393819 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229499 c[5] - 1159435 c[6] + 3124883 c[7] - 3414411 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229515 c[5] - 1159963 c[6] +$
 $3130627 c[7] - 3435003 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229515 c[5] - 1159931 c[6] + 3129923 c[7] - 3431131 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229531 c[5] - 1160491 c[6] +$
 $3136371 c[7] - 3455595 c[8], c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] +$
 $229531 c[5] - 1160459 c[6] + 3135667 c[7] - 3451723 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26409 c[4] + 229547 c[5] - 1160987 c[6] +$
 $3141475 c[7] - 3473019 c[8], c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] +$
 $229131 c[5] - 1153163 c[6] + 3077955 c[7] - 3284307 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229147 c[5] - 1153659 c[6] +$
 $3082995 c[7] - 3301155 c[8], c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] +$
 $229163 c[5] - 1154187 c[6] + 3088739 c[7] - 3321747 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229179 c[5] - 1154715 c[6] +$
 $3094483 c[7] - 3342339 c[8], c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] +$
 $229179 c[5] - 1154683 c[6] + 3093843 c[7] - 3339171 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26401 c[4] + 229195 c[5] - 1155211 c[6] +$
 $3099587 c[7] - 3359763 c[8], c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] +$
 $228795 c[5] - 1147915 c[6] + 3041811 c[7] - 3191643 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + 228811 c[5] - 1148411 c[6] +$
 $3046851 c[7] - 3208491 c[8], c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] +$
 $228827 c[5] - 1148939 c[6] + 3052595 c[7] - 3229083 c[8],$
 $c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] + 228827 c[5] - 1148907 c[6] +$
 $3051955 c[7] - 3225915 c[8], c[1] - 65 c[2] + 1777 c[3] - 26393 c[4] +$

```

228 843 c[5] - 1 149 467 c[6] + 3 058 339 c[7] - 3 249 675 c[8] ,
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 843 c[5] - 1 149 435 c[6] +
3 057 699 c[7] - 3 246 507 c[8] , c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 859 c[5] - 1 149 963 c[6] + 3 063 443 c[7] - 3 267 099 c[8] ,
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 475 c[5] - 1 143 163 c[6] +
3 010 707 c[7] - 3 115 827 c[8] , c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 491 c[5] - 1 143 691 c[6] + 3 016 451 c[7] - 3 136 419 c[8] ,
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 491 c[5] - 1 143 659 c[6] +
3 015 811 c[7] - 3 133 251 c[8] , c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 507 c[5] - 1 144 187 c[6] + 3 021 555 c[7] - 3 153 843 c[8] ,
c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] + 228 155 c[5] - 1 138 411 c[6] +
2 979 667 c[7] - 3 040 587 c[8] , c[1] - 65 c[2] + 1777 c[3] - 26 369 c[4] +
227 819 c[5] - 1 133 163 c[6] + 2 943 523 c[7] - 2 947 923 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3185 c[2] + 87 073 c[3] - 1 294 697 c[4] +
11 274 475 c[5] - 57 289 819 c[6] + 156 578 947 c[7] - 176 610 059 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3185 c[2] + 87 073 c[3] - 1 294 697 c[4] +
11 274 475 c[5] - 57 289 819 c[6] + 156 578 947 c[7] - 176 610 059 c[8] < 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 155 c[5] - 1 169 403 c[6] +
3 191 427 c[7] - 3 579 147 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 171 c[5] - 1 169 931 c[6] + 3 197 171 c[7] - 3 599 739 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] + 230 187 c[5] - 1 170 459 c[6] +
3 202 915 c[7] - 3 620 331 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 425 c[4] +
230 203 c[5] - 1 170 987 c[6] + 3 208 659 c[7] - 3 640 923 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 819 c[5] - 1 164 187 c[6] +
3 155 987 c[7] - 3 490 227 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 819 c[5] - 1 164 155 c[6] + 3 155 283 c[7] - 3 486 483 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 835 c[5] - 1 164 715 c[6] +
3 161 731 c[7] - 3 510 819 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 835 c[5] - 1 164 683 c[6] + 3 161 027 c[7] - 3 507 075 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 851 c[5] - 1 165 211 c[6] +
3 166 771 c[7] - 3 527 667 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 851 c[5] - 1 165 179 c[6] + 3 166 067 c[7] - 3 523 795 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 867 c[5] - 1 165 739 c[6] +
3 172 515 c[7] - 3 548 259 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] +
229 867 c[5] - 1 165 707 c[6] + 3 171 811 c[7] - 3 544 387 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 417 c[4] + 229 883 c[5] - 1 166 267 c[6] +
3 178 259 c[7] - 3 568 851 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 467 c[5] - 1 158 411 c[6] + 3 114 099 c[7] - 3 376 971 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 483 c[5] - 1 158 939 c[6] +
3 119 843 c[7] - 3 397 563 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 483 c[5] - 1 158 907 c[6] + 3 119 139 c[7] - 3 393 819 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 499 c[5] - 1 159 435 c[6] +
3 124 883 c[7] - 3 414 411 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +

```

```

229 515 c[5] - 1 159 963 c[6] + 3 130 627 c[7] - 3 435 003 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 515 c[5] - 1 159 931 c[6] +
3 129 923 c[7] - 3 431 131 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 531 c[5] - 1 160 491 c[6] + 3 136 371 c[7] - 3 455 595 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] + 229 531 c[5] - 1 160 459 c[6] +
3 135 667 c[7] - 3 451 723 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 409 c[4] +
229 547 c[5] - 1 160 987 c[6] + 3 141 475 c[7] - 3 473 019 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 131 c[5] - 1 153 163 c[6] +
3 077 955 c[7] - 3 284 307 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 147 c[5] - 1 153 659 c[6] + 3 082 995 c[7] - 3 301 155 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 163 c[5] - 1 154 187 c[6] +
3 088 739 c[7] - 3 321 747 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 179 c[5] - 1 154 715 c[6] + 3 094 483 c[7] - 3 342 339 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] + 229 179 c[5] - 1 154 683 c[6] +
3 093 843 c[7] - 3 339 171 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 401 c[4] +
229 195 c[5] - 1 155 211 c[6] + 3 099 587 c[7] - 3 359 763 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 795 c[5] - 1 147 915 c[6] +
3 041 811 c[7] - 3 191 643 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 811 c[5] - 1 148 411 c[6] + 3 046 851 c[7] - 3 208 491 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 827 c[5] - 1 148 939 c[6] +
3 052 595 c[7] - 3 229 083 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 827 c[5] - 1 148 907 c[6] + 3 051 955 c[7] - 3 225 915 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 843 c[5] - 1 149 467 c[6] +
3 058 339 c[7] - 3 249 675 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] +
228 843 c[5] - 1 149 435 c[6] + 3 057 699 c[7] - 3 246 507 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 393 c[4] + 228 859 c[5] - 1 149 963 c[6] +
3 063 443 c[7] - 3 267 099 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 475 c[5] - 1 143 163 c[6] + 3 010 707 c[7] - 3 115 827 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 491 c[5] - 1 143 691 c[6] +
3 016 451 c[7] - 3 136 419 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] +
228 491 c[5] - 1 143 659 c[6] + 3 015 811 c[7] - 3 133 251 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 385 c[4] + 228 507 c[5] - 1 144 187 c[6] +
3 021 555 c[7] - 3 153 843 c[8] ≥ 0 && c[1] - 65 c[2] + 1777 c[3] - 26 377 c[4] +
228 155 c[5] - 1 138 411 c[6] + 2 979 667 c[7] - 3 040 587 c[8] ≥ 0 &&
c[1] - 65 c[2] + 1777 c[3] - 26 369 c[4] + 227 819 c[5] - 1 133 163 c[6] +
2 943 523 c[7] - 2 947 923 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -1 213 093, -449 831, -95 266, -15 983}

GCD[0, 0, 0, 0, -1 213 093, -449 831, -95 266, -15 983]
1

cert.g
-141 522 491

{0, 0, 0, 0, -1 213 093, -449 831, -95 266, -15 983}.Reverse[gpart[listdim17[[131]]]]
-141 522 491

```

`cert.Transpose[A]`

```
{5323397, 5338709, 5354021, 5369333, 21622829, 14455149, 21638141,
 14470461, 14485773, 5272269, 14501085, 5287581, 14516397, 30739269,
 30754581, 23586901, 23602213, 23617525, 14404021, 23632837,
 14419333, 19589653, 39871021, 32718653, 32733965, 32749277, 28690781,
 28706093, 49002773, 41850405, 41865717, 37807221, 41881029, 37822533,
 37837845, 50982157, 50997469, 46938973, 46954285, 56070725, 65202477}
```

`chi = listdim17[[132]]`

$$(-11 + x)^3 (-9 + x)^9 (-7 + x) (5 + x)^{32} (7576 - 3405x + 555x^2 - 39x^3 + x^4)$$

`CoefficientList[feasibleinterlacingpolylist[chi], x]`

```
A = {{1, -61, 1565, -21865, 179411, -863143, 2249807, -2444787},
      {1, -61, 1565, -21865, 179411, -863111, 2249167, -2441747},
      {1, -61, 1565, -21865, 179427, -863543, 2252991, -2452835},
      {1, -61, 1565, -21865, 179443, -863943, 2256239, -2461459},
      {1, -61, 1565, -21857, 179091, -858423, 2219343, -2372139},
      {1, -61, 1565, -21857, 179091, -858423, 2219407, -2372715},
      {1, -61, 1565, -21857, 179107, -858887, 2223807, -2386395},
      {1, -61, 1565, -21857, 179107, -858887, 2223871, -2386971},
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      {1, -61, 1565, -21857, 179107, -858855, 2223231, -2383803},
      {1, -61, 1565, -21857, 179107, -858823, 2222591, -2380763},
      {1, -61, 1565, -21857, 179123, -859319, 2227631, -2397483},
      {1, -61, 1565, -21857, 179123, -859287, 2226991, -2394315},
      {1, -61, 1565, -21857, 179123, -859287, 2227055, -2395019},
      {1, -61, 1565, -21857, 179123, -859255, 2226415, -2391851},
      {1, -61, 1565, -21857, 179139, -859719, 2230815, -2405403},
      {1, -61, 1565, -21857, 179139, -859719, 2230879, -2406107},
      {1, -61, 1565, -21857, 179139, -859687, 2230239, -2402939},
      {1, -61, 1565, -21857, 179155, -860151, 2234639, -2416491},
      {1, -61, 1565, -21857, 179155, -860119, 2234063, -2414027},
      {1, -61, 1565, -21849, 178771, -853703, 2188943, -2300067},
      {1, -61, 1565, -21849, 178771, -853703, 2189007, -2300643},
      {1, -61, 1565, -21849, 178787, -854167, 2193407, -2314323},
      {1, -61, 1565, -21849, 178787, -854135, 2192767, -2311155},
      {1, -61, 1565, -21849, 178787, -854135, 2192831, -2311731},
      {1, -61, 1565, -21849, 178803, -854631, 2197871, -2328579},
      {1, -61, 1565, -21849, 178803, -854599, 2197231, -2325411},
      {1, -61, 1565, -21849, 178803, -854599, 2197295, -2325987},
      {1, -61, 1565, -21849, 178803, -854567, 2196591, -2322243},
```

```

{1, -61, 1565, -21849, 178803, -854567, 2196655, -2322819},
{1, -61, 1565, -21849, 178819, -855063, 2201695, -2339667},
{1, -61, 1565, -21849, 178819, -855063, 2201759, -2340243},
{1, -61, 1565, -21849, 178819, -855031, 2201055, -2336499},
{1, -61, 1565, -21849, 178819, -854999, 2200415, -2333331},
{1, -61, 1565, -21849, 178819, -854967, 2199839, -2330867},
{1, -61, 1565, -21849, 178835, -855463, 2204879, -2347587},
{1, -61, 1565, -21849, 178835, -855431, 2204239, -2344419},
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{1, -61, 1565, -21849, 178835, -855399, 2203663, -2341955},
{1, -61, 1565, -21849, 178851, -855895, 2208703, -2358675},
{1, -61, 1565, -21849, 178851, -855863, 2208063, -2355507},
{1, -61, 1565, -21849, 178851, -855863, 2208127, -2356211},
{1, -61, 1565, -21849, 178851, -855831, 2207487, -2353043},
{1, -61, 1565, -21841, 178483, -849847, 2166191, -2250171},
{1, -61, 1565, -21841, 178499, -850311, 2170655, -2264427},
{1, -61, 1565, -21841, 178499, -850279, 2170015, -2261259},
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{1, -61, 1565, -21841, 178531, -851207, 2178943, -2289771},
{1, -61, 1565, -21841, 178531, -851175, 2178303, -2286603},
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{1, -61, 1565, -21841, 178531, -851111, 2177087, -2280971},
{1, -61, 1565, -21841, 178547, -851639, 2182767, -2300859},
{1, -61, 1565, -21841, 178547, -851607, 2182127, -2297691},
{1, -61, 1565, -21841, 178547, -851575, 2181487, -2294523},
{1, -61, 1565, -21841, 178563, -852071, 2186591, -2311947},
{1, -61, 1565, -21841, 178563, -852039, 2185951, -2308779},
{1, -61, 1565, -21833, 178195, -845991, 2143439, -2200275},
{1, -61, 1565, -21833, 178211, -846455, 2147903, -2214531},
{1, -61, 1565, -21833, 178211, -846423, 2147263, -2211363},
{1, -61, 1565, -21833, 178227, -846887, 2151727, -2225619},
{1, -61, 1565, -21833, 178227, -846855, 2151087, -2222451},
{1, -61, 1565, -21833, 178243, -847351, 2156191, -2239875},
{1, -61, 1565, -21833, 178243, -847319, 2155551, -2236707},
{1, -61, 1565, -21833, 178243, -847287, 2154911, -2233539},
{1, -61, 1565, -21833, 178259, -847815, 2160655, -2254131},
{1, -61, 1565, -21833, 178259, -847783, 2160015, -2250963},
{1, -61, 1565, -21833, 178259, -847751, 2159375, -2247795},
{1, -61, 1565, -21833, 178275, -848247, 2164479, -2265219},
{1, -61, 1565, -21825, 177907, -842135, 2120687, -2150379},
{1, -61, 1565, -21825, 177923, -842567, 2124511, -2161467},
{1, -61, 1565, -21825, 177939, -843031, 2128975, -2175723},
{1, -61, 1565, -21825, 177939, -842999, 2128335, -2172555},
{1, -61, 1565, -21825, 177955, -843495, 2133439, -2189979},

```

```
{1, -61, 1565, -21817, 177619, -838279, 2097935, -2100483},
{1, -61, 1565, -21817, 177635, -838711, 2101759, -2111571}};
```

```
A // MatrixForm
```

```
( 1 -61 1565 -21865 179411 -863143 2249807 -2444787
 1 -61 1565 -21865 179411 -863111 2249167 -2441747
 1 -61 1565 -21865 179427 -863543 2252991 -2452835
 1 -61 1565 -21865 179443 -863943 2256239 -2461459
 1 -61 1565 -21857 179091 -858423 2219343 -2372139
 1 -61 1565 -21857 179091 -858423 2219407 -2372715
 1 -61 1565 -21857 179107 -858887 2223807 -2386395
 1 -61 1565 -21857 179107 -858887 2223871 -2386971
 1 -61 1565 -21857 179107 -858855 2223167 -2383227
 1 -61 1565 -21857 179107 -858855 2223231 -2383803
 1 -61 1565 -21857 179107 -858823 2222591 -2380763
 1 -61 1565 -21857 179123 -859319 2227631 -2397483
 1 -61 1565 -21857 179123 -859287 2226991 -2394315
 1 -61 1565 -21857 179123 -859287 2227055 -2395019
 1 -61 1565 -21857 179123 -859255 2226415 -2391851
 1 -61 1565 -21857 179139 -859719 2230815 -2405403
 1 -61 1565 -21857 179139 -859719 2230879 -2406107
 1 -61 1565 -21857 179139 -859687 2230239 -2402939
 1 -61 1565 -21857 179155 -860151 2234639 -2416491
 1 -61 1565 -21857 179155 -860119 2234063 -2414027
 1 -61 1565 -21849 178771 -853703 2188943 -2300067
 1 -61 1565 -21849 178771 -853703 2189007 -2300643
 1 -61 1565 -21849 178787 -854167 2193407 -2314323
 1 -61 1565 -21849 178787 -854135 2192767 -2311155
 1 -61 1565 -21849 178787 -854135 2192831 -2311731
 1 -61 1565 -21849 178803 -854631 2197871 -2328579
 1 -61 1565 -21849 178803 -854599 2197231 -2325411
 1 -61 1565 -21849 178803 -854599 2197295 -2325987
 1 -61 1565 -21849 178803 -854567 2196591 -2322243
 1 -61 1565 -21849 178803 -854567 2196655 -2322819
 1 -61 1565 -21849 178819 -855063 2201695 -2339667
 1 -61 1565 -21849 178819 -855063 2201759 -2340243
 1 -61 1565 -21849 178819 -855031 2201055 -2336499
 1 -61 1565 -21849 178819 -854999 2200415 -2333331
 1 -61 1565 -21849 178819 -854967 2199839 -2330867
 1 -61 1565 -21849 178835 -855463 2204879 -2347587
 1 -61 1565 -21849 178835 -855431 2204239 -2344419
 1 -61 1565 -21849 178835 -855431 2204303 -2345123
 1 -61 1565 -21849 178835 -855399 2203663 -2341955
 1 -61 1565 -21849 178851 -855895 2208703 -2358675
 1 -61 1565 -21849 178851 -855863 2208063 -2355507
 1 -61 1565 -21849 178851 -855863 2208127 -2356211
 1 -61 1565 -21849 178851 -855831 2207487 -2353043
 1 -61 1565 -21841 178483 -849847 2166191 -2250171
 1 -61 1565 -21841 178499 -850311 2170655 -2264427
 1 -61 1565 -21841 178499 -850279 2170015 -2261259
 1 -61 1565 -21841 178499 -850279 2170079 -2261835
 1 -61 1565 -21841 178515 -850775 2175119 -2278683
 1 -61 1565 -21841 178515 -850743 2174479 -2275515
 1 -61 1565 -21841 178515 -850711 2173839 -2272347
 1 -61 1565 -21841 178531 -851207 2178943 -2289771)
```

```

1 -61 1565 -21841 178531 -851175 2178303 -2286603
1 -61 1565 -21841 178531 -851143 2177663 -2283435
1 -61 1565 -21841 178531 -851111 2177087 -2280971
1 -61 1565 -21841 178547 -851639 2182767 -2300859
1 -61 1565 -21841 178547 -851607 2182127 -2297691
1 -61 1565 -21841 178547 -851575 2181487 -2294523
1 -61 1565 -21841 178563 -852071 2186591 -2311947
1 -61 1565 -21841 178563 -852039 2185951 -2308779
1 -61 1565 -21833 178195 -845991 2143439 -2200275
1 -61 1565 -21833 178211 -846455 2147903 -2214531
1 -61 1565 -21833 178211 -846423 2147263 -2211363
1 -61 1565 -21833 178227 -846887 2151727 -2225619
1 -61 1565 -21833 178227 -846855 2151087 -2222451
1 -61 1565 -21833 178243 -847351 2156191 -2239875
1 -61 1565 -21833 178243 -847319 2155551 -2236707
1 -61 1565 -21833 178243 -847287 2154911 -2233539
1 -61 1565 -21833 178259 -847815 2160655 -2254131
1 -61 1565 -21833 178259 -847783 2160015 -2250963
1 -61 1565 -21833 178259 -847751 2159375 -2247795
1 -61 1565 -21833 178275 -848247 2164479 -2265219
1 -61 1565 -21825 177907 -842135 2120687 -2150379
1 -61 1565 -21825 177923 -842567 2124511 -2161467
1 -61 1565 -21825 177939 -843031 2128975 -2175723
1 -61 1565 -21825 177939 -842999 2128335 -2172555
1 -61 1565 -21825 177955 -843495 2133439 -2189979
1 -61 1565 -21817 177619 -838279 2097935 -2100483
1 -61 1565 -21817 177635 -838711 2101759 -2111571

```

Dimensions[A]

{78, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -2989, 76685, -1071257, 8786835, -42238599, 109913199, -119046771}

Array[c, 8].Transpose[A]

```

{c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179411 c[5] -
  863143 c[6] + 2249807 c[7] - 2444787 c[8], c[1] - 61 c[2] + 1565 c[3] -
  21865 c[4] + 179411 c[5] - 863111 c[6] + 2249167 c[7] - 2441747 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179427 c[5] - 863543 c[6] +
  2252991 c[7] - 2452835 c[8], c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] +
  179443 c[5] - 863943 c[6] + 2256239 c[7] - 2461459 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179091 c[5] - 858423 c[6] +
  2219343 c[7] - 2372139 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] +
  179091 c[5] - 858423 c[6] + 2219407 c[7] - 2372715 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179107 c[5] - 858887 c[6] +
  2223807 c[7] - 2386395 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] +
  179107 c[5] - 858887 c[6] + 2223871 c[7] - 2386971 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179107 c[5] - 858855 c[6] +
  2223167 c[7] - 2383227 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] +
  179107 c[5] - 858855 c[6] + 2223231 c[7] - 2383803 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179107 c[5] - 858823 c[6] +

```

$$\begin{aligned}
& 2\,222\,591\,c[7] - 2\,380\,763\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,123\,c[5] - 859\,319\,c[6] + 2\,227\,631\,c[7] - 2\,397\,483\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,123\,c[5] - 859\,287\,c[6] + \\
& 2\,226\,991\,c[7] - 2\,394\,315\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,123\,c[5] - 859\,287\,c[6] + 2\,227\,055\,c[7] - 2\,395\,019\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,123\,c[5] - 859\,255\,c[6] + \\
& 2\,226\,415\,c[7] - 2\,391\,851\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,139\,c[5] - 859\,719\,c[6] + 2\,230\,815\,c[7] - 2\,405\,403\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,139\,c[5] - 859\,719\,c[6] + \\
& 2\,230\,879\,c[7] - 2\,406\,107\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,139\,c[5] - 859\,687\,c[6] + 2\,230\,239\,c[7] - 2\,402\,939\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,155\,c[5] - 860\,151\,c[6] + \\
& 2\,234\,639\,c[7] - 2\,416\,491\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,155\,c[5] - 860\,119\,c[6] + 2\,234\,063\,c[7] - 2\,414\,027\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,771\,c[5] - 853\,703\,c[6] + \\
& 2\,188\,943\,c[7] - 2\,300\,067\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,771\,c[5] - 853\,703\,c[6] + 2\,189\,007\,c[7] - 2\,300\,643\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,787\,c[5] - 854\,167\,c[6] + \\
& 2\,193\,407\,c[7] - 2\,314\,323\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,787\,c[5] - 854\,135\,c[6] + 2\,192\,767\,c[7] - 2\,311\,155\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,787\,c[5] - 854\,135\,c[6] + \\
& 2\,192\,831\,c[7] - 2\,311\,731\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,803\,c[5] - 854\,631\,c[6] + 2\,197\,871\,c[7] - 2\,328\,579\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,803\,c[5] - 854\,599\,c[6] + \\
& 2\,197\,231\,c[7] - 2\,325\,411\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,803\,c[5] - 854\,599\,c[6] + 2\,197\,295\,c[7] - 2\,325\,987\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,803\,c[5] - 854\,567\,c[6] + \\
& 2\,196\,591\,c[7] - 2\,322\,243\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,803\,c[5] - 854\,567\,c[6] + 2\,196\,655\,c[7] - 2\,322\,819\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,819\,c[5] - 855\,063\,c[6] + \\
& 2\,201\,695\,c[7] - 2\,339\,667\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,819\,c[5] - 855\,063\,c[6] + 2\,201\,759\,c[7] - 2\,340\,243\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,819\,c[5] - 855\,031\,c[6] + \\
& 2\,201\,055\,c[7] - 2\,336\,499\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,819\,c[5] - 854\,999\,c[6] + 2\,200\,415\,c[7] - 2\,333\,331\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,819\,c[5] - 854\,967\,c[6] + \\
& 2\,199\,839\,c[7] - 2\,330\,867\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,835\,c[5] - 855\,463\,c[6] + 2\,204\,879\,c[7] - 2\,347\,587\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,835\,c[5] - 855\,431\,c[6] + \\
& 2\,204\,239\,c[7] - 2\,344\,419\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,835\,c[5] - 855\,431\,c[6] + 2\,204\,303\,c[7] - 2\,345\,123\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,835\,c[5] - 855\,399\,c[6] + \\
& 2\,203\,663\,c[7] - 2\,341\,955\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,851\,c[5] - 855\,895\,c[6] + 2\,208\,703\,c[7] - 2\,358\,675\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,851\,c[5] - 855\,863\,c[6] + \\
& 2\,208\,063\,c[7] - 2\,355\,507\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,851\,c[5] - 855\,863\,c[6] + 2\,208\,127\,c[7] - 2\,356\,211\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178851 c[5] - 855831 c[6] + \\
& 2207487 c[7] - 2353043 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& 178483 c[5] - 849847 c[6] + 2166191 c[7] - 2250171 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178499 c[5] - 850311 c[6] + \\
& 2170655 c[7] - 2264427 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& 178499 c[5] - 850279 c[6] + 2170015 c[7] - 2261259 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178499 c[5] - 850279 c[6] + \\
& 2170079 c[7] - 2261835 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& 178515 c[5] - 850775 c[6] + 2175119 c[7] - 2278683 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178515 c[5] - 850743 c[6] + \\
& 2174479 c[7] - 2275515 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& 178515 c[5] - 850711 c[6] + 2173839 c[7] - 2272347 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178531 c[5] - 851207 c[6] + \\
& 2178943 c[7] - 2289771 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& 178531 c[5] - 851175 c[6] + 2178303 c[7] - 2286603 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178531 c[5] - 851143 c[6] + \\
& 2177663 c[7] - 2283435 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& 178531 c[5] - 851111 c[6] + 2177087 c[7] - 2280971 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178547 c[5] - 851639 c[6] + \\
& 2182767 c[7] - 2300859 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& 178547 c[5] - 851607 c[6] + 2182127 c[7] - 2297691 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178547 c[5] - 851575 c[6] + \\
& 2181487 c[7] - 2294523 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& 178563 c[5] - 852071 c[6] + 2186591 c[7] - 2311947 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178563 c[5] - 852039 c[6] + \\
& 2185951 c[7] - 2308779 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& 178195 c[5] - 845991 c[6] + 2143439 c[7] - 2200275 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178211 c[5] - 846455 c[6] + \\
& 2147903 c[7] - 2214531 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& 178211 c[5] - 846423 c[6] + 2147263 c[7] - 2211363 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178227 c[5] - 846887 c[6] + \\
& 2151727 c[7] - 2225619 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& 178227 c[5] - 846855 c[6] + 2151087 c[7] - 2222451 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178243 c[5] - 847351 c[6] + \\
& 2156191 c[7] - 2239875 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& 178243 c[5] - 847319 c[6] + 2155551 c[7] - 2236707 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178243 c[5] - 847287 c[6] + \\
& 2154911 c[7] - 2233539 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& 178259 c[5] - 847815 c[6] + 2160655 c[7] - 2254131 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178259 c[5] - 847783 c[6] + \\
& 2160015 c[7] - 2250963 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& 178259 c[5] - 847751 c[6] + 2159375 c[7] - 2247795 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178275 c[5] - 848247 c[6] + \\
& 2164479 c[7] - 2265219 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& 177907 c[5] - 842135 c[6] + 2120687 c[7] - 2150379 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177923 c[5] - 842567 c[6] + \\
& 2124511 c[7] - 2161467 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 177\,939\,c[5] - 843\,031\,c[6] + 2\,128\,975\,c[7] - 2\,175\,723\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,939\,c[5] - 842\,999\,c[6] + \\
& 2\,128\,335\,c[7] - 2\,172\,555\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& 177\,955\,c[5] - 843\,495\,c[6] + 2\,133\,439\,c[7] - 2\,189\,979\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + 177\,619\,c[5] - 838\,279\,c[6] + \\
& 2\,097\,935\,c[7] - 2\,100\,483\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + \\
& 177\,635\,c[5] - 838\,711\,c[6] + 2\,101\,759\,c[7] - 2\,111\,571\,c[8] \}
\end{aligned}$$

Array[c, 8].g

$$\begin{aligned}
& 49\,c[1] - 2989\,c[2] + 76\,685\,c[3] - 1\,071\,257\,c[4] + \\
& 8\,786\,835\,c[5] - 42\,238\,599\,c[6] + 109\,913\,199\,c[7] - 119\,046\,771\,c[8]
\end{aligned}$$

cert =

$$\begin{aligned}
& \text{Flatten}[\text{Array}[c, 8] /. \text{FindInstance}[49\,c[1] - 2989\,c[2] + 76\,685\,c[3] - 1\,071\,257\,c[4] + \\
& 8\,786\,835\,c[5] - 42\,238\,599\,c[6] + 109\,913\,199\,c[7] - 119\,046\,771\,c[8] < 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,865\,c[4] + 179\,411\,c[5] - 863\,143\,c[6] + \\
& 2\,249\,807\,c[7] - 2\,444\,787\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,865\,c[4] + \\
& 179\,411\,c[5] - 863\,111\,c[6] + 2\,249\,167\,c[7] - 2\,441\,747\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,865\,c[4] + 179\,427\,c[5] - 863\,543\,c[6] + \\
& 2\,252\,991\,c[7] - 2\,452\,835\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,865\,c[4] + \\
& 179\,443\,c[5] - 863\,943\,c[6] + 2\,256\,239\,c[7] - 2\,461\,459\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,091\,c[5] - \\
& 858\,423\,c[6] + 2\,219\,343\,c[7] - 2\,372\,139\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,091\,c[5] - 858\,423\,c[6] + \\
& 2\,219\,407\,c[7] - 2\,372\,715\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,107\,c[5] - 858\,887\,c[6] + 2\,223\,807\,c[7] - 2\,386\,395\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,107\,c[5] - 858\,887\,c[6] + \\
& 2\,223\,871\,c[7] - 2\,386\,971\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,107\,c[5] - 858\,855\,c[6] + 2\,223\,167\,c[7] - 2\,383\,227\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,107\,c[5] - 858\,855\,c[6] + \\
& 2\,223\,231\,c[7] - 2\,383\,803\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,107\,c[5] - 858\,823\,c[6] + 2\,222\,591\,c[7] - 2\,380\,763\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,123\,c[5] - 859\,319\,c[6] + \\
& 2\,227\,631\,c[7] - 2\,397\,483\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,123\,c[5] - 859\,287\,c[6] + 2\,226\,991\,c[7] - 2\,394\,315\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,123\,c[5] - 859\,287\,c[6] + \\
& 2\,227\,055\,c[7] - 2\,395\,019\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,123\,c[5] - 859\,255\,c[6] + 2\,226\,415\,c[7] - 2\,391\,851\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,139\,c[5] - 859\,719\,c[6] + \\
& 2\,230\,815\,c[7] - 2\,405\,403\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,139\,c[5] - 859\,719\,c[6] + 2\,230\,879\,c[7] - 2\,406\,107\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,139\,c[5] - 859\,687\,c[6] + \\
& 2\,230\,239\,c[7] - 2\,402\,939\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& 179\,155\,c[5] - 860\,151\,c[6] + 2\,234\,639\,c[7] - 2\,416\,491\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,155\,c[5] - 860\,119\,c[6] + \\
& 2\,234\,063\,c[7] - 2\,414\,027\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& 178\,771\,c[5] - 853\,703\,c[6] + 2\,188\,943\,c[7] - 2\,300\,067\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178771 c[5] - 853703 c[6] + \\
& \quad 2189007 c[7] - 2300643 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178787 c[5] - 854167 c[6] + 2193407 c[7] - 2314323 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178787 c[5] - 854135 c[6] + \\
& \quad 2192767 c[7] - 2311155 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178787 c[5] - 854135 c[6] + 2192831 c[7] - 2311731 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178803 c[5] - 854631 c[6] + \\
& \quad 2197871 c[7] - 2328579 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178803 c[5] - 854599 c[6] + 2197231 c[7] - 2325411 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178803 c[5] - 854599 c[6] + \\
& \quad 2197295 c[7] - 2325987 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178803 c[5] - 854567 c[6] + 2196591 c[7] - 2322243 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178803 c[5] - 854567 c[6] + \\
& \quad 2196655 c[7] - 2322819 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178819 c[5] - 855063 c[6] + 2201695 c[7] - 2339667 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178819 c[5] - 855063 c[6] + \\
& \quad 2201759 c[7] - 2340243 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178819 c[5] - 855031 c[6] + 2201055 c[7] - 2336499 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178819 c[5] - 854999 c[6] + \\
& \quad 2200415 c[7] - 2333331 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178819 c[5] - 854967 c[6] + 2199839 c[7] - 2330867 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178835 c[5] - 855463 c[6] + \\
& \quad 2204879 c[7] - 2347587 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178835 c[5] - 855431 c[6] + 2204239 c[7] - 2344419 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178835 c[5] - 855431 c[6] + \\
& \quad 2204303 c[7] - 2345123 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178835 c[5] - 855399 c[6] + 2203663 c[7] - 2341955 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178851 c[5] - 855895 c[6] + \\
& \quad 2208703 c[7] - 2358675 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178851 c[5] - 855863 c[6] + 2208063 c[7] - 2355507 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178851 c[5] - 855863 c[6] + \\
& \quad 2208127 c[7] - 2356211 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178851 c[5] - 855831 c[6] + 2207487 c[7] - 2353043 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178483 c[5] - 849847 c[6] + \\
& \quad 2166191 c[7] - 2250171 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178499 c[5] - 850311 c[6] + 2170655 c[7] - 2264427 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178499 c[5] - 850279 c[6] + \\
& \quad 2170015 c[7] - 2261259 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178499 c[5] - 850279 c[6] + 2170079 c[7] - 2261835 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178515 c[5] - 850775 c[6] + \\
& \quad 2175119 c[7] - 2278683 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178515 c[5] - 850743 c[6] + 2174479 c[7] - 2275515 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178515 c[5] - 850711 c[6] + \\
& \quad 2173839 c[7] - 2272347 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178531 c[5] - 851207 c[6] + 2178943 c[7] - 2289771 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178531 c[5] - 851175 c[6] + \\
& \quad 2178303 c[7] - 2286603 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] +
\end{aligned}$$

```

178 531 c[5] - 851 143 c[6] + 2 177 663 c[7] - 2 283 435 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 531 c[5] - 851 111 c[6] +
2 177 087 c[7] - 2 280 971 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 547 c[5] - 851 639 c[6] + 2 182 767 c[7] - 2 300 859 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 547 c[5] - 851 607 c[6] +
2 182 127 c[7] - 2 297 691 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 547 c[5] - 851 575 c[6] + 2 181 487 c[7] - 2 294 523 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 563 c[5] - 852 071 c[6] +
2 186 591 c[7] - 2 311 947 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 563 c[5] - 852 039 c[6] + 2 185 951 c[7] - 2 308 779 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 195 c[5] - 845 991 c[6] +
2 143 439 c[7] - 2 200 275 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 211 c[5] - 846 455 c[6] + 2 147 903 c[7] - 2 214 531 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 211 c[5] - 846 423 c[6] +
2 147 263 c[7] - 2 211 363 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 227 c[5] - 846 887 c[6] + 2 151 727 c[7] - 2 225 619 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 227 c[5] - 846 855 c[6] +
2 151 087 c[7] - 2 222 451 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 243 c[5] - 847 351 c[6] + 2 156 191 c[7] - 2 239 875 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 243 c[5] - 847 319 c[6] +
2 155 551 c[7] - 2 236 707 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 243 c[5] - 847 287 c[6] + 2 154 911 c[7] - 2 233 539 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 259 c[5] - 847 815 c[6] +
2 160 655 c[7] - 2 254 131 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 259 c[5] - 847 783 c[6] + 2 160 015 c[7] - 2 250 963 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 259 c[5] - 847 751 c[6] +
2 159 375 c[7] - 2 247 795 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 275 c[5] - 848 247 c[6] + 2 164 479 c[7] - 2 265 219 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] + 177 907 c[5] - 842 135 c[6] +
2 120 687 c[7] - 2 150 379 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] +
177 923 c[5] - 842 567 c[6] + 2 124 511 c[7] - 2 161 467 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] + 177 939 c[5] - 843 031 c[6] +
2 128 975 c[7] - 2 175 723 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] +
177 939 c[5] - 842 999 c[6] + 2 128 335 c[7] - 2 172 555 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] + 177 955 c[5] - 843 495 c[6] +
2 133 439 c[7] - 2 189 979 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 619 c[5] - 838 279 c[6] + 2 097 935 c[7] - 2 100 483 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 635 c[5] - 838 711 c[6] +
2 101 759 c[7] - 2 111 571 c[8] ≥ 0, Array[c, 8], Integers]]

{0, 0, 0, 179 862 902, 49 896 108, 8 683 646, 1 295 256, 179 176}

GCD[0, 0, 0, 179 862 902, 49 896 108, 8 683 646, 1 295 256, 179 176]
2

cert = cert / 2

{0, 0, 0, 89 931 451, 24 948 054, 4 341 823, 647 628, 89 588}

```

cert.g

-79 839 170

{0, 0, 0, 89 931 451, 24 948 054, 4 341 823, 647 628, 89 588}.

Reverse[gpart[listdim17[[132]]]

-79 839 170

cert.Transpose[A]

{4 440 430, 1 244 366, 7 923 422, 1 251 918, 12 968 950, 2 814 454, 11 376 806, 1 222 310,
19 648 006, 9 493 510, 6 297 446, 18 055 862, 26 327 062, 4 705 302, 12 976 502,
33 006 118, 11 384 358, 19 655 558, 39 685 174, 26 334 614, 11 342 974, 1 188 478,
9 750 830, 18 022 030, 7 867 534, 8 158 686, 16 429 886, 6 275 390, 24 701 086,
14 546 590, 14 837 742, 4 683 246, 23 108 942, 31 380 142, 18 029 582, 29 787 998,
38 059 198, 16 437 438, 24 708 638, 36 467 054, 44 738 254, 23 116 494, 31 387 694,
23 075 110, 21 482 966, 29 754 166, 19 599 670, 19 890 822, 28 162 022, 36 433 222,
26 569 878, 34 841 078, 43 112 278, 29 761 718, 33 248 934, 41 520 134, 49 791 334,
39 927 990, 48 199 190, 34 807 246, 33 215 102, 41 486 302, 39 894 158, 48 165 358,
38 302 014, 46 573 214, 54 844 414, 36 709 870, 44 981 070, 53 252 270, 43 388 926,
46 539 382, 53 218 438, 51 626 294, 59 897 494, 50 034 150, 58 271 518, 64 950 574}

chi = listdim17[[133]]

$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (73 - 18x + x^2) (-888 + 289x - 30x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

A = {{1, -63, 1669, -24 067, 203 715, -1 010 765, 2 718 519, -3 053 809},
{1, -63, 1669, -24 059, 203 379, -1 005 581, 2 683 847, -2 969 593},
{1, -63, 1669, -24 059, 203 379, -1 005 581, 2 683 911, -2 970 297},
{1, -63, 1669, -24 059, 203 395, -1 006 045, 2 688 183, -2 982 441},
{1, -63, 1669, -24 059, 203 395, -1 006 045, 2 688 247, -2 983 145},
{1, -63, 1669, -24 059, 203 411, -1 006 509, 2 692 583, -2 995 993},
{1, -63, 1669, -24 059, 203 427, -1 006 973, 2 696 919, -3 008 841},
{1, -63, 1669, -24 051, 203 059, -1 000 893, 2 654 151, -2 901 393},
{1, -63, 1669, -24 051, 203 059, -1 000 893, 2 654 151, -2 901 265},
{1, -63, 1669, -24 051, 203 059, -1 000 893, 2 654 215, -2 901 969},
{1, -63, 1669, -24 051, 203 059, -1 000 861, 2 653 447, -2 897 521},
{1, -63, 1669, -24 051, 203 059, -1 000 861, 2 653 511, -2 898 225},
{1, -63, 1669, -24 051, 203 075, -1 001 357, 2 658 423, -2 913 537},
{1, -63, 1669, -24 051, 203 075, -1 001 357, 2 658 487, -2 914 241},
{1, -63, 1669, -24 051, 203 075, -1 001 357, 2 658 551, -2 914 817},
{1, -63, 1669, -24 051, 203 075, -1 001 325, 2 657 847, -2 911 073},
{1, -63, 1669, -24 051, 203 075, -1 001 325, 2 657 911, -2 911 777},

```

{1, -63, 1669, -24 051, 203 075, -1 001 325, 2 657 975, -2 912 481},
{1, -63, 1669, -24 051, 203 091, -1 001 821, 2 662 823, -2 927 089},
{1, -63, 1669, -24 051, 203 091, -1 001 789, 2 662 247, -2 924 625},
{1, -63, 1669, -24 051, 203 091, -1 001 789, 2 662 311, -2 925 329},
{1, -63, 1669, -24 051, 203 107, -1 002 253, 2 666 647, -2 938 177},
{1, -63, 1669, -24 043, 202 739, -996 173, 2 623 751, -2 829 321},
{1, -63, 1669, -24 043, 202 739, -996 173, 2 623 815, -2 829 897},
{1, -63, 1669, -24 043, 202 739, -996 141, 2 623 111, -2 826 153},
{1, -63, 1669, -24 043, 202 739, -996 141, 2 623 175, -2 826 729},
{1, -63, 1669, -24 043, 202 755, -996 669, 2 628 791, -2 846 041},
{1, -63, 1669, -24 043, 202 755, -996 637, 2 628 087, -2 842 169},
{1, -63, 1669, -24 043, 202 755, -996 637, 2 628 151, -2 842 873},
{1, -63, 1669, -24 043, 202 755, -996 637, 2 628 215, -2 843 577},
{1, -63, 1669, -24 043, 202 755, -996 637, 2 628 279, -2 844 153},
{1, -63, 1669, -24 043, 202 755, -996 605, 2 627 511, -2 839 705},
{1, -63, 1669, -24 043, 202 755, -996 605, 2 627 575, -2 840 409},
{1, -63, 1669, -24 043, 202 755, -996 573, 2 626 935, -2 837 241},
{1, -63, 1669, -24 043, 202 771, -997 101, 2 632 551, -2 856 425},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 631 847, -2 852 553},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 631 911, -2 853 257},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 631 975, -2 853 961},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 632 039, -2 854 665},
{1, -63, 1669, -24 043, 202 787, -997 533, 2 636 311, -2 866 809},
{1, -63, 1669, -24 043, 202 787, -997 533, 2 636 375, -2 867 513},
{1, -63, 1669, -24 043, 202 803, -997 997, 2 640 711, -2 880 361},
{1, -63, 1669, -24 035, 202 419, -991 453, 2 593 351, -2 757 249},
{1, -63, 1669, -24 035, 202 435, -991 949, 2 598 455, -2 774 673},
{1, -63, 1669, -24 035, 202 435, -991 917, 2 597 751, -2 770 801},
{1, -63, 1669, -24 035, 202 435, -991 917, 2 597 815, -2 771 505},
{1, -63, 1669, -24 035, 202 435, -991 885, 2 597 175, -2 768 337},
{1, -63, 1669, -24 035, 202 435, -991 885, 2 597 239, -2 768 913},
{1, -63, 1669, -24 035, 202 451, -992 381, 2 602 215, -2 785 057},
{1, -63, 1669, -24 035, 202 451, -992 381, 2 602 279, -2 785 761},
{1, -63, 1669, -24 035, 202 451, -992 349, 2 601 575, -2 781 889},
{1, -63, 1669, -24 035, 202 451, -992 349, 2 601 639, -2 782 593},
{1, -63, 1669, -24 035, 202 451, -992 317, 2 600 935, -2 778 721},
{1, -63, 1669, -24 035, 202 451, -992 317, 2 600 999, -2 779 425},
{1, -63, 1669, -24 035, 202 467, -992 813, 2 605 975, -2 795 441},
{1, -63, 1669, -24 035, 202 467, -992 813, 2 606 039, -2 796 145},
{1, -63, 1669, -24 035, 202 467, -992 813, 2 606 103, -2 796 849},
{1, -63, 1669, -24 035, 202 467, -992 781, 2 605 335, -2 792 273},
{1, -63, 1669, -24 035, 202 483, -993 277, 2 610 439, -2 809 697},
{1, -63, 1669, -24 027, 202 115, -987 165, 2 566 775, -2 696 265},
{1, -63, 1669, -24 027, 202 131, -987 661, 2 571 879, -2 713 689},
{1, -63, 1669, -24 027, 202 131, -987 629, 2 571 239, -2 710 521},
{1, -63, 1669, -24 027, 202 131, -987 597, 2 570 599, -2 707 353},
{1, -63, 1669, -24 027, 202 147, -988 125, 2 576 343, -2 727 945},

```

```
{1, -63, 1669, -24 027, 202 147, -988 093, 2 575 639, -2 724 073},
{1, -63, 1669, -24 027, 202 147, -988 093, 2 575 703, -2 724 777},
{1, -63, 1669, -24 027, 202 147, -988 061, 2 574 999, -2 720 905},
{1, -63, 1669, -24 027, 202 147, -988 061, 2 575 063, -2 721 609},
{1, -63, 1669, -24 027, 202 163, -988 557, 2 580 103, -2 738 329},
{1, -63, 1669, -24 027, 202 163, -988 557, 2 580 167, -2 739 033},
{1, -63, 1669, -24 019, 201 827, -983 341, 2 544 663, -2 649 537},
{1, -63, 1669, -24 019, 201 843, -983 837, 2 549 767, -2 666 961},
{1, -63, 1669, -24 019, 201 843, -983 805, 2 549 127, -2 663 793},
{1, -63, 1669, -24 019, 201 843, -983 773, 2 548 423, -2 659 921},
{1, -63, 1669, -24 019, 201 859, -984 301, 2 554 231, -2 681 217}};
```

```
A // MatrixForm
```

```
( 1 -63 1669 -24 067 203 715 -1 010 765 2 718 519 -3 053 809 )
( 1 -63 1669 -24 059 203 379 -1 005 581 2 683 847 -2 969 593 )
( 1 -63 1669 -24 059 203 379 -1 005 581 2 683 911 -2 970 297 )
( 1 -63 1669 -24 059 203 395 -1 006 045 2 688 183 -2 982 441 )
( 1 -63 1669 -24 059 203 395 -1 006 045 2 688 247 -2 983 145 )
( 1 -63 1669 -24 059 203 411 -1 006 509 2 692 583 -2 995 993 )
( 1 -63 1669 -24 059 203 427 -1 006 973 2 696 919 -3 008 841 )
( 1 -63 1669 -24 051 203 059 -1 000 893 2 654 151 -2 901 393 )
( 1 -63 1669 -24 051 203 059 -1 000 893 2 654 151 -2 901 265 )
( 1 -63 1669 -24 051 203 059 -1 000 893 2 654 215 -2 901 969 )
( 1 -63 1669 -24 051 203 059 -1 000 861 2 653 447 -2 897 521 )
( 1 -63 1669 -24 051 203 059 -1 000 861 2 653 511 -2 898 225 )
( 1 -63 1669 -24 051 203 075 -1 001 357 2 658 423 -2 913 537 )
( 1 -63 1669 -24 051 203 075 -1 001 357 2 658 487 -2 914 241 )
( 1 -63 1669 -24 051 203 075 -1 001 357 2 658 551 -2 914 817 )
( 1 -63 1669 -24 051 203 075 -1 001 325 2 657 847 -2 911 073 )
( 1 -63 1669 -24 051 203 075 -1 001 325 2 657 911 -2 911 777 )
( 1 -63 1669 -24 051 203 075 -1 001 325 2 657 975 -2 912 481 )
( 1 -63 1669 -24 051 203 091 -1 001 821 2 662 823 -2 927 089 )
( 1 -63 1669 -24 051 203 091 -1 001 789 2 662 247 -2 924 625 )
( 1 -63 1669 -24 051 203 091 -1 001 789 2 662 311 -2 925 329 )
( 1 -63 1669 -24 051 203 107 -1 002 253 2 666 647 -2 938 177 )
( 1 -63 1669 -24 043 202 739 -996 173 2 623 751 -2 829 321 )
( 1 -63 1669 -24 043 202 739 -996 173 2 623 815 -2 829 897 )
( 1 -63 1669 -24 043 202 739 -996 141 2 623 111 -2 826 153 )
( 1 -63 1669 -24 043 202 739 -996 141 2 623 175 -2 826 729 )
( 1 -63 1669 -24 043 202 755 -996 669 2 628 791 -2 846 041 )
( 1 -63 1669 -24 043 202 755 -996 637 2 628 087 -2 842 169 )
( 1 -63 1669 -24 043 202 755 -996 637 2 628 151 -2 842 873 )
( 1 -63 1669 -24 043 202 755 -996 637 2 628 215 -2 843 577 )
( 1 -63 1669 -24 043 202 755 -996 637 2 628 279 -2 844 153 )
( 1 -63 1669 -24 043 202 755 -996 605 2 627 511 -2 839 705 )
( 1 -63 1669 -24 043 202 755 -996 605 2 627 575 -2 840 409 )
( 1 -63 1669 -24 043 202 755 -996 573 2 626 935 -2 837 241 )
( 1 -63 1669 -24 043 202 771 -997 101 2 632 551 -2 856 425 )
( 1 -63 1669 -24 043 202 771 -997 069 2 631 847 -2 852 553 )
( 1 -63 1669 -24 043 202 771 -997 069 2 631 911 -2 853 257 )
( 1 -63 1669 -24 043 202 771 -997 069 2 631 975 -2 853 961 )
( 1 -63 1669 -24 043 202 771 -997 069 2 632 039 -2 854 665 )
( 1 -63 1669 -24 043 202 787 -997 533 2 636 311 -2 866 809 )
```

```

1 -63 1669 -24 043 202 787 -997 533 2 636 375 -2 867 513
1 -63 1669 -24 043 202 803 -997 997 2 640 711 -2 880 361
1 -63 1669 -24 035 202 419 -991 453 2 593 351 -2 757 249
1 -63 1669 -24 035 202 435 -991 949 2 598 455 -2 774 673
1 -63 1669 -24 035 202 435 -991 917 2 597 751 -2 770 801
1 -63 1669 -24 035 202 435 -991 917 2 597 815 -2 771 505
1 -63 1669 -24 035 202 435 -991 885 2 597 175 -2 768 337
1 -63 1669 -24 035 202 435 -991 885 2 597 239 -2 768 913
1 -63 1669 -24 035 202 451 -992 381 2 602 215 -2 785 057
1 -63 1669 -24 035 202 451 -992 381 2 602 279 -2 785 761
1 -63 1669 -24 035 202 451 -992 349 2 601 575 -2 781 889
1 -63 1669 -24 035 202 451 -992 349 2 601 639 -2 782 593
1 -63 1669 -24 035 202 451 -992 317 2 600 935 -2 778 721
1 -63 1669 -24 035 202 451 -992 317 2 600 999 -2 779 425
1 -63 1669 -24 035 202 467 -992 813 2 605 975 -2 795 441
1 -63 1669 -24 035 202 467 -992 813 2 606 039 -2 796 145
1 -63 1669 -24 035 202 467 -992 813 2 606 103 -2 796 849
1 -63 1669 -24 035 202 467 -992 781 2 605 335 -2 792 273
1 -63 1669 -24 035 202 483 -993 277 2 610 439 -2 809 697
1 -63 1669 -24 027 202 115 -987 165 2 566 775 -2 696 265
1 -63 1669 -24 027 202 131 -987 661 2 571 879 -2 713 689
1 -63 1669 -24 027 202 131 -987 629 2 571 239 -2 710 521
1 -63 1669 -24 027 202 131 -987 597 2 570 599 -2 707 353
1 -63 1669 -24 027 202 147 -988 125 2 576 343 -2 727 945
1 -63 1669 -24 027 202 147 -988 093 2 575 639 -2 724 073
1 -63 1669 -24 027 202 147 -988 093 2 575 703 -2 724 777
1 -63 1669 -24 027 202 147 -988 061 2 574 999 -2 720 905
1 -63 1669 -24 027 202 147 -988 061 2 575 063 -2 721 609
1 -63 1669 -24 027 202 163 -988 557 2 580 103 -2 738 329
1 -63 1669 -24 027 202 163 -988 557 2 580 167 -2 739 033
1 -63 1669 -24 019 201 827 -983 341 2 544 663 -2 649 537
1 -63 1669 -24 019 201 843 -983 837 2 549 767 -2 666 961
1 -63 1669 -24 019 201 843 -983 805 2 549 127 -2 663 793
1 -63 1669 -24 019 201 843 -983 773 2 548 423 -2 659 921
1 -63 1669 -24 019 201 859 -984 301 2 554 231 -2 681 217

```

Dimensions[A]

{75, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81 781, -1 178 763, 9 961 795, -49 237 629, 131 401 879, -145 519 977}

Array[c, 8].Transpose[A]

```

{c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 715 c[5] -
 1 010 765 c[6] + 2 718 519 c[7] - 3 053 809 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24 059 c[4] + 203 379 c[5] - 1 005 581 c[6] + 2 683 847 c[7] - 2 969 593 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 379 c[5] - 1 005 581 c[6] +
 2 683 911 c[7] - 2 970 297 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
 203 395 c[5] - 1 006 045 c[6] + 2 688 183 c[7] - 2 982 441 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 395 c[5] - 1 006 045 c[6] +
 2 688 247 c[7] - 2 983 145 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
 203 411 c[5] - 1 006 509 c[6] + 2 692 583 c[7] - 2 995 993 c[8],

```


$c[1] - 63 c[2] + 1669 c[3] - 24\,059 c[4] + 203\,427 c[5] - 1\,006\,973 c[6] +$
 $2\,696\,919 c[7] - 3\,008\,841 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,059 c[5] - 1\,000\,893 c[6] + 2\,654\,151 c[7] - 2\,901\,393 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,893 c[6] +$
 $2\,654\,151 c[7] - 2\,901\,265 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,059 c[5] - 1\,000\,893 c[6] + 2\,654\,215 c[7] - 2\,901\,969 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,059 c[5] - 1\,000\,861 c[6] +$
 $2\,653\,447 c[7] - 2\,897\,521 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,059 c[5] - 1\,000\,861 c[6] + 2\,653\,511 c[7] - 2\,898\,225 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,075 c[5] - 1\,001\,357 c[6] +$
 $2\,658\,423 c[7] - 2\,913\,537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,075 c[5] - 1\,001\,357 c[6] + 2\,658\,487 c[7] - 2\,914\,241 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,075 c[5] - 1\,001\,357 c[6] +$
 $2\,658\,551 c[7] - 2\,914\,817 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,075 c[5] - 1\,001\,325 c[6] + 2\,657\,847 c[7] - 2\,911\,073 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,075 c[5] - 1\,001\,325 c[6] +$
 $2\,657\,911 c[7] - 2\,911\,777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,075 c[5] - 1\,001\,325 c[6] + 2\,657\,975 c[7] - 2\,912\,481 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,091 c[5] - 1\,001\,821 c[6] +$
 $2\,662\,823 c[7] - 2\,927\,089 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,091 c[5] - 1\,001\,789 c[6] + 2\,662\,247 c[7] - 2\,924\,625 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,091 c[5] - 1\,001\,789 c[6] +$
 $2\,662\,311 c[7] - 2\,925\,329 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] +$
 $203\,107 c[5] - 1\,002\,253 c[6] + 2\,666\,647 c[7] - 2\,938\,177 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,173 c[6] + 2\,623\,751 c[7] -$
 $2\,829\,321 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] -$
 $996\,173 c[6] + 2\,623\,815 c[7] - 2\,829\,897 c[8], c[1] - 63 c[2] + 1669 c[3] -$
 $24\,043 c[4] + 202\,739 c[5] - 996\,141 c[6] + 2\,623\,111 c[7] - 2\,826\,153 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,141 c[6] +$
 $2\,623\,175 c[7] - 2\,826\,729 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,755 c[5] - 996\,669 c[6] + 2\,628\,791 c[7] - 2\,846\,041 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,637 c[6] +$
 $2\,628\,087 c[7] - 2\,842\,169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,755 c[5] - 996\,637 c[6] + 2\,628\,151 c[7] - 2\,842\,873 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,637 c[6] +$
 $2\,628\,215 c[7] - 2\,843\,577 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,755 c[5] - 996\,637 c[6] + 2\,628\,279 c[7] - 2\,844\,153 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,605 c[6] +$
 $2\,627\,511 c[7] - 2\,839\,705 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,755 c[5] - 996\,605 c[6] + 2\,627\,575 c[7] - 2\,840\,409 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,573 c[6] +$
 $2\,626\,935 c[7] - 2\,837\,241 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,771 c[5] - 997\,101 c[6] + 2\,632\,551 c[7] - 2\,856\,425 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] +$
 $2\,631\,847 c[7] - 2\,852\,553 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] +$
 $202\,771 c[5] - 997\,069 c[6] + 2\,631\,911 c[7] - 2\,853\,257 c[8],$
 $c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] +$

$$\begin{aligned}
& 2\,631\,975\,c[7] - 2\,853\,961\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,069\,c[6] + 2\,632\,039\,c[7] - 2\,854\,665\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,533\,c[6] + \\
& 2\,636\,311\,c[7] - 2\,866\,809\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,533\,c[6] + 2\,636\,375\,c[7] - 2\,867\,513\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 997\,997\,c[6] + \\
& 2\,640\,711\,c[7] - 2\,880\,361\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,453\,c[6] + 2\,593\,351\,c[7] - 2\,757\,249\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,949\,c[6] + \\
& 2\,598\,455\,c[7] - 2\,774\,673\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,751\,c[7] - 2\,770\,801\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,917\,c[6] + \\
& 2\,597\,815\,c[7] - 2\,771\,505\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,175\,c[7] - 2\,768\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,239\,c[7] - 2\,768\,913\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,215\,c[7] - 2\,785\,057\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,381\,c[6] + \\
& 2\,602\,279\,c[7] - 2\,785\,761\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,349\,c[6] + 2\,601\,575\,c[7] - 2\,781\,889\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,639\,c[7] - 2\,782\,593\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,935\,c[7] - 2\,778\,721\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,317\,c[6] + \\
& 2\,600\,999\,c[7] - 2\,779\,425\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,813\,c[6] + 2\,605\,975\,c[7] - 2\,795\,441\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& 2\,606\,039\,c[7] - 2\,796\,145\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,813\,c[6] + 2\,606\,103\,c[7] - 2\,796\,849\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,781\,c[6] + \\
& 2\,605\,335\,c[7] - 2\,792\,273\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,277\,c[6] + 2\,610\,439\,c[7] - 2\,809\,697\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,165\,c[6] + \\
& 2\,566\,775\,c[7] - 2\,696\,265\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,661\,c[6] + 2\,571\,879\,c[7] - 2\,713\,689\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,629\,c[6] + \\
& 2\,571\,239\,c[7] - 2\,710\,521\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,599\,c[7] - 2\,707\,353\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,125\,c[6] + \\
& 2\,576\,343\,c[7] - 2\,727\,945\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,093\,c[6] + 2\,575\,639\,c[7] - 2\,724\,073\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,093\,c[6] + \\
& 2\,575\,703\,c[7] - 2\,724\,777\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,061\,c[6] + 2\,574\,999\,c[7] - 2\,720\,905\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,061\,c[6] + \\
& 2\,575\,063\,c[7] - 2\,721\,609\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,557\,c[6] + 2\,580\,103\,c[7] - 2\,738\,329\,c[8],
\end{aligned}$$

```

c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 163 c[5] - 988 557 c[6] +
  2 580 167 c[7] - 2 739 033 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 827 c[5] - 983 341 c[6] + 2 544 663 c[7] - 2 649 537 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 837 c[6] +
  2 549 767 c[7] - 2 666 961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 843 c[5] - 983 805 c[6] + 2 549 127 c[7] - 2 663 793 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 773 c[6] +
  2 548 423 c[7] - 2 659 921 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 859 c[5] - 984 301 c[6] + 2 554 231 c[7] - 2 681 217 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 763 c[4] +
  9 961 795 c[5] - 49 237 629 c[6] + 131 401 879 c[7] - 145 519 977 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 763 c[4] +
  9 961 795 c[5] - 49 237 629 c[6] + 131 401 879 c[7] - 145 519 977 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 715 c[5] - 1 010 765 c[6] +
  2 718 519 c[7] - 3 053 809 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 379 c[5] - 1 005 581 c[6] + 2 683 847 c[7] - 2 969 593 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 379 c[5] - 1 005 581 c[6] +
  2 683 911 c[7] - 2 970 297 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 395 c[5] - 1 006 045 c[6] + 2 688 183 c[7] - 2 982 441 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 395 c[5] - 1 006 045 c[6] +
  2 688 247 c[7] - 2 983 145 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
  203 411 c[5] - 1 006 509 c[6] + 2 692 583 c[7] - 2 995 993 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 427 c[5] - 1 006 973 c[6] +
  2 696 919 c[7] - 3 008 841 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 059 c[5] - 1 000 893 c[6] + 2 654 151 c[7] - 2 901 393 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 059 c[5] - 1 000 893 c[6] +
  2 654 151 c[7] - 2 901 265 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 059 c[5] - 1 000 893 c[6] + 2 654 215 c[7] - 2 901 969 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 059 c[5] - 1 000 861 c[6] +
  2 653 447 c[7] - 2 897 521 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 059 c[5] - 1 000 861 c[6] + 2 653 511 c[7] - 2 898 225 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 075 c[5] - 1 001 357 c[6] +
  2 658 423 c[7] - 2 913 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 075 c[5] - 1 001 357 c[6] + 2 658 487 c[7] - 2 914 241 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 075 c[5] - 1 001 357 c[6] +
  2 658 551 c[7] - 2 914 817 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 075 c[5] - 1 001 325 c[6] + 2 657 847 c[7] - 2 911 073 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 075 c[5] - 1 001 325 c[6] +
  2 657 911 c[7] - 2 911 777 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 075 c[5] - 1 001 325 c[6] + 2 657 975 c[7] - 2 912 481 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 091 c[5] - 1 001 821 c[6] +
  2 662 823 c[7] - 2 927 089 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 091 c[5] - 1 001 789 c[6] + 2 662 247 c[7] - 2 924 625 c[8] ≥ 0 &&

```

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,091 c[5] - 1\,001\,789 c[6] + \\
& \quad 2\,662\,311 c[7] - 2\,925\,329 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,107 c[5] - 1\,002\,253 c[6] + 2\,666\,647 c[7] - 2\,938\,177 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,173 c[6] + \\
& \quad 2\,623\,751 c[7] - 2\,829\,321 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,173 c[6] + 2\,623\,815 c[7] - 2\,829\,897 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,141 c[6] + \\
& \quad 2\,623\,111 c[7] - 2\,826\,153 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,141 c[6] + 2\,623\,175 c[7] - 2\,826\,729 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,669 c[6] + \\
& \quad 2\,628\,791 c[7] - 2\,846\,041 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,637 c[6] + 2\,628\,087 c[7] - 2\,842\,169 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,637 c[6] + \\
& \quad 2\,628\,151 c[7] - 2\,842\,873 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,637 c[6] + 2\,628\,215 c[7] - 2\,843\,577 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,637 c[6] + \\
& \quad 2\,628\,279 c[7] - 2\,844\,153 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,605 c[6] + 2\,627\,511 c[7] - 2\,839\,705 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,605 c[6] + \\
& \quad 2\,627\,575 c[7] - 2\,840\,409 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,573 c[6] + 2\,626\,935 c[7] - 2\,837\,241 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,101 c[6] + \\
& \quad 2\,632\,551 c[7] - 2\,856\,425 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,069 c[6] + 2\,631\,847 c[7] - 2\,852\,553 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] + \\
& \quad 2\,631\,911 c[7] - 2\,853\,257 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,069 c[6] + 2\,631\,975 c[7] - 2\,853\,961 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] + \\
& \quad 2\,632\,039 c[7] - 2\,854\,665 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,533 c[6] + 2\,636\,311 c[7] - 2\,866\,809 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,533 c[6] + \\
& \quad 2\,636\,375 c[7] - 2\,867\,513 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,803 c[5] - 997\,997 c[6] + 2\,640\,711 c[7] - 2\,880\,361 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,453 c[6] + \\
& \quad 2\,593\,351 c[7] - 2\,757\,249 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,949 c[6] + 2\,598\,455 c[7] - 2\,774\,673 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,917 c[6] + \\
& \quad 2\,597\,751 c[7] - 2\,770\,801 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,917 c[6] + 2\,597\,815 c[7] - 2\,771\,505 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,885 c[6] + \\
& \quad 2\,597\,175 c[7] - 2\,768\,337 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,885 c[6] + 2\,597\,239 c[7] - 2\,768\,913 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,381 c[6] + \\
& \quad 2\,602\,215 c[7] - 2\,785\,057 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,381 c[6] + 2\,602\,279 c[7] - 2\,785\,761 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,349 c[6] + \\
& \quad 2\,601\,575 c[7] - 2\,781\,889 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] +
\end{aligned}$$

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202 451 c[5] - 992 349 c[6] + 2 601 639 c[7] - 2 782 593 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 451 c[5] - 992 317 c[6] +
2 600 935 c[7] - 2 778 721 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 451 c[5] - 992 317 c[6] + 2 600 999 c[7] - 2 779 425 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 813 c[6] +
2 605 975 c[7] - 2 795 441 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 467 c[5] - 992 813 c[6] + 2 606 039 c[7] - 2 796 145 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 813 c[6] +
2 606 103 c[7] - 2 796 849 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
202 467 c[5] - 992 781 c[6] + 2 605 335 c[7] - 2 792 273 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 483 c[5] - 993 277 c[6] +
2 610 439 c[7] - 2 809 697 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 115 c[5] - 987 165 c[6] + 2 566 775 c[7] - 2 696 265 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 661 c[6] +
2 571 879 c[7] - 2 713 689 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 131 c[5] - 987 629 c[6] + 2 571 239 c[7] - 2 710 521 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 597 c[6] +
2 570 599 c[7] - 2 707 353 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 147 c[5] - 988 125 c[6] + 2 576 343 c[7] - 2 727 945 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 093 c[6] +
2 575 639 c[7] - 2 724 073 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 147 c[5] - 988 093 c[6] + 2 575 703 c[7] - 2 724 777 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 061 c[6] +
2 574 999 c[7] - 2 720 905 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 147 c[5] - 988 061 c[6] + 2 575 063 c[7] - 2 721 609 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 163 c[5] - 988 557 c[6] +
2 580 103 c[7] - 2 738 329 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 163 c[5] - 988 557 c[6] + 2 580 167 c[7] - 2 739 033 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 341 c[6] +
2 544 663 c[7] - 2 649 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 843 c[5] - 983 837 c[6] + 2 549 767 c[7] - 2 666 961 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 805 c[6] +
2 549 127 c[7] - 2 663 793 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 843 c[5] - 983 773 c[6] + 2 548 423 c[7] - 2 659 921 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 859 c[5] - 984 301 c[6] +
2 554 231 c[7] - 2 681 217 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, -19 060 138 333, -2 884 207 282, -300 173 384, -30 699 551, -3 100 964, -310 097}

```

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GCD[0, 0, -19 060 138 333, -2 884 207 282,
-300 173 384, -30 699 551, -3 100 964, -310 097]

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cert.g
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-145 922 195
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{0, 0, -19 060 138 333, -2 884 207 282, -300 173 384, -30 699 551, -3 100 964, -310 097}.
Reverse[gpart[listdim17[[133]]]]
-145 922 195
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cert.Transpose[A]
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{3 980 229, 43 601 469, 63 448 061, 23 765 341, 43 611 933, 23 775 805, 3 939 677,
43 542 549, 3 850 133, 23 696 725, 43 539 989, 63 386 581, 3 859 829, 23 706 421,
3 860 597, 43 550 453, 63 397 045, 83 243 637, 3 870 293, 43 560 917, 63 407 509,
43 571 381, 43 481 069, 23 635 245, 63 325 101, 43 479 277, 23 647 501, 23 644 941,
43 491 533, 63 338 125, 43 492 301, 63 335 565, 83 182 157, 103 026 189, 43 501 997,
43 499 437, 63 346 029, 83 192 621, 103 039 213, 63 356 493, 83 203 085, 63 366 957,
43 419 589, 43 432 613, 43 430 053, 63 276 645, 83 120 677, 63 274 853, 63 287 109,
83 133 701, 83 131 141, 102 977 733, 102 975 173, 122 821 765, 83 141 605, 102 988 197,
122 834 789, 102 985 637, 102 998 661, 83 059 197, 83 072 221, 102 916 253, 122 760 285,
102 929 277, 102 926 717, 122 773 309, 122 770 749, 142 617 341, 122 783 773,
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```
chi = listdim17[[134]]
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```
 $(-11 + x)^2 (-9 + x)^9 (5 + x)^{32}$   

 $(583\,064 - 398\,521\,x + 111\,601\,x^2 - 16\,398\,x^3 + 1334\,x^4 - 57\,x^5 + x^6)$ 
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CoefficientList[feasibleinterlacingpolylist[chi], x]
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A // MatrixForm

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1 -72 2236 -39 080 419 910 -2 835 960 11 733 212 -27 116 568 26 704 161
1 -72 2236 -39 080 419 926 -2 836 600 11 742 716 -27 178 648 26 854 641
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1 -72 2236 -39 072 419 518 -2 828 392 11 661 260 -26 779 696 26 082 873
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1	-72	2236	-39 072	419 566	-2 830 248	11 687 916	-26 948 208	26 478 441
1	-72	2236	-39 072	419 566	-2 830 216	11 686 924	-26 938 128	26 445 001
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1	-72	2236	-39 064	419 110	-2 820 120	11 577 948	-26 363 016	25 255 233
1	-72	2236	-39 064	419 126	-2 820 760	11 587 388	-26 423 944	25 400 529
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1	-72	2236	-39 064	419 158	-2 821 944	11 603 612	-26 521 448	25 617 361
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1	-72	2236	-39 056	418 766	-2 814 376	11 531 724	-26 185 856	25 002 153
1	-72	2236	-39 056	418 766	-2 814 376	11 531 788	-26 187 136	25 008 489
1	-72	2236	-39 056	418 766	-2 814 344	11 530 796	-26 176 928	24 973 641
1	-72	2236	-39 056	418 766	-2 814 344	11 530 860	-26 178 208	24 979 977
1	-72	2236	-39 056	418 782	-2 815 048	11 542 220	-26 258 144	25 187 481
1	-72	2236	-39 056	418 782	-2 815 016	11 541 292	-26 249 216	25 158 969
1	-72	2236	-39 056	418 782	-2 814 984	11 540 300	-26 239 008	25 124 121
1	-72	2236	-39 056	418 782	-2 814 984	11 540 364	-26 240 288	25 130 457
1	-72	2236	-39 056	418 782	-2 814 984	11 540 428	-26 241 568	25 136 793
1	-72	2236	-39 056	418 798	-2 815 656	11 550 860	-26 312 576	25 315 785
1	-72	2236	-39 056	418 798	-2 815 624	11 549 868	-26 302 368	25 280 937
1	-72	2236	-39 056	418 798	-2 815 624	11 549 932	-26 303 648	25 287 273

1	-72	2236	-39056	418814	-2816264	11559436	-26365728	25437753
1	-72	2236	-39048	418342	-2805528	11440700	-25723672	24074721
1	-72	2236	-39048	418358	-2806136	11449340	-25778104	24203025
1	-72	2236	-39048	418358	-2806104	11448412	-25769176	24174513
1	-72	2236	-39048	418374	-2806744	11457916	-25831256	24324993
1	-72	2236	-39048	418374	-2806712	11457052	-25823608	24302817
1	-72	2236	-39048	418390	-2807352	11466556	-25885688	24453297
1	-72	2236	-39048	418390	-2807320	11465628	-25876760	24424785
1	-72	2236	-39048	418406	-2807992	11476124	-25949048	24610113
1	-72	2236	-39048	418406	-2807960	11475132	-25938840	24575265
1	-72	2236	-39040	417982	-2799080	11383244	-25469008	23625657
1	-72	2236	-39040	417998	-2799688	11391820	-25522160	23747625

Dimensions[A]

{91, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3528, 109564, -1914792, 20570662,
-138892376, 574502460, -1327807160, 1308786417}

Array[c, 9].Transpose[A]

{c[1] - 72 c[2] + 2236 c[3] - 39080 c[4] + 419910 c[5] -
2835960 c[6] + 11733212 c[7] - 27116568 c[8] + 26704161 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39080 c[4] + 419926 c[5] - 2836600 c[6] +
11742716 c[7] - 27178648 c[8] + 26854641 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39080 c[4] + 419926 c[5] - 2836568 c[6] +
11741724 c[7] - 27168568 c[8] + 26821201 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39080 c[4] + 419942 c[5] - 2837208 c[6] +
11751228 c[7] - 27230648 c[8] + 26971681 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] + 419518 c[5] - 2828392 c[6] +
11661260 c[7] - 26779696 c[8] + 26082873 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] + 419518 c[5] - 2828360 c[6] +
11660332 c[7] - 26770896 c[8] + 26055513 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] + 419518 c[5] - 2828328 c[6] + 11659404 c[7] -
26761968 c[8] + 26027001 c[9], c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] +
419534 c[5] - 2829064 c[6] + 11671756 c[7] - 26851984 c[8] + 26268201 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] + 419534 c[5] - 2829032 c[6] + 11670764 c[7] -
26841904 c[8] + 26234505 c[9], c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] +
419534 c[5] - 2829032 c[6] + 11670828 c[7] - 26843056 c[8] + 26239689 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] + 419534 c[5] - 2829000 c[6] + 11669772 c[7] -
26831696 c[8] + 26199657 c[9], c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] +
419534 c[5] - 2829000 c[6] + 11669836 c[7] - 26832976 c[8] + 26205993 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] + 419534 c[5] - 2829000 c[6] + 11669836 c[7] -
26832848 c[8] + 26204841 c[9], c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] +
419534 c[5] - 2829000 c[6] + 11669900 c[7] - 26834256 c[8] + 26212329 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] + 419534 c[5] - 2828968 c[6] + 11668908 c[7] -
26824048 c[8] + 26177481 c[9], c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] +
419550 c[5] - 2829672 c[6] + 11680204 c[7] - 26902704 c[8] + 26378649 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] + 419550 c[5] - 2829672 c[6] + 11680268 c[7] -

$26\,903\,984\,c[8] + 26\,384\,985\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] +$
 $419\,550\,c[5] - 2\,829\,640\,c[6] + 11\,679\,276\,c[7] - 26\,893\,776\,c[8] + 26\,350\,137\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,640\,c[6] + 11\,679\,340\,c[7] -$
 $26\,895\,056\,c[8] + 26\,356\,473\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] +$
 $419\,550\,c[5] - 2\,829\,640\,c[6] + 11\,679\,404\,c[7] - 26\,896\,336\,c[8] + 26\,362\,809\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,608\,c[6] + 11\,678\,348\,c[7] -$
 $26\,884\,976\,c[8] + 26\,323\,033\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] +$
 $419\,550\,c[5] - 2\,829\,608\,c[6] + 11\,678\,412\,c[7] - 26\,886\,128\,c[8] + 26\,327\,961\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,608\,c[6] + 11\,678\,476\,c[7] -$
 $26\,887\,408\,c[8] + 26\,334\,297\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] +$
 $419\,550\,c[5] - 2\,829\,576\,c[6] + 11\,677\,420\,c[7] - 26\,876\,048\,c[8] + 26\,294\,521\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,566\,c[5] - 2\,830\,248\,c[6] + 11\,687\,852\,c[7] -$
 $26\,946\,928\,c[8] + 26\,472\,105\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] +$
 $419\,566\,c[5] - 2\,830\,248\,c[6] + 11\,687\,916\,c[7] - 26\,948\,208\,c[8] + 26\,478\,441\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,566\,c[5] - 2\,830\,216\,c[6] + 11\,686\,924\,c[7] -$
 $26\,938\,128\,c[8] + 26\,445\,001\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] +$
 $419\,566\,c[5] - 2\,830\,216\,c[6] + 11\,686\,988\,c[7] - 26\,939\,408\,c[8] + 26\,451\,337\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,110\,c[5] - 2\,820\,120\,c[6] + 11\,577\,948\,c[7] -$
 $26\,363\,016\,c[8] + 25\,255\,233\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] +$
 $419\,126\,c[5] - 2\,820\,760\,c[6] + 11\,587\,388\,c[7] - 26\,423\,944\,c[8] + 25\,400\,529\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,126\,c[5] - 2\,820\,760\,c[6] + 11\,587\,452\,c[7] -$
 $26\,425\,096\,c[8] + 25\,405\,713\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] +$
 $419\,126\,c[5] - 2\,820\,728\,c[6] + 11\,586\,524\,c[7] - 26\,416\,296\,c[8] + 25\,378\,353\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,432\,c[6] + 11\,597\,884\,c[7] -$
 $26\,496\,232\,c[8] + 25\,585\,857\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] +$
 $419\,142\,c[5] - 2\,821\,400\,c[6] + 11\,596\,892\,c[7] - 26\,486\,024\,c[8] + 25\,551\,009\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,400\,c[6] + 11\,596\,956\,c[7] -$
 $26\,487\,304\,c[8] + 25\,557\,345\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] +$
 $419\,142\,c[5] - 2\,821\,400\,c[6] + 11\,597\,020\,c[7] - 26\,488\,456\,c[8] + 25\,562\,529\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,368\,c[6] + 11\,596\,028\,c[7] -$
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 $419\,142\,c[5] - 2\,821\,336\,c[6] + 11\,595\,100\,c[7] - 26\,469\,448\,c[8] + 25\,500\,321\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,142\,c[5] - 2\,821\,336\,c[6] + 11\,595\,164\,c[7] -$
 $26\,470\,728\,c[8] + 25\,506\,657\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] +$
 $419\,158\,c[5] - 2\,822\,072\,c[6] + 11\,607\,388\,c[7] - 26\,558\,312\,c[8] + 25\,736\,337\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,040\,c[6] + 11\,606\,396\,c[7] -$
 $26\,548\,104\,c[8] + 25\,701\,489\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] +$
 $419\,158\,c[5] - 2\,822\,040\,c[6] + 11\,606\,460\,c[7] - 26\,549\,384\,c[8] + 25\,707\,825\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,822\,008\,c[6] + 11\,605\,468\,c[7] -$
 $26\,539\,176\,c[8] + 25\,672\,977\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] +$
 $419\,158\,c[5] - 2\,822\,008\,c[6] + 11\,605\,532\,c[7] - 26\,540\,456\,c[8] + 25\,679\,313\,c[9],$
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 $26\,541\,736\,c[8] + 25\,685\,649\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] +$
 $419\,158\,c[5] - 2\,821\,976\,c[6] + 11\,604\,540\,c[7] - 26\,530\,376\,c[8] + 25\,645\,873\,c[9],$
 $c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,158\,c[5] - 2\,821\,976\,c[6] + 11\,604\,604\,c[7] -$
 $26\,531\,528\,c[8] + 25\,650\,801\,c[9], c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] +$
 $419\,158\,c[5] - 2\,821\,976\,c[6] + 11\,604\,668\,c[7] - 26\,532\,808\,c[8] + 25\,657\,137\,c[9],$

$$\begin{aligned}
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,821\,944 c[6] + 11\,603\,612 c[7] - \\
& 26\,521\,448 c[8] + 25\,617\,361 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + \\
& 419\,174 c[5] - 2\,822\,680 c[6] + 11\,616\,028 c[7] - 26\,612\,744 c[8] + 25\,864\,641 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,174 c[5] - 2\,822\,648 c[6] + 11\,615\,036 c[7] - \\
& 26\,602\,536 c[8] + 25\,829\,793 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + \\
& 419\,174 c[5] - 2\,822\,648 c[6] + 11\,615\,100 c[7] - 26\,603\,816 c[8] + 25\,836\,129 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,174 c[5] - 2\,822\,616 c[6] + 11\,614\,108 c[7] - \\
& 26\,593\,608 c[8] + 25\,801\,281 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + \\
& 419\,174 c[5] - 2\,822\,616 c[6] + 11\,614\,172 c[7] - 26\,594\,888 c[8] + 25\,807\,617 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,174 c[5] - 2\,822\,584 c[6] + 11\,613\,180 c[7] - \\
& 26\,584\,680 c[8] + 25\,772\,769 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + \\
& 419\,190 c[5] - 2\,823\,256 c[6] + 11\,623\,612 c[7] - 26\,655\,688 c[8] + 25\,951\,761 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,190 c[5] - 2\,823\,256 c[6] + 11\,623\,676 c[7] - \\
& 26\,656\,968 c[8] + 25\,958\,097 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + \\
& 419\,190 c[5] - 2\,823\,224 c[6] + 11\,622\,684 c[7] - 26\,646\,760 c[8] + 25\,923\,249 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,718 c[5] - 2\,812\,488 c[6] + 11\,504\,140 c[7] - \\
& 26\,008\,416 c[8] + 24\,578\,073 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,734 c[5] - 2\,813\,160 c[6] + 11\,514\,508 c[7] - 26\,078\,272 c[8] + 24\,751\,881 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,734 c[5] - 2\,813\,096 c[6] + 11\,512\,716 c[7] - \\
& 26\,061\,696 c[8] + 24\,701\,193 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,750 c[5] - 2\,813\,768 c[6] + 11\,523\,084 c[7] - 26\,131\,424 c[8] + 24\,873\,849 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,750 c[5] - 2\,813\,768 c[6] + 11\,523\,148 c[7] - \\
& 26\,132\,704 c[8] + 24\,880\,185 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,750 c[5] - 2\,813\,736 c[6] + 11\,522\,220 c[7] - 26\,123\,776 c[8] + 24\,851\,673 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,750 c[5] - 2\,813\,704 c[6] + 11\,521\,356 c[7] - \\
& 26\,116\,128 c[8] + 24\,829\,497 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,766 c[5] - 2\,814\,408 c[6] + 11\,532\,652 c[7] - 26\,194\,784 c[8] + 25\,030\,665 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,766 c[5] - 2\,814\,376 c[6] + 11\,531\,660 c[7] - \\
& 26\,184\,576 c[8] + 24\,995\,817 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,766 c[5] - 2\,814\,376 c[6] + 11\,531\,724 c[7] - 26\,185\,856 c[8] + 25\,002\,153 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,766 c[5] - 2\,814\,376 c[6] + 11\,531\,788 c[7] - \\
& 26\,187\,136 c[8] + 25\,008\,489 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,766 c[5] - 2\,814\,344 c[6] + 11\,530\,796 c[7] - 26\,176\,928 c[8] + 24\,973\,641 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,766 c[5] - 2\,814\,344 c[6] + \\
& 11\,530\,860 c[7] - 26\,178\,208 c[8] + 24\,979\,977 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,782 c[5] - 2\,815\,048 c[6] + \\
& 11\,542\,220 c[7] - 26\,258\,144 c[8] + 25\,187\,481 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,782 c[5] - 2\,815\,016 c[6] + \\
& 11\,541\,292 c[7] - 26\,249\,216 c[8] + 25\,158\,969 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,782 c[5] - 2\,814\,984 c[6] + \\
& 11\,540\,300 c[7] - 26\,239\,008 c[8] + 25\,124\,121 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,782 c[5] - 2\,814\,984 c[6] + \\
& 11\,540\,364 c[7] - 26\,240\,288 c[8] + 25\,130\,457 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,782 c[5] - 2\,814\,984 c[6] + \\
& 11\,540\,428 c[7] - 26\,241\,568 c[8] + 25\,136\,793 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,798 c[5] - 2\,815\,656 c[6] + \\
& 11\,550\,860 c[7] - 26\,312\,576 c[8] + 25\,315\,785 c[9],
\end{aligned}$$

```

c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 798 c[5] - 2 815 624 c[6] +
  11 549 868 c[7] - 26 302 368 c[8] + 25 280 937 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 798 c[5] - 2 815 624 c[6] +
  11 549 932 c[7] - 26 303 648 c[8] + 25 287 273 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 814 c[5] - 2 816 264 c[6] +
  11 559 436 c[7] - 26 365 728 c[8] + 25 437 753 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 342 c[5] - 2 805 528 c[6] +
  11 440 700 c[7] - 25 723 672 c[8] + 24 074 721 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 358 c[5] - 2 806 136 c[6] +
  11 449 340 c[7] - 25 778 104 c[8] + 24 203 025 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 358 c[5] - 2 806 104 c[6] +
  11 448 412 c[7] - 25 769 176 c[8] + 24 174 513 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 374 c[5] - 2 806 744 c[6] +
  11 457 916 c[7] - 25 831 256 c[8] + 24 324 993 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 374 c[5] - 2 806 712 c[6] +
  11 457 052 c[7] - 25 823 608 c[8] + 24 302 817 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 390 c[5] - 2 807 352 c[6] +
  11 466 556 c[7] - 25 885 688 c[8] + 24 453 297 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 390 c[5] - 2 807 320 c[6] +
  11 465 628 c[7] - 25 876 760 c[8] + 24 424 785 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 406 c[5] - 2 807 992 c[6] +
  11 476 124 c[7] - 25 949 048 c[8] + 24 610 113 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 406 c[5] - 2 807 960 c[6] +
  11 475 132 c[7] - 25 938 840 c[8] + 24 575 265 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] + 417 982 c[5] - 2 799 080 c[6] +
  11 383 244 c[7] - 25 469 008 c[8] + 23 625 657 c[9] ,
c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] + 417 998 c[5] - 2 799 688 c[6] +
  11 391 820 c[7] - 25 522 160 c[8] + 23 747 625 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3528 c[2] + 109 564 c[3] - 1 914 792 c[4] + 20 570 662 c[5] -
  138 892 376 c[6] + 574 502 460 c[7] - 1 327 807 160 c[8] + 1 308 786 417 c[9]

```

cert = Flatten[Array[c, 9] /.

```

  FindInstance[49 c[1] - 3528 c[2] + 109 564 c[3] - 1 914 792 c[4] + 20 570 662 c[5] -
    138 892 376 c[6] + 574 502 460 c[7] - 1 327 807 160 c[8] + 1 308 786 417 c[9] < 0 &&
    c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 910 c[5] - 2 835 960 c[6] +
    11 733 212 c[7] - 27 116 568 c[8] + 26 704 161 c[9] ≥ 0 &&
    c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 926 c[5] - 2 836 600 c[6] +
    11 742 716 c[7] - 27 178 648 c[8] + 26 854 641 c[9] ≥ 0 &&
    c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 926 c[5] - 2 836 568 c[6] +
    11 741 724 c[7] - 27 168 568 c[8] + 26 821 201 c[9] ≥ 0 &&
    c[1] - 72 c[2] + 2236 c[3] - 39 080 c[4] + 419 942 c[5] - 2 837 208 c[6] +
    11 751 228 c[7] - 27 230 648 c[8] + 26 971 681 c[9] ≥ 0 &&
    c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 518 c[5] - 2 828 392 c[6] +
    11 661 260 c[7] - 26 779 696 c[8] + 26 082 873 c[9] ≥ 0 &&
    c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 518 c[5] - 2 828 360 c[6] +

```

$$\begin{aligned}
& 11\,660\,332\,c[7] - 26\,770\,896\,c[8] + 26\,055\,513\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,518\,c[5] - 2\,828\,328\,c[6] + \\
& 11\,659\,404\,c[7] - 26\,761\,968\,c[8] + 26\,027\,001\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,064\,c[6] + \\
& 11\,671\,756\,c[7] - 26\,851\,984\,c[8] + 26\,268\,201\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,032\,c[6] + \\
& 11\,670\,764\,c[7] - 26\,841\,904\,c[8] + 26\,234\,505\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,032\,c[6] + \\
& 11\,670\,828\,c[7] - 26\,843\,056\,c[8] + 26\,239\,689\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,000\,c[6] + \\
& 11\,669\,772\,c[7] - 26\,831\,696\,c[8] + 26\,199\,657\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,000\,c[6] + \\
& 11\,669\,836\,c[7] - 26\,832\,976\,c[8] + 26\,205\,993\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,000\,c[6] + \\
& 11\,669\,836\,c[7] - 26\,832\,848\,c[8] + 26\,204\,841\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,829\,000\,c[6] + \\
& 11\,669\,900\,c[7] - 26\,834\,256\,c[8] + 26\,212\,329\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,534\,c[5] - 2\,828\,968\,c[6] + \\
& 11\,668\,908\,c[7] - 26\,824\,048\,c[8] + 26\,177\,481\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,672\,c[6] + \\
& 11\,680\,204\,c[7] - 26\,902\,704\,c[8] + 26\,378\,649\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,672\,c[6] + \\
& 11\,680\,268\,c[7] - 26\,903\,984\,c[8] + 26\,384\,985\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,640\,c[6] + \\
& 11\,679\,276\,c[7] - 26\,893\,776\,c[8] + 26\,350\,137\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,640\,c[6] + \\
& 11\,679\,340\,c[7] - 26\,895\,056\,c[8] + 26\,356\,473\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,640\,c[6] + \\
& 11\,679\,404\,c[7] - 26\,896\,336\,c[8] + 26\,362\,809\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,608\,c[6] + \\
& 11\,678\,348\,c[7] - 26\,884\,976\,c[8] + 26\,323\,033\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,608\,c[6] + \\
& 11\,678\,412\,c[7] - 26\,886\,128\,c[8] + 26\,327\,961\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,608\,c[6] + \\
& 11\,678\,476\,c[7] - 26\,887\,408\,c[8] + 26\,334\,297\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,550\,c[5] - 2\,829\,576\,c[6] + \\
& 11\,677\,420\,c[7] - 26\,876\,048\,c[8] + 26\,294\,521\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,566\,c[5] - 2\,830\,248\,c[6] + \\
& 11\,687\,852\,c[7] - 26\,946\,928\,c[8] + 26\,472\,105\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,566\,c[5] - 2\,830\,248\,c[6] + \\
& 11\,687\,916\,c[7] - 26\,948\,208\,c[8] + 26\,478\,441\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,566\,c[5] - 2\,830\,216\,c[6] + \\
& 11\,686\,924\,c[7] - 26\,938\,128\,c[8] + 26\,445\,001\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,072\,c[4] + 419\,566\,c[5] - 2\,830\,216\,c[6] + \\
& 11\,686\,988\,c[7] - 26\,939\,408\,c[8] + 26\,451\,337\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,110\,c[5] - 2\,820\,120\,c[6] + \\
& 11\,577\,948\,c[7] - 26\,363\,016\,c[8] + 25\,255\,233\,c[9] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,126 c[5] - 2\,820\,760 c[6] + \\
& \quad 11\,587\,388 c[7] - 26\,423\,944 c[8] + 25\,400\,529 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,126 c[5] - 2\,820\,760 c[6] + \\
& \quad 11\,587\,452 c[7] - 26\,425\,096 c[8] + 25\,405\,713 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,126 c[5] - 2\,820\,728 c[6] + \\
& \quad 11\,586\,524 c[7] - 26\,416\,296 c[8] + 25\,378\,353 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,142 c[5] - 2\,821\,432 c[6] + \\
& \quad 11\,597\,884 c[7] - 26\,496\,232 c[8] + 25\,585\,857 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,142 c[5] - 2\,821\,400 c[6] + \\
& \quad 11\,596\,892 c[7] - 26\,486\,024 c[8] + 25\,551\,009 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,142 c[5] - 2\,821\,400 c[6] + \\
& \quad 11\,596\,956 c[7] - 26\,487\,304 c[8] + 25\,557\,345 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,142 c[5] - 2\,821\,400 c[6] + \\
& \quad 11\,597\,020 c[7] - 26\,488\,456 c[8] + 25\,562\,529 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,142 c[5] - 2\,821\,368 c[6] + \\
& \quad 11\,596\,028 c[7] - 26\,478\,376 c[8] + 25\,528\,833 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,142 c[5] - 2\,821\,336 c[6] + \\
& \quad 11\,595\,100 c[7] - 26\,469\,448 c[8] + 25\,500\,321 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,142 c[5] - 2\,821\,336 c[6] + \\
& \quad 11\,595\,164 c[7] - 26\,470\,728 c[8] + 25\,506\,657 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,822\,072 c[6] + \\
& \quad 11\,607\,388 c[7] - 26\,558\,312 c[8] + 25\,736\,337 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,822\,040 c[6] + \\
& \quad 11\,606\,396 c[7] - 26\,548\,104 c[8] + 25\,701\,489 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,822\,040 c[6] + \\
& \quad 11\,606\,460 c[7] - 26\,549\,384 c[8] + 25\,707\,825 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,822\,008 c[6] + \\
& \quad 11\,605\,468 c[7] - 26\,539\,176 c[8] + 25\,672\,977 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,822\,008 c[6] + \\
& \quad 11\,605\,532 c[7] - 26\,540\,456 c[8] + 25\,679\,313 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,822\,008 c[6] + \\
& \quad 11\,605\,596 c[7] - 26\,541\,736 c[8] + 25\,685\,649 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,821\,976 c[6] + \\
& \quad 11\,604\,540 c[7] - 26\,530\,376 c[8] + 25\,645\,873 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,821\,976 c[6] + \\
& \quad 11\,604\,604 c[7] - 26\,531\,528 c[8] + 25\,650\,801 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,821\,976 c[6] + \\
& \quad 11\,604\,668 c[7] - 26\,532\,808 c[8] + 25\,657\,137 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,821\,944 c[6] + \\
& \quad 11\,603\,612 c[7] - 26\,521\,448 c[8] + 25\,617\,361 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,174 c[5] - 2\,822\,680 c[6] + \\
& \quad 11\,616\,028 c[7] - 26\,612\,744 c[8] + 25\,864\,641 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,174 c[5] - 2\,822\,648 c[6] + \\
& \quad 11\,615\,036 c[7] - 26\,602\,536 c[8] + 25\,829\,793 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,174 c[5] - 2\,822\,648 c[6] + \\
& \quad 11\,615\,100 c[7] - 26\,603\,816 c[8] + 25\,836\,129 c[9] \geq 0 \&\& \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,174 c[5] - 2\,822\,616 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 11\,614\,108\,c[7] - 26\,593\,608\,c[8] + 25\,801\,281\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,174\,c[5] - 2\,822\,616\,c[6] + \\
& 11\,614\,172\,c[7] - 26\,594\,888\,c[8] + 25\,807\,617\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,174\,c[5] - 2\,822\,584\,c[6] + \\
& 11\,613\,180\,c[7] - 26\,584\,680\,c[8] + 25\,772\,769\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,190\,c[5] - 2\,823\,256\,c[6] + \\
& 11\,623\,612\,c[7] - 26\,655\,688\,c[8] + 25\,951\,761\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,190\,c[5] - 2\,823\,256\,c[6] + \\
& 11\,623\,676\,c[7] - 26\,656\,968\,c[8] + 25\,958\,097\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,064\,c[4] + 419\,190\,c[5] - 2\,823\,224\,c[6] + \\
& 11\,622\,684\,c[7] - 26\,646\,760\,c[8] + 25\,923\,249\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,718\,c[5] - 2\,812\,488\,c[6] + \\
& 11\,504\,140\,c[7] - 26\,008\,416\,c[8] + 24\,578\,073\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,734\,c[5] - 2\,813\,160\,c[6] + \\
& 11\,514\,508\,c[7] - 26\,078\,272\,c[8] + 24\,751\,881\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,734\,c[5] - 2\,813\,096\,c[6] + \\
& 11\,512\,716\,c[7] - 26\,061\,696\,c[8] + 24\,701\,193\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,750\,c[5] - 2\,813\,768\,c[6] + \\
& 11\,523\,084\,c[7] - 26\,131\,424\,c[8] + 24\,873\,849\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,750\,c[5] - 2\,813\,768\,c[6] + \\
& 11\,523\,148\,c[7] - 26\,132\,704\,c[8] + 24\,880\,185\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,750\,c[5] - 2\,813\,736\,c[6] + \\
& 11\,522\,220\,c[7] - 26\,123\,776\,c[8] + 24\,851\,673\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,750\,c[5] - 2\,813\,704\,c[6] + \\
& 11\,521\,356\,c[7] - 26\,116\,128\,c[8] + 24\,829\,497\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,766\,c[5] - 2\,814\,408\,c[6] + \\
& 11\,532\,652\,c[7] - 26\,194\,784\,c[8] + 25\,030\,665\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,766\,c[5] - 2\,814\,376\,c[6] + \\
& 11\,531\,660\,c[7] - 26\,184\,576\,c[8] + 24\,995\,817\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,766\,c[5] - 2\,814\,376\,c[6] + \\
& 11\,531\,724\,c[7] - 26\,185\,856\,c[8] + 25\,002\,153\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,766\,c[5] - 2\,814\,376\,c[6] + \\
& 11\,531\,788\,c[7] - 26\,187\,136\,c[8] + 25\,008\,489\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,766\,c[5] - 2\,814\,344\,c[6] + \\
& 11\,530\,796\,c[7] - 26\,176\,928\,c[8] + 24\,973\,641\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,766\,c[5] - 2\,814\,344\,c[6] + \\
& 11\,530\,860\,c[7] - 26\,178\,208\,c[8] + 24\,979\,977\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,782\,c[5] - 2\,815\,048\,c[6] + \\
& 11\,542\,220\,c[7] - 26\,258\,144\,c[8] + 25\,187\,481\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,782\,c[5] - 2\,815\,016\,c[6] + \\
& 11\,541\,292\,c[7] - 26\,249\,216\,c[8] + 25\,158\,969\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,782\,c[5] - 2\,814\,984\,c[6] + \\
& 11\,540\,300\,c[7] - 26\,239\,008\,c[8] + 25\,124\,121\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,782\,c[5] - 2\,814\,984\,c[6] + \\
& 11\,540\,364\,c[7] - 26\,240\,288\,c[8] + 25\,130\,457\,c[9] \geq 0 \ \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,782\,c[5] - 2\,814\,984\,c[6] + \\
& 11\,540\,428\,c[7] - 26\,241\,568\,c[8] + 25\,136\,793\,c[9] \geq 0 \ \&\&
\end{aligned}$$


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c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 798 c[5] - 2 815 656 c[6] +
  11 550 860 c[7] - 26 312 576 c[8] + 25 315 785 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 798 c[5] - 2 815 624 c[6] +
  11 549 868 c[7] - 26 302 368 c[8] + 25 280 937 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 798 c[5] - 2 815 624 c[6] +
  11 549 932 c[7] - 26 303 648 c[8] + 25 287 273 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 814 c[5] - 2 816 264 c[6] +
  11 559 436 c[7] - 26 365 728 c[8] + 25 437 753 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 342 c[5] - 2 805 528 c[6] +
  11 440 700 c[7] - 25 723 672 c[8] + 24 074 721 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 358 c[5] - 2 806 136 c[6] +
  11 449 340 c[7] - 25 778 104 c[8] + 24 203 025 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 358 c[5] - 2 806 104 c[6] +
  11 448 412 c[7] - 25 769 176 c[8] + 24 174 513 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] + 418 374 c[5] - 2 806 744 c[6] +
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cert.g
-1 861 528 552

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cert.Transpose[A]

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chi = listdim17[[135]]

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1	-63	1669	-24043	202771	-997069	2631975	-2853961
1	-63	1669	-24043	202771	-997069	2632039	-2854665
1	-63	1669	-24043	202771	-997069	2632039	-2854537
1	-63	1669	-24043	202771	-997037	2631271	-2850089
1	-63	1669	-24043	202771	-997037	2631335	-2850793
1	-63	1669	-24043	202771	-997037	2631399	-2851497
1	-63	1669	-24043	202771	-997005	2630631	-2846921
1	-63	1669	-24043	202771	-997005	2630695	-2847625
1	-63	1669	-24043	202787	-997565	2637079	-2871385
1	-63	1669	-24043	202787	-997533	2636375	-2867513
1	-63	1669	-24043	202787	-997533	2636439	-2868217
1	-63	1669	-24043	202787	-997501	2635735	-2864345
1	-63	1669	-24035	202403	-990893	2587095	-2734641
1	-63	1669	-24035	202419	-991389	2592135	-2751489
1	-63	1669	-24035	202419	-991357	2591431	-2747745
1	-63	1669	-24035	202419	-991357	2591495	-2748321

1	-63	1669	-24 035	202 419	-991 357	2 591 559	-2 748 897
1	-63	1669	-24 035	202 435	-991 885	2 597 175	-2 768 337
1	-63	1669	-24 035	202 435	-991 885	2 597 239	-2 768 913
1	-63	1669	-24 035	202 435	-991 853	2 596 471	-2 764 465
1	-63	1669	-24 035	202 435	-991 853	2 596 535	-2 765 169
1	-63	1669	-24 035	202 435	-991 853	2 596 599	-2 765 745
1	-63	1669	-24 035	202 435	-991 821	2 595 831	-2 761 297
1	-63	1669	-24 035	202 435	-991 821	2 595 895	-2 762 001
1	-63	1669	-24 035	202 435	-991 821	2 595 895	-2 761 873
1	-63	1669	-24 035	202 435	-991 821	2 595 959	-2 762 577
1	-63	1669	-24 035	202 435	-991 789	2 595 255	-2 758 833
1	-63	1669	-24 035	202 451	-992 413	2 602 919	-2 788 929
1	-63	1669	-24 035	202 451	-992 381	2 602 279	-2 785 761
1	-63	1669	-24 035	202 451	-992 381	2 602 343	-2 786 337
1	-63	1669	-24 035	202 451	-992 349	2 601 575	-2 781 889
1	-63	1669	-24 035	202 451	-992 349	2 601 639	-2 782 593
1	-63	1669	-24 035	202 451	-992 349	2 601 703	-2 783 169
1	-63	1669	-24 035	202 451	-992 317	2 600 935	-2 778 721
1	-63	1669	-24 035	202 451	-992 317	2 600 999	-2 779 425
1	-63	1669	-24 035	202 451	-992 285	2 600 295	-2 775 553
1	-63	1669	-24 035	202 451	-992 285	2 600 359	-2 776 257
1	-63	1669	-24 035	202 451	-992 253	2 599 655	-2 772 385
1	-63	1669	-24 035	202 467	-992 877	2 607 383	-2 803 185
1	-63	1669	-24 035	202 467	-992 845	2 606 743	-2 800 017
1	-63	1669	-24 035	202 467	-992 845	2 606 807	-2 800 593
1	-63	1669	-24 035	202 467	-992 813	2 606 039	-2 796 145
1	-63	1669	-24 035	202 467	-992 813	2 606 103	-2 796 849
1	-63	1669	-24 035	202 467	-992 781	2 605 399	-2 792 977
1	-63	1669	-24 035	202 483	-993 309	2 611 143	-2 813 569
1	-63	1669	-24 027	202 099	-986 637	2 561 031	-2 675 673
1	-63	1669	-24 027	202 099	-986 637	2 561 095	-2 676 249
1	-63	1669	-24 027	202 115	-987 165	2 566 775	-2 696 265
1	-63	1669	-24 027	202 115	-987 133	2 566 135	-2 693 097
1	-63	1669	-24 027	202 115	-987 101	2 565 495	-2 689 929
1	-63	1669	-24 027	202 115	-987 101	2 565 559	-2 690 505
1	-63	1669	-24 027	202 115	-987 069	2 564 855	-2 686 761
1	-63	1669	-24 027	202 115	-987 069	2 564 919	-2 687 337
1	-63	1669	-24 027	202 131	-987 629	2 571 239	-2 710 521
1	-63	1669	-24 027	202 131	-987 597	2 570 599	-2 707 353
1	-63	1669	-24 027	202 131	-987 565	2 569 895	-2 703 481
1	-63	1669	-24 027	202 131	-987 565	2 569 959	-2 704 185
1	-63	1669	-24 027	202 131	-987 533	2 569 255	-2 700 313
1	-63	1669	-24 027	202 131	-987 533	2 569 319	-2 701 017
1	-63	1669	-24 027	202 147	-988 093	2 575 703	-2 724 777
1	-63	1669	-24 027	202 147	-988 061	2 575 063	-2 721 609
1	-63	1669	-24 027	202 147	-988 029	2 574 359	-2 717 737
1	-63	1669	-24 027	202 163	-988 589	2 580 807	-2 742 201
1	-63	1669	-24 027	202 163	-988 557	2 580 167	-2 739 033
1	-63	1669	-24 019	201 795	-982 349	2 534 455	-2 614 689
1	-63	1669	-24 019	201 811	-982 845	2 539 559	-2 632 113
1	-63	1669	-24 019	201 811	-982 813	2 538 919	-2 628 945
1	-63	1669	-24 019	201 811	-982 781	2 538 279	-2 625 777
1	-63	1669	-24 019	201 827	-983 309	2 544 023	-2 646 369
1	-63	1669	-24 011	201 491	-978 061	2 507 879	-2 553 705

Dimensions[A]

{136, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1178763, 9961795, -49236221, 131379223, -145439081}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24067 c[4] + 203715 c[5] -
 1010733 c[6] + 2718007 c[7] - 3052049 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24059 c[4] + 203379 c[5] - 1005549 c[6] + 2683271 c[7] - 2966873 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] - 1005549 c[6] +
 2683335 c[7] - 2967705 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203379 c[5] - 1005517 c[6] + 2682631 c[7] - 2963961 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203395 c[5] - 1006045 c[6] +
 2688311 c[7] - 2983721 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203395 c[5] - 1006045 c[6] + 2688375 c[7] - 2984425 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203395 c[5] - 1006013 c[6] +
 2687607 c[7] - 2979977 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203395 c[5] - 1006013 c[6] + 2687671 c[7] - 2980681 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203395 c[5] - 1006013 c[6] +
 2687735 c[7] - 2981385 c[8], c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
 203411 c[5] - 1006509 c[6] + 2692647 c[7] - 2996697 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203411 c[5] - 1006477 c[6] +
 2692007 c[7] - 2993529 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203043 c[5] - 1000333 c[6] + 2647895 c[7] - 2878785 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203059 c[5] - 1000893 c[6] +
 2654343 c[7] - 2903121 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203059 c[5] - 1000861 c[6] + 2653639 c[7] - 2899377 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203059 c[5] - 1000829 c[6] +
 2652935 c[7] - 2895633 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203059 c[5] - 1000829 c[6] + 2652935 c[7] - 2895505 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203059 c[5] - 1000797 c[6] +
 2652231 c[7] - 2891889 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203059 c[5] - 1000797 c[6] + 2652295 c[7] - 2892465 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001357 c[6] +
 2658679 c[7] - 2916225 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203075 c[5] - 1001357 c[6] + 2658679 c[7] - 2916097 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001325 c[6] +
 2657911 c[7] - 2911649 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203075 c[5] - 1001325 c[6] + 2657975 c[7] - 2912481 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001325 c[6] +
 2657975 c[7] - 2912353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203075 c[5] - 1001325 c[6] + 2658039 c[7] - 2913057 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001293 c[6] +
 2657207 c[7] - 2907905 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203075 c[5] - 1001293 c[6] + 2657271 c[7] - 2908609 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001293 c[6] +

$$\begin{aligned}
& 2\,657\,271\,c[7] - 2\,908\,481\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,293\,c[6] + 2\,657\,335\,c[7] - 2\,909\,313\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,293\,c[6] + \\
& 2\,657\,335\,c[7] - 2\,909\,185\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,261\,c[6] + 2\,656\,631\,c[7] - 2\,905\,441\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,261\,c[6] + \\
& 2\,656\,695\,c[7] - 2\,906\,145\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,821\,c[6] + 2\,662\,951\,c[7] - 2\,928\,497\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,789\,c[6] + \\
& 2\,662\,311\,c[7] - 2\,925\,329\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,789\,c[6] + 2\,662\,375\,c[7] - 2\,926\,033\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,789\,c[6] + \\
& 2\,662\,375\,c[7] - 2\,925\,905\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,789\,c[6] + 2\,662\,439\,c[7] - 2\,926\,737\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,757\,c[6] + \\
& 2\,661\,607\,c[7] - 2\,921\,457\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,757\,c[6] + 2\,661\,671\,c[7] - 2\,922\,161\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,757\,c[6] + \\
& 2\,661\,735\,c[7] - 2\,922\,865\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,107\,c[5] - 1\,002\,253\,c[6] + 2\,666\,711\,c[7] - 2\,938\,881\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,613\,c[6] + \\
& 2\,617\,495\,c[7] - 2\,806\,713\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,239\,c[7] - 2\,827\,305\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& 2\,622\,535\,c[7] - 2\,823\,561\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,599\,c[7] - 2\,824\,137\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,077\,c[6] + \\
& 2\,621\,831\,c[7] - 2\,819\,817\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,895\,c[7] - 2\,820\,393\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,077\,c[6] + \\
& 2\,621\,895\,c[7] - 2\,820\,265\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,279\,c[7] - 2\,844\,153\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,343\,c[7] - 2\,844\,729\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,575\,c[7] - 2\,840\,409\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,575\,c[7] - 2\,840\,281\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,639\,c[7] - 2\,840\,985\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,703\,c[7] - 2\,841\,561\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,807\,c[7] - 2\,835\,833\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,871\,c[7] - 2\,836\,537\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,935\,c[7] - 2\,837\,241\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,935\,c[7] - 2\,837\,113\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,999\,c[7] - 2\,837\,817\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,541 c[6] + \\
& \quad 2\,626\,231 c[7] - 2\,833\,369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,541 c[6] + 2\,626\,295 c[7] - 2\,834\,073 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,541 c[6] + \\
& \quad 2\,626\,295 c[7] - 2\,833\,945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,509 c[6] + 2\,625\,655 c[7] - 2\,830\,905 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,133 c[6] + \\
& \quad 2\,633\,319 c[7] - 2\,861\,001 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,101 c[6] + 2\,632\,615 c[7] - 2\,857\,129 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,101 c[6] + \\
& \quad 2\,632\,679 c[7] - 2\,857\,833 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,101 c[6] + 2\,632\,743 c[7] - 2\,858\,409 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] + \\
& \quad 2\,631\,975 c[7] - 2\,853\,961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,069 c[6] + 2\,632\,039 c[7] - 2\,854\,665 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] + \\
& \quad 2\,632\,039 c[7] - 2\,854\,537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,037 c[6] + 2\,631\,271 c[7] - 2\,850\,089 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,037 c[6] + \\
& \quad 2\,631\,335 c[7] - 2\,850\,793 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,037 c[6] + 2\,631\,399 c[7] - 2\,851\,497 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,005 c[6] + \\
& \quad 2\,630\,631 c[7] - 2\,846\,921 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,005 c[6] + 2\,630\,695 c[7] - 2\,847\,625 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,565 c[6] + \\
& \quad 2\,637\,079 c[7] - 2\,871\,385 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,533 c[6] + 2\,636\,375 c[7] - 2\,867\,513 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,533 c[6] + \\
& \quad 2\,636\,439 c[7] - 2\,868\,217 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,501 c[6] + 2\,635\,735 c[7] - 2\,864\,345 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,893 c[6] + \\
& \quad 2\,587\,095 c[7] - 2\,734\,641 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,389 c[6] + 2\,592\,135 c[7] - 2\,751\,489 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,357 c[6] + \\
& \quad 2\,591\,431 c[7] - 2\,747\,745 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,357 c[6] + 2\,591\,495 c[7] - 2\,748\,321 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,357 c[6] + \\
& \quad 2\,591\,559 c[7] - 2\,748\,897 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,885 c[6] + 2\,597\,175 c[7] - 2\,768\,337 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,885 c[6] + \\
& \quad 2\,597\,239 c[7] - 2\,768\,913 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,853 c[6] + 2\,596\,471 c[7] - 2\,764\,465 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,853 c[6] + \\
& \quad 2\,596\,535 c[7] - 2\,765\,169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,853 c[6] + 2\,596\,599 c[7] - 2\,765\,745 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,821 c[6] + \\
& \quad 2\,595\,831 c[7] - 2\,761\,297 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,895\,c[7] - 2\,762\,001\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,821\,c[6] + \\
& 2\,595\,895\,c[7] - 2\,761\,873\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,959\,c[7] - 2\,762\,577\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,789\,c[6] + \\
& 2\,595\,255\,c[7] - 2\,758\,833\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,413\,c[6] + 2\,602\,919\,c[7] - 2\,788\,929\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,381\,c[6] + \\
& 2\,602\,279\,c[7] - 2\,785\,761\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,343\,c[7] - 2\,786\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,575\,c[7] - 2\,781\,889\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,349\,c[6] + 2\,601\,639\,c[7] - 2\,782\,593\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,703\,c[7] - 2\,783\,169\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,935\,c[7] - 2\,778\,721\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,317\,c[6] + \\
& 2\,600\,999\,c[7] - 2\,779\,425\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,285\,c[6] + 2\,600\,295\,c[7] - 2\,775\,553\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,285\,c[6] + \\
& 2\,600\,359\,c[7] - 2\,776\,257\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,253\,c[6] + 2\,599\,655\,c[7] - 2\,772\,385\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,877\,c[6] + \\
& 2\,607\,383\,c[7] - 2\,803\,185\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,845\,c[6] + 2\,606\,743\,c[7] - 2\,800\,017\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] + \\
& 2\,606\,807\,c[7] - 2\,800\,593\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,813\,c[6] + 2\,606\,039\,c[7] - 2\,796\,145\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& 2\,606\,103\,c[7] - 2\,796\,849\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,781\,c[6] + 2\,605\,399\,c[7] - 2\,792\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,309\,c[6] + \\
& 2\,611\,143\,c[7] - 2\,813\,569\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,637\,c[6] + 2\,561\,031\,c[7] - 2\,675\,673\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,637\,c[6] + \\
& 2\,561\,095\,c[7] - 2\,676\,249\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,165\,c[6] + 2\,566\,775\,c[7] - 2\,696\,265\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,133\,c[6] + \\
& 2\,566\,135\,c[7] - 2\,693\,097\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,495\,c[7] - 2\,689\,929\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& 2\,565\,559\,c[7] - 2\,690\,505\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,855\,c[7] - 2\,686\,761\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& 2\,564\,919\,c[7] - 2\,687\,337\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,629\,c[6] + 2\,571\,239\,c[7] - 2\,710\,521\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,597\,c[6] +
\end{aligned}$$

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2 570 599 c[7] - 2 707 353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 131 c[5] - 987 565 c[6] + 2 569 895 c[7] - 2 703 481 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 565 c[6] +
2 569 959 c[7] - 2 704 185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 131 c[5] - 987 533 c[6] + 2 569 255 c[7] - 2 700 313 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 533 c[6] +
2 569 319 c[7] - 2 701 017 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 147 c[5] - 988 093 c[6] + 2 575 703 c[7] - 2 724 777 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 061 c[6] +
2 575 063 c[7] - 2 721 609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 147 c[5] - 988 029 c[6] + 2 574 359 c[7] - 2 717 737 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 163 c[5] - 988 589 c[6] +
2 580 807 c[7] - 2 742 201 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
202 163 c[5] - 988 557 c[6] + 2 580 167 c[7] - 2 739 033 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 349 c[6] +
2 534 455 c[7] - 2 614 689 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 845 c[6] + 2 539 559 c[7] - 2 632 113 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 813 c[6] +
2 538 919 c[7] - 2 628 945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 781 c[6] + 2 538 279 c[7] - 2 625 777 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 309 c[6] +
2 544 023 c[7] - 2 646 369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 491 c[5] - 978 061 c[6] + 2 507 879 c[7] - 2 553 705 c[8] }

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Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 763 c[4] +
9 961 795 c[5] - 49 236 221 c[6] + 131 379 223 c[7] - 145 439 081 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 763 c[4] +
9 961 795 c[5] - 49 236 221 c[6] + 131 379 223 c[7] - 145 439 081 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 067 c[4] + 203 715 c[5] - 1 010 733 c[6] +
2 718 007 c[7] - 3 052 049 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 379 c[5] - 1 005 549 c[6] + 2 683 271 c[7] - 2 966 873 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 379 c[5] - 1 005 549 c[6] +
2 683 335 c[7] - 2 967 705 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 379 c[5] - 1 005 517 c[6] + 2 682 631 c[7] - 2 963 961 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 395 c[5] - 1 006 045 c[6] +
2 688 311 c[7] - 2 983 721 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 395 c[5] - 1 006 045 c[6] + 2 688 375 c[7] - 2 984 425 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 395 c[5] - 1 006 013 c[6] +
2 687 607 c[7] - 2 979 977 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 395 c[5] - 1 006 013 c[6] + 2 687 671 c[7] - 2 980 681 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 395 c[5] - 1 006 013 c[6] +
2 687 735 c[7] - 2 981 385 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 411 c[5] - 1 006 509 c[6] + 2 692 647 c[7] - 2 996 697 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 411 c[5] - 1 006 477 c[6] +

```

$$\begin{aligned}
& 2\,692\,007\,c[7] - 2\,993\,529\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,043\,c[5] - 1\,000\,333\,c[6] + 2\,647\,895\,c[7] - 2\,878\,785\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& 2\,654\,343\,c[7] - 2\,903\,121\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,861\,c[6] + 2\,653\,639\,c[7] - 2\,899\,377\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,829\,c[6] + \\
& 2\,652\,935\,c[7] - 2\,895\,633\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,829\,c[6] + 2\,652\,935\,c[7] - 2\,895\,505\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,797\,c[6] + \\
& 2\,652\,231\,c[7] - 2\,891\,889\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,797\,c[6] + 2\,652\,295\,c[7] - 2\,892\,465\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,357\,c[6] + \\
& 2\,658\,679\,c[7] - 2\,916\,225\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,357\,c[6] + 2\,658\,679\,c[7] - 2\,916\,097\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - \\
& 1\,001\,325\,c[6] + 2\,657\,911\,c[7] - 2\,911\,649\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& 2\,657\,975\,c[7] - 2\,912\,481\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,975\,c[7] - 2\,912\,353\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& 2\,658\,039\,c[7] - 2\,913\,057\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,293\,c[6] + 2\,657\,207\,c[7] - 2\,907\,905\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,293\,c[6] + \\
& 2\,657\,271\,c[7] - 2\,908\,609\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,293\,c[6] + 2\,657\,271\,c[7] - 2\,908\,481\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,293\,c[6] + \\
& 2\,657\,335\,c[7] - 2\,909\,313\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,293\,c[6] + 2\,657\,335\,c[7] - 2\,909\,185\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,261\,c[6] + \\
& 2\,656\,631\,c[7] - 2\,905\,441\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,261\,c[6] + 2\,656\,695\,c[7] - 2\,906\,145\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,821\,c[6] + \\
& 2\,662\,951\,c[7] - 2\,928\,497\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,789\,c[6] + 2\,662\,311\,c[7] - 2\,925\,329\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,789\,c[6] + \\
& 2\,662\,375\,c[7] - 2\,926\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,789\,c[6] + 2\,662\,375\,c[7] - 2\,925\,905\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,789\,c[6] + \\
& 2\,662\,439\,c[7] - 2\,926\,737\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,757\,c[6] + 2\,661\,607\,c[7] - 2\,921\,457\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,757\,c[6] + \\
& 2\,661\,671\,c[7] - 2\,922\,161\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,757\,c[6] + 2\,661\,735\,c[7] - 2\,922\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,107\,c[5] - 1\,002\,253\,c[6] + \\
& 2\,666\,711\,c[7] - 2\,938\,881\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,613\,c[6] + 2\,617\,495\,c[7] - 2\,806\,713\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,623\,239\,c[7] - 2\,827\,305\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,535\,c[7] - 2\,823\,561\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& 2\,622\,599\,c[7] - 2\,824\,137\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,831\,c[7] - 2\,819\,817\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,077\,c[6] + \\
& 2\,621\,895\,c[7] - 2\,820\,393\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,895\,c[7] - 2\,820\,265\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,279\,c[7] - 2\,844\,153\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,343\,c[7] - 2\,844\,729\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,575\,c[7] - 2\,840\,409\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,575\,c[7] - 2\,840\,281\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,639\,c[7] - 2\,840\,985\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,703\,c[7] - 2\,841\,561\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,807\,c[7] - 2\,835\,833\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,871\,c[7] - 2\,836\,537\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,935\,c[7] - 2\,837\,241\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,935\,c[7] - 2\,837\,113\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,999\,c[7] - 2\,837\,817\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,231\,c[7] - 2\,833\,369\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,541\,c[6] + \\
& 2\,626\,295\,c[7] - 2\,834\,073\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,295\,c[7] - 2\,833\,945\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,509\,c[6] + \\
& 2\,625\,655\,c[7] - 2\,830\,905\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,133\,c[6] + 2\,633\,319\,c[7] - 2\,861\,001\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,101\,c[6] + \\
& 2\,632\,615\,c[7] - 2\,857\,129\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,101\,c[6] + 2\,632\,679\,c[7] - 2\,857\,833\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,101\,c[6] + \\
& 2\,632\,743\,c[7] - 2\,858\,409\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,069\,c[6] + 2\,631\,975\,c[7] - 2\,853\,961\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& 2\,632\,039\,c[7] - 2\,854\,665\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,069\,c[6] + 2\,632\,039\,c[7] - 2\,854\,537\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,037\,c[6] + \\
& 2\,631\,271\,c[7] - 2\,850\,089\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,037\,c[6] + 2\,631\,335\,c[7] - 2\,850\,793\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,037\,c[6] + \\
& 2\,631\,399\,c[7] - 2\,851\,497\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,005\,c[6] + 2\,630\,631\,c[7] - 2\,846\,921\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,005 c[6] + \\
& \quad 2\,630\,695 c[7] - 2\,847\,625 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,565 c[6] + 2\,637\,079 c[7] - 2\,871\,385 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,533 c[6] + \\
& \quad 2\,636\,375 c[7] - 2\,867\,513 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,533 c[6] + 2\,636\,439 c[7] - 2\,868\,217 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,501 c[6] + \\
& \quad 2\,635\,735 c[7] - 2\,864\,345 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,893 c[6] + 2\,587\,095 c[7] - 2\,734\,641 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,389 c[6] + \\
& \quad 2\,592\,135 c[7] - 2\,751\,489 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,357 c[6] + 2\,591\,431 c[7] - 2\,747\,745 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,357 c[6] + \\
& \quad 2\,591\,495 c[7] - 2\,748\,321 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,357 c[6] + 2\,591\,559 c[7] - 2\,748\,897 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,885 c[6] + \\
& \quad 2\,597\,175 c[7] - 2\,768\,337 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,885 c[6] + 2\,597\,239 c[7] - 2\,768\,913 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,853 c[6] + \\
& \quad 2\,596\,471 c[7] - 2\,764\,465 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,853 c[6] + 2\,596\,535 c[7] - 2\,765\,169 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,853 c[6] + \\
& \quad 2\,596\,599 c[7] - 2\,765\,745 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,821 c[6] + 2\,595\,831 c[7] - 2\,761\,297 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,821 c[6] + \\
& \quad 2\,595\,895 c[7] - 2\,762\,001 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,821 c[6] + 2\,595\,895 c[7] - 2\,761\,873 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,821 c[6] + \\
& \quad 2\,595\,959 c[7] - 2\,762\,577 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,789 c[6] + 2\,595\,255 c[7] - 2\,758\,833 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,413 c[6] + \\
& \quad 2\,602\,919 c[7] - 2\,788\,929 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,381 c[6] + 2\,602\,279 c[7] - 2\,785\,761 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,381 c[6] + \\
& \quad 2\,602\,343 c[7] - 2\,786\,337 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,349 c[6] + 2\,601\,575 c[7] - 2\,781\,889 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,349 c[6] + \\
& \quad 2\,601\,639 c[7] - 2\,782\,593 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,349 c[6] + 2\,601\,703 c[7] - 2\,783\,169 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,317 c[6] + \\
& \quad 2\,600\,935 c[7] - 2\,778\,721 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,317 c[6] + 2\,600\,999 c[7] - 2\,779\,425 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,285 c[6] + \\
& \quad 2\,600\,295 c[7] - 2\,775\,553 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,285 c[6] + 2\,600\,359 c[7] - 2\,776\,257 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,253 c[6] + \\
& \quad 2\,599\,655 c[7] - 2\,772\,385 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,467\,c[5] - 992\,877\,c[6] + 2\,607\,383\,c[7] - 2\,803\,185\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] + \\
& \quad 2\,606\,743\,c[7] - 2\,800\,017\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,467\,c[5] - 992\,845\,c[6] + 2\,606\,807\,c[7] - 2\,800\,593\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& \quad 2\,606\,039\,c[7] - 2\,796\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,467\,c[5] - 992\,813\,c[6] + 2\,606\,103\,c[7] - 2\,796\,849\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,781\,c[6] + \\
& \quad 2\,605\,399\,c[7] - 2\,792\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,483\,c[5] - 993\,309\,c[6] + 2\,611\,143\,c[7] - 2\,813\,569\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,637\,c[6] + \\
& \quad 2\,561\,031\,c[7] - 2\,675\,673\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,099\,c[5] - 986\,637\,c[6] + 2\,561\,095\,c[7] - 2\,676\,249\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,165\,c[6] + \\
& \quad 2\,566\,775\,c[7] - 2\,696\,265\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,133\,c[6] + 2\,566\,135\,c[7] - 2\,693\,097\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& \quad 2\,565\,495\,c[7] - 2\,689\,929\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,559\,c[7] - 2\,690\,505\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& \quad 2\,564\,855\,c[7] - 2\,686\,761\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,919\,c[7] - 2\,687\,337\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,629\,c[6] + \\
& \quad 2\,571\,239\,c[7] - 2\,710\,521\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,599\,c[7] - 2\,707\,353\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,565\,c[6] + \\
& \quad 2\,569\,895\,c[7] - 2\,703\,481\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,565\,c[6] + 2\,569\,959\,c[7] - 2\,704\,185\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,533\,c[6] + \\
& \quad 2\,569\,255\,c[7] - 2\,700\,313\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,533\,c[6] + 2\,569\,319\,c[7] - 2\,701\,017\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,093\,c[6] + \\
& \quad 2\,575\,703\,c[7] - 2\,724\,777\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,147\,c[5] - 988\,061\,c[6] + 2\,575\,063\,c[7] - 2\,721\,609\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,029\,c[6] + \\
& \quad 2\,574\,359\,c[7] - 2\,717\,737\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,163\,c[5] - 988\,589\,c[6] + 2\,580\,807\,c[7] - 2\,742\,201\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,557\,c[6] + \\
& \quad 2\,580\,167\,c[7] - 2\,739\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,795\,c[5] - 982\,349\,c[6] + 2\,534\,455\,c[7] - 2\,614\,689\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,811\,c[5] - 982\,845\,c[6] + \\
& \quad 2\,539\,559\,c[7] - 2\,632\,113\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,811\,c[5] - 982\,813\,c[6] + 2\,538\,919\,c[7] - 2\,628\,945\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,811\,c[5] - 982\,781\,c[6] + \\
& \quad 2\,538\,279\,c[7] - 2\,625\,777\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,827\,c[5] - 983\,309\,c[6] + 2\,544\,023\,c[7] - 2\,646\,369\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + 201\,491\,c[5] - 978\,061\,c[6] + \\
& \quad 2\,507\,870\,c[7] - 2\,552\,705\,c[8] \geq 0 \&\& \text{Appendix B1: Testcases 11}
\end{aligned}$$


```
{0, 0, -27 750 045 610, -4 064 194 735, -408 278 612, -41 428 056, -4 245 277, -439 167}
```

```
GCD[0, 0, -27 750 045 610, -4 064 194 735,  
-408 278 612, -41 428 056, -4 245 277, -439 167]
```

```
1
```

```
cert.g
```

```
-165 225 013
```

```
{0, 0, -27 750 045 610, -4 064 194 735, -408 278 612, -41 428 056, -4 245 277, -439 167}.  
Reverse[gpart[listdim17[[135]]]
```

```
-165 225 013
```

```
cert.Transpose[A]
```

```
{41 045 867, 3 512 795, 97 202 011, 115 937 979, 22 260 315, 59 736 155, 40 996 283,  
78 472 123, 115 947 963, 3 530 427, 3 528 859, 78 404 907, 59 680 491, 78 416 459,  
97 152 427, 40 939 051, 115 888 395, 97 150 859, 97 163 979, 40 950 603, 22 210 731,  
115 899 947, 59 686 571, 97 162 411, 40 946 699, 78 422 539, 22 209 163, 115 898 379,  
59 685 003, 78 420 971, 115 896 811, 40 958 251, 40 956 683, 78 432 523, 22 219 147,  
115 908 363, 3 479 275, 40 955 115, 78 430 955, 3 489 259, 78 355 323, 78 366 875,  
97 102 843, 78 365 307, 115 838 811, 97 101 275, 40 887 899, 97 114 395, 78 376 859,  
115 850 363, 59 636 987, 97 112 827, 78 375 291, 40 897 115, 78 372 955, 115 848 795,  
59 635 419, 97 111 259, 78 371 387, 115 847 227, 59 633 851, 115 845 659, 115 861 915,  
78 384 507, 115 860 347, 97 122 811, 78 382 939, 115 858 779, 59 645 403, 40 905 531,  
78 381 371, 115 857 211, 40 903 963, 78 379 803, 78 392 923, 40 915 515, 78 391 355,  
40 913 947, 78 305 739, 97 053 259, 115 789 227, 97 051 691, 78 314 155, 115 800 779,  
97 063 243, 78 323 371, 115 799 211, 97 061 675, 78 321 803, 115 797 643, 59 584 267,  
97 060 107, 115 796 075, 115 812 331, 115 810 763, 97 073 227, 78 333 355, 115 809 195,  
97 071 659, 78 331 787, 115 807 627, 78 330 219, 115 806 059, 78 328 651, 115 820 747,  
115 819 179, 97 081 643, 78 341 771, 115 817 611, 78 340 203, 78 351 755, 115 739 643,  
97 002 107, 115 751 195, 115 749 627, 115 748 059, 97 010 523, 115 746 491,  
97 008 955, 115 759 611, 115 758 043, 78 280 635, 115 756 475, 78 279 067,  
115 754 907, 115 768 027, 115 766 459, 78 289 051, 115 778 011, 115 776 443,  
115 696 907, 115 706 891, 115 705 323, 115 703 755, 115 715 307, 115 654 171}
```

```
chi = listdim17[[136]]
```

```

$$(-11 + x)^2 (-9 + x)^8 (-8 + x) (5 + x)^{32} (-811 + 271 x - 29 x^2 + x^3)^2$$

```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{ {297 387, -235 084, 74 595, -12 256, 1105, -52, 1},
  {299 259, -235 436, 74 611, -12 256, 1105, -52, 1},
  {298 971, -235 404, 74 611, -12 256, 1105, -52, 1},
  {298 683, -235 372, 74 611, -12 256, 1105, -52, 1},
  {290 547, -232 884, 74 363, -12 248, 1105, -52, 1},
  {291 843, -233 172, 74 379, -12 248, 1105, -52, 1},
  {291 555, -233 140, 74 379, -12 248, 1105, -52, 1},
  {293 427, -233 492, 74 395, -12 248, 1105, -52, 1},
  {293 139, -233 460, 74 395, -12 248, 1105, -52, 1},
  {294 723, -233 780, 74 411, -12 248, 1105, -52, 1},
  {284 715, -230 940, 74 147, -12 240, 1105, -52, 1},
  {286 011, -231 228, 74 163, -12 240, 1105, -52, 1},
  {287 595, -231 548, 74 179, -12 240, 1105, -52, 1},
  {278 883, -228 996, 73 931, -12 232, 1105, -52, 1},
  {280 467, -229 316, 73 947, -12 232, 1105, -52, 1} }
```

```
A = { {297 387, -235 084, 74 595, -12 256, 1105, -52, 1},
  {299 259, -235 436, 74 611, -12 256, 1105, -52, 1},
  {298 971, -235 404, 74 611, -12 256, 1105, -52, 1},
  {298 683, -235 372, 74 611, -12 256, 1105, -52, 1},
  {290 547, -232 884, 74 363, -12 248, 1105, -52, 1},
  {291 843, -233 172, 74 379, -12 248, 1105, -52, 1},
  {291 555, -233 140, 74 379, -12 248, 1105, -52, 1},
  {293 427, -233 492, 74 395, -12 248, 1105, -52, 1},
  {293 139, -233 460, 74 395, -12 248, 1105, -52, 1},
  {294 723, -233 780, 74 411, -12 248, 1105, -52, 1},
  {284 715, -230 940, 74 147, -12 240, 1105, -52, 1},
  {286 011, -231 228, 74 163, -12 240, 1105, -52, 1},
  {287 595, -231 548, 74 179, -12 240, 1105, -52, 1},
  {278 883, -228 996, 73 931, -12 232, 1105, -52, 1},
  {280 467, -229 316, 73 947, -12 232, 1105, -52, 1} };
```

```
A // MatrixForm
```

```
( 297 387 -235 084 74 595 -12 256 1105 -52 1 )
( 299 259 -235 436 74 611 -12 256 1105 -52 1 )
( 298 971 -235 404 74 611 -12 256 1105 -52 1 )
( 298 683 -235 372 74 611 -12 256 1105 -52 1 )
( 290 547 -232 884 74 363 -12 248 1105 -52 1 )
( 291 843 -233 172 74 379 -12 248 1105 -52 1 )
( 291 555 -233 140 74 379 -12 248 1105 -52 1 )
( 293 427 -233 492 74 395 -12 248 1105 -52 1 )
( 293 139 -233 460 74 395 -12 248 1105 -52 1 )
( 294 723 -233 780 74 411 -12 248 1105 -52 1 )
( 284 715 -230 940 74 147 -12 240 1105 -52 1 )
( 286 011 -231 228 74 163 -12 240 1105 -52 1 )
( 287 595 -231 548 74 179 -12 240 1105 -52 1 )
( 278 883 -228 996 73 931 -12 232 1105 -52 1 )
( 280 467 -229 316 73 947 -12 232 1105 -52 1 )
```

Dimensions[A]

{15, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{14 567 579, -11 507 308, 3 652 723, -600 416, 54 145, -2548, 49}

Array[c, 7].Transpose[A]

{ 297 387 c[1] - 235 084 c[2] + 74 595 c[3] - 12 256 c[4] + 1105 c[5] - 52 c[6] + c[7],
 299 259 c[1] - 235 436 c[2] + 74 611 c[3] - 12 256 c[4] + 1105 c[5] - 52 c[6] + c[7],
 298 971 c[1] - 235 404 c[2] + 74 611 c[3] - 12 256 c[4] + 1105 c[5] - 52 c[6] + c[7],
 298 683 c[1] - 235 372 c[2] + 74 611 c[3] - 12 256 c[4] + 1105 c[5] - 52 c[6] + c[7],
 290 547 c[1] - 232 884 c[2] + 74 363 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7],
 291 843 c[1] - 233 172 c[2] + 74 379 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7],
 291 555 c[1] - 233 140 c[2] + 74 379 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7],
 293 427 c[1] - 233 492 c[2] + 74 395 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7],
 293 139 c[1] - 233 460 c[2] + 74 395 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7],
 294 723 c[1] - 233 780 c[2] + 74 411 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7],
 284 715 c[1] - 230 940 c[2] + 74 147 c[3] - 12 240 c[4] + 1105 c[5] - 52 c[6] + c[7],
 286 011 c[1] - 231 228 c[2] + 74 163 c[3] - 12 240 c[4] + 1105 c[5] - 52 c[6] + c[7],
 287 595 c[1] - 231 548 c[2] + 74 179 c[3] - 12 240 c[4] + 1105 c[5] - 52 c[6] + c[7],
 278 883 c[1] - 228 996 c[2] + 73 931 c[3] - 12 232 c[4] + 1105 c[5] - 52 c[6] + c[7],
 280 467 c[1] - 229 316 c[2] + 73 947 c[3] - 12 232 c[4] + 1105 c[5] - 52 c[6] + c[7] }

Array[c, 7].g

14 567 579 c[1] - 11 507 308 c[2] + 3 652 723 c[3] -
 600 416 c[4] + 54 145 c[5] - 2548 c[6] + 49 c[7]

```

cert =
  Flatten[Array[c, 7] /. FindInstance[14 567 579 c[1] - 11 507 308 c[2] + 3 652 723 c[3] -
    600 416 c[4] + 54 145 c[5] - 2548 c[6] + 49 c[7] < 0 && 297 387 c[1] -
    235 084 c[2] + 74 595 c[3] - 12 256 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥ 0 &&
    299 259 c[1] - 235 436 c[2] + 74 611 c[3] - 12 256 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥
    0 && 298 971 c[1] - 235 404 c[2] + 74 611 c[3] - 12 256 c[4] +
    1105 c[5] - 52 c[6] + c[7] ≥ 0 && 298 683 c[1] - 235 372 c[2] +
    74 611 c[3] - 12 256 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥ 0 &&
    290 547 c[1] - 232 884 c[2] + 74 363 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥
    0 && 291 843 c[1] - 233 172 c[2] + 74 379 c[3] - 12 248 c[4] +
    1105 c[5] - 52 c[6] + c[7] ≥ 0 && 291 555 c[1] - 233 140 c[2] +
    74 379 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥ 0 &&
    293 427 c[1] - 233 492 c[2] + 74 395 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥
    0 && 293 139 c[1] - 233 460 c[2] + 74 395 c[3] - 12 248 c[4] +
    1105 c[5] - 52 c[6] + c[7] ≥ 0 && 294 723 c[1] - 233 780 c[2] +
    74 411 c[3] - 12 248 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥ 0 &&
    284 715 c[1] - 230 940 c[2] + 74 147 c[3] - 12 240 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥
    0 && 286 011 c[1] - 231 228 c[2] + 74 163 c[3] - 12 240 c[4] +
    1105 c[5] - 52 c[6] + c[7] ≥ 0 && 287 595 c[1] - 231 548 c[2] +
    74 179 c[3] - 12 240 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥ 0 &&
    278 883 c[1] - 228 996 c[2] + 73 931 c[3] - 12 232 c[4] + 1105 c[5] - 52 c[6] + c[7] ≥
    0 && 280 467 c[1] - 229 316 c[2] + 73 947 c[3] - 12 232 c[4] +
    1105 c[5] - 52 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{14 896, 105 206, 629 516, 2 174 852, 0, 0, 0}

GCD[14 896, 105 206, 629 516, 2 174 852, 0, 0, 0]
2

cert = cert / 2
{7448, 52 603, 314 758, 1 087 426, 0, 0, 0}

Reverse[cert]
{0, 0, 0, 1 087 426, 314 758, 52 603, 7448}

cert.g
-3 777 514

{7448, 52 603, 314 758, 1 087 426, 0, 0, 0}.gpart[listdim17[[136]]]
-3 777 514

cert.Transpose[A]
{694 678, 1 157 206, 695 478, 233 750, 1 152 510, 691 582, 229 854,
  692 382, 230 654, 231 454, 687 686, 226 758, 227 558, 222 862, 223 662}

```

```
chi = listdim17[[137]]
```

$$(-11 + x) (-9 + x)^9 (5 + x)^{32} (95 - 20x + x^2) (-67656 + 38085x - 8392x^2 + 906x^3 - 48x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -83, 3028, -63676, 849822, -7456506, 42958020,
      -156457996, 326278345, -296143595}, {1, -83, 3028, -63676,
      849822, -7456506, 42958084, -156459980, 326298505, -296210475},
      {1, -83, 3028, -63676, 849822, -7456474, 42956676, -156437004,
      326134025, -295775755}, {1, -83, 3028, -63676, 849822, -7456474,
      42956740, -156438988, 326154185, -295842635}, {1, -83, 3028, -63668,
      849326, -7443778, 42785060, -155145876, 321011545, -287407395},
      {1, -83, 3028, -63668, 849326, -7443746, 42783780, -155126868,
      320887385, -287106435}, {1, -83, 3028, -63668, 849342,
      -7444626, 42802884, -155331508, 321969065, -289363635},
      {1, -83, 3028, -63668, 849342, -7444594, 42801540, -155310516,
      321824745, -288995795}, {1, -83, 3028, -63668, 849342,
      -7444594, 42801604, -155312500, 321844905, -289062675},
      {1, -83, 3028, -63668, 849342, -7444562, 42800260, -155291508,
      321700585, -288694835}, {1, -83, 3028, -63668, 849342,
      -7444562, 42800324, -155293492, 321720745, -288761715},
      {1, -83, 3028, -63668, 849358, -7445410, 42818084, -155477140,
      322658105, -290651075}, {1, -83, 3028, -63668, 849358,
      -7445410, 42818148, -155479124, 322678265, -290717955},
      {1, -83, 3028, -63668, 849358, -7445378, 42816804, -155458132,
      322533945, -290350115}, {1, -83, 3028, -63668, 849358,
      -7445346, 42815460, -155437140, 322389625, -289982275},
      {1, -83, 3028, -63660, 848830, -7431050, 42612036, -153831772,
      315724585, -278604315}, {1, -83, 3028, -63660, 848846,
      -7431866, 42628580, -153998396, 316557945, -280259595},
      {1, -83, 3028, -63660, 848846, -7431834, 42627300, -153979388,
      316433785, -279958635}, {1, -83, 3028, -63660, 848862,
      -7432714, 42646404, -154184028, 317515465, -282215835},
      {1, -83, 3028, -63660, 848862, -7432682, 42645124, -154165020,
      317391305, -281914875}, {1, -83, 3028, -63660, 848862,
      -7432650, 42643780, -154144028, 317246985, -281547035},
      {1, -83, 3028, -63660, 848862, -7432650, 42643844, -154146012,
      317267145, -281613915}, {1, -83, 3028, -63660, 848862,
      -7432618, 42642500, -154125020, 317122825, -281246075},
      {1, -83, 3028, -63660, 848878, -7433498, 42661668, -154331644,
      318224665, -283570155}, {1, -83, 3028, -63660, 848878,
      -7433466, 42660388, -154312636, 318100505, -283269195},
```

```

{1, -83, 3028, -63 660, 848 878, -7 433 434, 42 659 044, -154 291 644,
 317 956 185, -282 901 355}, {1, -83, 3028, -63 660, 848 894, -7 434 314,
 42 678 212, -154 498 268, 319 058 025, -285 225 435}, {1, -83, 3028, -63 652,
 848 366, -7 419 954, 42 472 100, -152 850 916, 312 104 345, -273 111 795},
{1, -83, 3028, -63 652, 848 366, -7 419 922, 42 470 820, -152 831 908,
 311 980 185, -272 810 835}, {1, -83, 3028, -63 652, 848 382,
 -7 420 738, 42 487 364, -152 998 532, 312 813 545, -274 466 115},
{1, -83, 3028, -63 652, 848 382, -7 420 706, 42 486 084, -152 979 524,
 312 689 385, -274 165 155}, {1, -83, 3028, -63 652, 848 398,
 -7 421 554, 42 503 908, -153 165 156, 313 646 905, -276 121 395},
{1, -83, 3028, -63 652, 848 414, -7 422 370, 42 520 452, -153 331 780,
 314 480 265, -277 776 675}, {1, -83, 3028, -63 644, 847 886,
 -7 408 010, 42 314 340, -151 684 428, 307 526 585, -265 663 035},
{1, -83, 3028, -63 644, 847 902, -7 408 794, 42 329 604, -151 832 044,
 308 235 785, -267 017 355}, {1, -83, 3028, -63 644, 847 918,
 -7 409 610, 42 346 148, -151 998 668, 309 069 145, -268 672 635}};

```

```
A // MatrixForm
```

```

1 -83 3028 -63 676 849 822 -7 456 506 42 958 020 -156 457 996 326 278 345 -296 143 59
1 -83 3028 -63 676 849 822 -7 456 506 42 958 084 -156 459 980 326 298 505 -296 210 47
1 -83 3028 -63 676 849 822 -7 456 474 42 956 676 -156 437 004 326 134 025 -295 775 75
1 -83 3028 -63 676 849 822 -7 456 474 42 956 740 -156 438 988 326 154 185 -295 842 63
1 -83 3028 -63 668 849 326 -7 443 778 42 785 060 -155 145 876 321 011 545 -287 407 39
1 -83 3028 -63 668 849 326 -7 443 746 42 783 780 -155 126 868 320 887 385 -287 106 43
1 -83 3028 -63 668 849 342 -7 444 626 42 802 884 -155 331 508 321 969 065 -289 363 63
1 -83 3028 -63 668 849 342 -7 444 594 42 801 540 -155 310 516 321 824 745 -288 995 79
1 -83 3028 -63 668 849 342 -7 444 594 42 801 604 -155 312 500 321 844 905 -289 062 67
1 -83 3028 -63 668 849 342 -7 444 562 42 800 260 -155 291 508 321 700 585 -288 694 83
1 -83 3028 -63 668 849 342 -7 444 562 42 800 324 -155 293 492 321 720 745 -288 761 71
1 -83 3028 -63 668 849 358 -7 445 410 42 818 084 -155 477 140 322 658 105 -290 651 07
1 -83 3028 -63 668 849 358 -7 445 410 42 818 148 -155 479 124 322 678 265 -290 717 95
1 -83 3028 -63 668 849 358 -7 445 378 42 816 804 -155 458 132 322 533 945 -290 350 11
1 -83 3028 -63 668 849 358 -7 445 346 42 815 460 -155 437 140 322 389 625 -289 982 27
1 -83 3028 -63 660 848 830 -7 431 050 42 612 036 -153 831 772 315 724 585 -278 604 31
1 -83 3028 -63 660 848 846 -7 431 866 42 628 580 -153 998 396 316 557 945 -280 259 59
1 -83 3028 -63 660 848 846 -7 431 834 42 627 300 -153 979 388 316 433 785 -279 958 63
1 -83 3028 -63 660 848 862 -7 432 714 42 646 404 -154 184 028 317 515 465 -282 215 83
1 -83 3028 -63 660 848 862 -7 432 682 42 645 124 -154 165 020 317 391 305 -281 914 87
1 -83 3028 -63 660 848 862 -7 432 650 42 643 780 -154 144 028 317 246 985 -281 547 03
1 -83 3028 -63 660 848 862 -7 432 650 42 643 844 -154 146 012 317 267 145 -281 613 91
1 -83 3028 -63 660 848 862 -7 432 618 42 642 500 -154 125 020 317 122 825 -281 246 07
1 -83 3028 -63 660 848 878 -7 433 498 42 661 668 -154 331 644 318 224 665 -283 570 15
1 -83 3028 -63 660 848 878 -7 433 466 42 660 388 -154 312 636 318 100 505 -283 269 19
1 -83 3028 -63 660 848 878 -7 433 434 42 659 044 -154 291 644 317 956 185 -282 901 35
1 -83 3028 -63 660 848 894 -7 434 314 42 678 212 -154 498 268 319 058 025 -285 225 43
1 -83 3028 -63 652 848 366 -7 419 954 42 472 100 -152 850 916 312 104 345 -273 111 79
1 -83 3028 -63 652 848 366 -7 419 922 42 470 820 -152 831 908 311 980 185 -272 810 83
1 -83 3028 -63 652 848 382 -7 420 738 42 487 364 -152 998 532 312 813 545 -274 466 11
1 -83 3028 -63 652 848 382 -7 420 706 42 486 084 -152 979 524 312 689 385 -274 165 15
1 -83 3028 -63 652 848 398 -7 421 554 42 503 908 -153 165 156 313 646 905 -276 121 39
1 -83 3028 -63 652 848 414 -7 422 370 42 520 452 -153 331 780 314 480 265 -277 776 67
1 -83 3028 -63 644 847 886 -7 408 010 42 314 340 -151 684 428 307 526 585 -265 663 03
1 -83 3028 -63 644 847 902 -7 408 794 42 329 604 -151 832 044 308 235 785 -267 017 35
1 -83 3028 -63 644 847 918 -7 409 610 42 346 148 -151 998 668 309 069 145 -268 672 63

```

Dimensions[A]

```
{36, 10}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -4067, 148 372, -3 119 996, 41 634 094, -365 201 962,
 2 102 887 588, -7 652 237 996, 15 935 268 585, -14 430 255 435}
```

Array[c, 10].Transpose[A]

```
{c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 822 c[5] - 7 456 506 c[6] +
 42 958 020 c[7] - 156 457 996 c[8] + 326 278 345 c[9] - 296 143 595 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 822 c[5] - 7 456 506 c[6] +
 42 958 084 c[7] - 156 459 980 c[8] + 326 298 505 c[9] - 296 210 475 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 822 c[5] - 7 456 474 c[6] +
 42 956 676 c[7] - 156 437 004 c[8] + 326 134 025 c[9] - 295 775 755 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 822 c[5] - 7 456 474 c[6] +
 42 956 740 c[7] - 156 438 988 c[8] + 326 154 185 c[9] - 295 842 63 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 778 c[6] +
 42 785 060 c[7] - 155 145 876 c[8] + 321 011 545 c[9] - 287 407 39 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 746 c[6] +
 42 783 780 c[7] - 155 126 868 c[8] + 320 887 385 c[9] - 287 106 43 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 626 c[6] +
 42 802 884 c[7] - 155 331 508 c[8] + 321 969 065 c[9] - 289 363 63 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 594 c[6] +
 42 801 540 c[7] - 155 310 516 c[8] + 321 824 745 c[9] - 288 995 79 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 594 c[6] +
 42 801 604 c[7] - 155 312 500 c[8] + 321 844 905 c[9] - 289 062 67 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 562 c[6] +
 42 800 260 c[7] - 155 291 508 c[8] + 321 700 585 c[9] - 288 694 83 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 562 c[6] +
 42 800 324 c[7] - 155 293 492 c[8] + 321 720 745 c[9] - 288 761 71 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 358 c[5] - 7 445 410 c[6] +
 42 818 084 c[7] - 155 477 140 c[8] + 322 658 105 c[9] - 290 651 07 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 358 c[5] - 7 445 410 c[6] +
 42 818 148 c[7] - 155 479 124 c[8] + 322 678 265 c[9] - 290 717 95 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 358 c[5] - 7 445 378 c[6] +
 42 816 804 c[7] - 155 458 132 c[8] + 322 533 945 c[9] - 290 350 11 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 358 c[5] - 7 445 346 c[6] +
 42 815 460 c[7] - 155 437 140 c[8] + 322 389 625 c[9] - 289 982 27 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 830 c[5] - 7 431 050 c[6] +
 42 612 036 c[7] - 153 831 772 c[8] + 315 724 585 c[9] - 278 604 31 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 866 c[6] +
 42 628 580 c[7] - 153 998 396 c[8] + 316 557 945 c[9] - 280 259 59 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 846 c[5] - 7 431 834 c[6] +
 42 627 300 c[7] - 153 979 388 c[8] + 316 433 785 c[9] - 279 958 63 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 714 c[6] +
 42 646 404 c[7] - 154 184 028 c[8] + 317 515 465 c[9] - 282 215 83 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 682 c[6] +
 42 645 124 c[7] - 154 165 020 c[8] + 317 391 305 c[9] - 281 914 87 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 650 c[6] +
 42 643 780 c[7] - 154 144 028 c[8] + 317 246 985 c[9] - 281 547 03 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 650 c[6] +
 42 643 844 c[7] - 154 146 012 c[8] + 317 267 145 c[9] - 281 613 91 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 862 c[5] - 7 432 618 c[6] +
 42 642 500 c[7] - 154 125 020 c[8] + 317 122 825 c[9] - 281 246 07 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 878 c[5] - 7 433 498 c[6] +
 42 661 668 c[7] - 154 331 644 c[8] + 318 224 665 c[9] - 283 570 15 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 878 c[5] - 7 433 466 c[6] +
 42 660 388 c[7] - 154 312 636 c[8] + 318 100 505 c[9] - 283 269 19 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 878 c[5] - 7 433 434 c[6] +
 42 659 044 c[7] - 154 291 644 c[8] + 317 956 185 c[9] - 282 901 35 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 660 c[4] + 848 894 c[5] - 7 434 314 c[6] +
 42 678 212 c[7] - 154 498 268 c[8] + 319 058 025 c[9] - 285 225 43 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 954 c[6] +
 42 472 100 c[7] - 152 850 916 c[8] + 312 104 345 c[9] - 273 111 79 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 922 c[6] +
 42 470 820 c[7] - 152 831 908 c[8] + 311 980 185 c[9] - 272 810 83 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 738 c[6] +
 42 487 364 c[7] - 152 998 532 c[8] + 312 813 545 c[9] - 274 466 11 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 706 c[6] +
 42 486 084 c[7] - 152 979 524 c[8] + 312 689 385 c[9] - 274 165 15 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 398 c[5] - 7 421 554 c[6] +
 42 503 908 c[7] - 153 165 156 c[8] + 313 646 905 c[9] - 276 121 39 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 414 c[5] - 7 422 370 c[6] +
 42 520 452 c[7] - 153 331 780 c[8] + 314 480 265 c[9] - 277 776 67 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 886 c[5] - 7 408 010 c[6] +
 42 314 340 c[7] - 151 684 428 c[8] + 307 526 585 c[9] - 265 663 03 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 902 c[5] - 7 408 794 c[6] +
 42 329 604 c[7] - 151 832 044 c[8] + 308 235 785 c[9] - 267 017 35 c[10],
c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 918 c[5] - 7 409 610 c[6] +
 42 346 148 c[7] - 151 998 668 c[8] + 309 069 145 c[9] - 268 672 63 c[10],

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$42\,956\,740\,c[7] - 156\,438\,988\,c[8] + 326\,154\,185\,c[9] - 295\,842\,635\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,326\,c[5] - 7\,443\,778\,c[6] +$
 $42\,785\,060\,c[7] - 155\,145\,876\,c[8] + 321\,011\,545\,c[9] - 287\,407\,395\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,326\,c[5] - 7\,443\,746\,c[6] +$
 $42\,783\,780\,c[7] - 155\,126\,868\,c[8] + 320\,887\,385\,c[9] - 287\,106\,435\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,342\,c[5] - 7\,444\,626\,c[6] +$
 $42\,802\,884\,c[7] - 155\,331\,508\,c[8] + 321\,969\,065\,c[9] - 289\,363\,635\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,342\,c[5] - 7\,444\,594\,c[6] +$
 $42\,801\,540\,c[7] - 155\,310\,516\,c[8] + 321\,824\,745\,c[9] - 288\,995\,795\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,342\,c[5] - 7\,444\,594\,c[6] +$
 $42\,801\,604\,c[7] - 155\,312\,500\,c[8] + 321\,844\,905\,c[9] - 289\,062\,675\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,342\,c[5] - 7\,444\,562\,c[6] +$
 $42\,800\,260\,c[7] - 155\,291\,508\,c[8] + 321\,700\,585\,c[9] - 288\,694\,835\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,342\,c[5] - 7\,444\,562\,c[6] +$
 $42\,800\,324\,c[7] - 155\,293\,492\,c[8] + 321\,720\,745\,c[9] - 288\,761\,715\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,358\,c[5] - 7\,445\,410\,c[6] +$
 $42\,818\,084\,c[7] - 155\,477\,140\,c[8] + 322\,658\,105\,c[9] - 290\,651\,075\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,358\,c[5] - 7\,445\,410\,c[6] +$
 $42\,818\,148\,c[7] - 155\,479\,124\,c[8] + 322\,678\,265\,c[9] - 290\,717\,955\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,358\,c[5] - 7\,445\,378\,c[6] +$
 $42\,816\,804\,c[7] - 155\,458\,132\,c[8] + 322\,533\,945\,c[9] - 290\,350\,115\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,358\,c[5] - 7\,445\,346\,c[6] +$
 $42\,815\,460\,c[7] - 155\,437\,140\,c[8] + 322\,389\,625\,c[9] - 289\,982\,275\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,830\,c[5] - 7\,431\,050\,c[6] +$
 $42\,612\,036\,c[7] - 153\,831\,772\,c[8] + 315\,724\,585\,c[9] - 278\,604\,315\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,846\,c[5] - 7\,431\,866\,c[6] +$
 $42\,628\,580\,c[7] - 153\,998\,396\,c[8] + 316\,557\,945\,c[9] - 280\,259\,595\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,846\,c[5] - 7\,431\,834\,c[6] +$
 $42\,627\,300\,c[7] - 153\,979\,388\,c[8] + 316\,433\,785\,c[9] - 279\,958\,635\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,714\,c[6] +$
 $42\,646\,404\,c[7] - 154\,184\,028\,c[8] + 317\,515\,465\,c[9] - 282\,215\,835\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,682\,c[6] +$
 $42\,645\,124\,c[7] - 154\,165\,020\,c[8] + 317\,391\,305\,c[9] - 281\,914\,875\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,650\,c[6] +$
 $42\,643\,780\,c[7] - 154\,144\,028\,c[8] + 317\,246\,985\,c[9] - 281\,547\,035\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,650\,c[6] +$
 $42\,643\,844\,c[7] - 154\,146\,012\,c[8] + 317\,267\,145\,c[9] - 281\,613\,915\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,618\,c[6] +$
 $42\,642\,500\,c[7] - 154\,125\,020\,c[8] + 317\,122\,825\,c[9] - 281\,246\,075\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,878\,c[5] - 7\,433\,498\,c[6] +$
 $42\,661\,668\,c[7] - 154\,331\,644\,c[8] + 318\,224\,665\,c[9] - 283\,570\,155\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,878\,c[5] - 7\,433\,466\,c[6] +$
 $42\,660\,388\,c[7] - 154\,312\,636\,c[8] + 318\,100\,505\,c[9] - 283\,269\,195\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,878\,c[5] - 7\,433\,434\,c[6] +$
 $42\,659\,044\,c[7] - 154\,291\,644\,c[8] + 317\,956\,185\,c[9] - 282\,901\,355\,c[10],$
 $c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,894\,c[5] - 7\,434\,314\,c[6] +$
 $42\,678\,212\,c[7] - 154\,498\,268\,c[8] + 319\,058\,025\,c[9] - 285\,225\,435\,c[10],$


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c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 954 c[6] +
  42 472 100 c[7] - 152 850 916 c[8] + 312 104 345 c[9] - 273 111 795 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 366 c[5] - 7 419 922 c[6] +
  42 470 820 c[7] - 152 831 908 c[8] + 311 980 185 c[9] - 272 810 835 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 738 c[6] +
  42 487 364 c[7] - 152 998 532 c[8] + 312 813 545 c[9] - 274 466 115 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 382 c[5] - 7 420 706 c[6] +
  42 486 084 c[7] - 152 979 524 c[8] + 312 689 385 c[9] - 274 165 155 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 398 c[5] - 7 421 554 c[6] +
  42 503 908 c[7] - 153 165 156 c[8] + 313 646 905 c[9] - 276 121 395 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 652 c[4] + 848 414 c[5] - 7 422 370 c[6] +
  42 520 452 c[7] - 153 331 780 c[8] + 314 480 265 c[9] - 277 776 675 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 886 c[5] - 7 408 010 c[6] +
  42 314 340 c[7] - 151 684 428 c[8] + 307 526 585 c[9] - 265 663 035 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 902 c[5] - 7 408 794 c[6] +
  42 329 604 c[7] - 151 832 044 c[8] + 308 235 785 c[9] - 267 017 355 c[10] ,
c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 918 c[5] - 7 409 610 c[6] +
  42 346 148 c[7] - 151 998 668 c[8] + 309 069 145 c[9] - 268 672 635 c[10] }

```

Array[c, 10].g

```

49 c[1] - 4067 c[2] + 148 372 c[3] - 3 119 996 c[4] + 41 634 094 c[5] - 365 201 962 c[6] +
  2 102 887 588 c[7] - 7 652 237 996 c[8] + 15 935 268 585 c[9] - 14 430 255 435 c[10]

```

cert = Flatten[Array[c, 10] /. FindInstance[

```

  49 c[1] - 4067 c[2] + 148 372 c[3] - 3 119 996 c[4] + 41 634 094 c[5] - 365 201 962 c[6] +
    2 102 887 588 c[7] - 7 652 237 996 c[8] + 15 935 268 585 c[9] - 14 430 255 435 c[10] <
    0 && c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 822 c[5] - 7 456 506 c[6] +
    42 958 020 c[7] - 156 457 996 c[8] + 326 278 345 c[9] - 296 143 595 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 822 c[5] - 7 456 506 c[6] +
    42 958 084 c[7] - 156 459 980 c[8] + 326 298 505 c[9] - 296 210 475 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 822 c[5] - 7 456 474 c[6] +
    42 956 676 c[7] - 156 437 004 c[8] + 326 134 025 c[9] - 295 775 755 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 676 c[4] + 849 822 c[5] - 7 456 474 c[6] +
    42 956 740 c[7] - 156 438 988 c[8] + 326 154 185 c[9] - 295 842 635 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 778 c[6] +
    42 785 060 c[7] - 155 145 876 c[8] + 321 011 545 c[9] - 287 407 395 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 326 c[5] - 7 443 746 c[6] +
    42 783 780 c[7] - 155 126 868 c[8] + 320 887 385 c[9] - 287 106 435 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 626 c[6] +
    42 802 884 c[7] - 155 331 508 c[8] + 321 969 065 c[9] - 289 363 635 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 594 c[6] +
    42 801 540 c[7] - 155 310 516 c[8] + 321 824 745 c[9] - 288 995 795 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 594 c[6] +
    42 801 604 c[7] - 155 312 500 c[8] + 321 844 905 c[9] - 289 062 675 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 562 c[6] +
    42 800 260 c[7] - 155 291 508 c[8] + 321 700 585 c[9] - 288 694 835 c[10] ≥ 0 &&
  c[1] - 83 c[2] + 3028 c[3] - 63 668 c[4] + 849 342 c[5] - 7 444 562 c[6] +

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$$\begin{aligned}
& 42\,800\,324\,c[7] - 155\,293\,492\,c[8] + 321\,720\,745\,c[9] - 288\,761\,715\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,358\,c[5] - 7\,445\,410\,c[6] + \\
& 42\,818\,084\,c[7] - 155\,477\,140\,c[8] + 322\,658\,105\,c[9] - 290\,651\,075\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,358\,c[5] - 7\,445\,410\,c[6] + \\
& 42\,818\,148\,c[7] - 155\,479\,124\,c[8] + 322\,678\,265\,c[9] - 290\,717\,955\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,358\,c[5] - 7\,445\,378\,c[6] + \\
& 42\,816\,804\,c[7] - 155\,458\,132\,c[8] + 322\,533\,945\,c[9] - 290\,350\,115\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,668\,c[4] + 849\,358\,c[5] - 7\,445\,346\,c[6] + \\
& 42\,815\,460\,c[7] - 155\,437\,140\,c[8] + 322\,389\,625\,c[9] - 289\,982\,275\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,830\,c[5] - 7\,431\,050\,c[6] + \\
& 42\,612\,036\,c[7] - 153\,831\,772\,c[8] + 315\,724\,585\,c[9] - 278\,604\,315\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,846\,c[5] - 7\,431\,866\,c[6] + \\
& 42\,628\,580\,c[7] - 153\,998\,396\,c[8] + 316\,557\,945\,c[9] - 280\,259\,595\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,846\,c[5] - 7\,431\,834\,c[6] + \\
& 42\,627\,300\,c[7] - 153\,979\,388\,c[8] + 316\,433\,785\,c[9] - 279\,958\,635\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,714\,c[6] + \\
& 42\,646\,404\,c[7] - 154\,184\,028\,c[8] + 317\,515\,465\,c[9] - 282\,215\,835\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,682\,c[6] + \\
& 42\,645\,124\,c[7] - 154\,165\,020\,c[8] + 317\,391\,305\,c[9] - 281\,914\,875\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,650\,c[6] + \\
& 42\,643\,780\,c[7] - 154\,144\,028\,c[8] + 317\,246\,985\,c[9] - 281\,547\,035\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,650\,c[6] + \\
& 42\,643\,844\,c[7] - 154\,146\,012\,c[8] + 317\,267\,145\,c[9] - 281\,613\,915\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,862\,c[5] - 7\,432\,618\,c[6] + \\
& 42\,642\,500\,c[7] - 154\,125\,020\,c[8] + 317\,122\,825\,c[9] - 281\,246\,075\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,878\,c[5] - 7\,433\,498\,c[6] + \\
& 42\,661\,668\,c[7] - 154\,331\,644\,c[8] + 318\,224\,665\,c[9] - 283\,570\,155\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,878\,c[5] - 7\,433\,466\,c[6] + \\
& 42\,660\,388\,c[7] - 154\,312\,636\,c[8] + 318\,100\,505\,c[9] - 283\,269\,195\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,878\,c[5] - 7\,433\,434\,c[6] + \\
& 42\,659\,044\,c[7] - 154\,291\,644\,c[8] + 317\,956\,185\,c[9] - 282\,901\,355\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,660\,c[4] + 848\,894\,c[5] - 7\,434\,314\,c[6] + \\
& 42\,678\,212\,c[7] - 154\,498\,268\,c[8] + 319\,058\,025\,c[9] - 285\,225\,435\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,652\,c[4] + 848\,366\,c[5] - 7\,419\,954\,c[6] + \\
& 42\,472\,100\,c[7] - 152\,850\,916\,c[8] + 312\,104\,345\,c[9] - 273\,111\,795\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,652\,c[4] + 848\,366\,c[5] - 7\,419\,922\,c[6] + \\
& 42\,470\,820\,c[7] - 152\,831\,908\,c[8] + 311\,980\,185\,c[9] - 272\,810\,835\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,652\,c[4] + 848\,382\,c[5] - 7\,420\,738\,c[6] + \\
& 42\,487\,364\,c[7] - 152\,998\,532\,c[8] + 312\,813\,545\,c[9] - 274\,466\,115\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,652\,c[4] + 848\,382\,c[5] - 7\,420\,706\,c[6] + \\
& 42\,486\,084\,c[7] - 152\,979\,524\,c[8] + 312\,689\,385\,c[9] - 274\,165\,155\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,652\,c[4] + 848\,398\,c[5] - 7\,421\,554\,c[6] + \\
& 42\,503\,908\,c[7] - 153\,165\,156\,c[8] + 313\,646\,905\,c[9] - 276\,121\,395\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,652\,c[4] + 848\,414\,c[5] - 7\,422\,370\,c[6] + \\
& 42\,520\,452\,c[7] - 153\,331\,780\,c[8] + 314\,480\,265\,c[9] - 277\,776\,675\,c[10] \geq 0 \&\& \\
& c[1] - 83\,c[2] + 3028\,c[3] - 63\,644\,c[4] + 847\,886\,c[5] - 7\,408\,010\,c[6] + \\
& 42\,314\,340\,c[7] - 151\,684\,428\,c[8] + 307\,526\,585\,c[9] - 265\,663\,035\,c[10] \geq 0 \&\&
\end{aligned}$$

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c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 902 c[5] - 7 408 794 c[6] +
42 329 604 c[7] - 151 832 044 c[8] + 308 235 785 c[9] - 267 017 355 c[10] ≥ 0 &&
c[1] - 83 c[2] + 3028 c[3] - 63 644 c[4] + 847 918 c[5] - 7 409 610 c[6] +
42 346 148 c[7] - 151 998 668 c[8] + 309 069 145 c[9] -
268 672 635 c[10] ≥ 0, Array[c, 10], Integers]]
{0, 0, 0, 0, 0, 0, -1337 775, -752 950, -233 517, -53 538}

GCD[0, 0, 0, 0, 0, 0, -1337 775, -752 950, -233 517, -53 538]
1

cert.g
-26 942 632 915

{0, 0, 0, 0, 0, 0, -1337 775, -752 950, -233 517, -53 538}.
Reverse[gpart[listdim17[[137]]]]
-26 942 632 915

cert.Transpose[A]
{278 382 445, 559 536 365, 278 181 165, 559 335 085, 5 867 852 445, 6 148 805 085,
2 930 944 525, 2 930 743 245, 3 211 897 165, 3 211 695 885, 3 492 849 805, 274 787 965,
555 941 885, 555 740 605, 555 539 325, 11 176 168 525, 8 520 213 245, 8 801 165 885,
5 583 305 325, 5 864 257 965, 5 864 056 685, 6 145 210 605, 6 145 009 325, 3 208 302 685,
3 489 255 325, 3 489 054 045, 552 347 405, 11 172 574 045, 11 453 526 685, 8 797 571 405,
9 078 524 045, 6 141 616 125, 3 485 660 845, 14 105 887 485, 11 730 884 845, 9 074 929 565}

chi = listdim17[[138]]
(-11 + x)4 (-9 + x)6 (-8 + x) (-7 + x)2 (5 + x)32 (95 - 20 x + x2)2

CoefficientList[feasibleinterlacingpolylist[chi], x]
{{245 385, -197 770, 64 503, -10 948, 1023, -50, 1}}

A = {{245 385, -197 770, 64 503, -10 948, 1023, -50, 1}};

A // MatrixForm
( 245 385 -197 770 64 503 -10 948 1023 -50 1 )

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{11 950 185, -9 664 970, 3 157 559, -536 324, 50 127, -2450, 49}

Array[c, 7].Transpose[A]
{245 385 c[1] - 197 770 c[2] + 64 503 c[3] - 10 948 c[4] + 1023 c[5] - 50 c[6] + c[7]}

```

Array[c, 7].g

$11\,950\,185\,c[1] - 9\,664\,970\,c[2] + 3\,157\,559\,c[3] -$
 $536\,324\,c[4] + 50\,127\,c[5] - 2450\,c[6] + 49\,c[7]$

cert = Flatten[Array[c, 7] /.

FindInstance[$11\,950\,185\,c[1] - 9\,664\,970\,c[2] + 3\,157\,559\,c[3] - 536\,324\,c[4] +$
 $50\,127\,c[5] - 2450\,c[6] + 49\,c[7] < 0 \&\& 245\,385\,c[1] - 197\,770\,c[2] + 64\,503\,c[3] -$
 $10\,948\,c[4] + 1023\,c[5] - 50\,c[6] + c[7] \geq 0$, Array[c, 7], Integers]]

{0, 0, 4, -198 141, 0, 0, -2 169 430 180}

GCD[0, 0, 4, -198 141, 0, 0, -2 169 430 180]

1

Reverse[cert]

{-2 169 430 180, 0, 0, -198 141, 4, 0, 0}

cert.g

-21 674 900

{0, 0, 4, -198 141, 0, 0, -2 169 430 180}.gpart[listdim17[[138]]]

-21 674 900

cert.Transpose[A]

{75 500}

chi = listdim17[[139]]

$(-11 + x)^3 (-9 + x)^{10} (5 + x)^{32} (5820 - 2831\,x + 495\,x^2 - 37\,x^3 + x^4)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

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 $\{269\,819, -219\,284, 71\,451, -11\,992, 1097, -52, 1\},$
 $\{271\,339, -219\,604, 71\,467, -11\,992, 1097, -52, 1\},$
 $\{271\,403, -219\,604, 71\,467, -11\,992, 1097, -52, 1\},$
 $\{271\,051, -219\,572, 71\,467, -11\,992, 1097, -52, 1\},$
 $\{259\,875, -216\,444, 71\,187, -11\,984, 1097, -52, 1\},$
 $\{261\,683, -216\,796, 71\,203, -11\,984, 1097, -52, 1\},$
 $\{261\,747, -216\,796, 71\,203, -11\,984, 1097, -52, 1\},$
 $\{261\,395, -216\,764, 71\,203, -11\,984, 1097, -52, 1\},$
 $\{261\,459, -216\,764, 71\,203, -11\,984, 1097, -52, 1\},$
 $\{263\,619, -217\,148, 71\,219, -11\,984, 1097, -52, 1\},$
 $\{263\,267, -217\,116, 71\,219, -11\,984, 1097, -52, 1\},$
 $\{263\,331, -217\,116, 71\,219, -11\,984, 1097, -52, 1\},$

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{229 275, -206 276, 70 075, -11 944, 1097, -52, 1},
{228 987, -206 244, 70 075, -11 944, 1097, -52, 1},
{230 859, -206 596, 70 091, -11 944, 1097, -52, 1},
{230 571, -206 564, 70 091, -11 944, 1097, -52, 1},
{232 155, -206 884, 70 107, -11 944, 1097, -52, 1},
{231 803, -206 852, 70 107, -11 944, 1097, -52, 1},
{233 739, -207 204, 70 123, -11 944, 1097, -52, 1},
{222 147, -204 044, 69 843, -11 936, 1097, -52, 1},
{223 443, -204 332, 69 859, -11 936, 1097, -52, 1},
{225 027, -204 652, 69 875, -11 936, 1097, -52, 1},
{226 611, -204 972, 69 891, -11 936, 1097, -52, 1},
{216 315, -202 100, 69 627, -11 928, 1097, -52, 1},
{217 899, -202 420, 69 643, -11 928, 1097, -52, 1},
{210 771, -200 188, 69 411, -11 920, 1097, -52, 1}};
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```
A // MatrixForm
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( 270 171 -219 316 71 451 -11 992 1097 -52 1 )
269 819 -219 284 71 451 -11 992 1097 -52 1
271 339 -219 604 71 467 -11 992 1097 -52 1
271 403 -219 604 71 467 -11 992 1097 -52 1
271 051 -219 572 71 467 -11 992 1097 -52 1
259 875 -216 444 71 187 -11 984 1097 -52 1
261 683 -216 796 71 203 -11 984 1097 -52 1
261 747 -216 796 71 203 -11 984 1097 -52 1
261 395 -216 764 71 203 -11 984 1097 -52 1
261 459 -216 764 71 203 -11 984 1097 -52 1
263 619 -217 148 71 219 -11 984 1097 -52 1
263 267 -217 116 71 219 -11 984 1097 -52 1
263 331 -217 116 71 219 -11 984 1097 -52 1
262 979 -217 084 71 219 -11 984 1097 -52 1
263 043 -217 084 71 219 -11 984 1097 -52 1
262 691 -217 052 71 219 -11 984 1097 -52 1
265 203 -217 468 71 235 -11 984 1097 -52 1
264 915 -217 436 71 235 -11 984 1097 -52 1
264 563 -217 404 71 235 -11 984 1097 -52 1
264 627 -217 404 71 235 -11 984 1097 -52 1
264 211 -217 372 71 235 -11 984 1097 -52 1
264 275 -217 372 71 235 -11 984 1097 -52 1
266 499 -217 756 71 251 -11 984 1097 -52 1
266 147 -217 724 71 251 -11 984 1097 -52 1
266 211 -217 724 71 251 -11 984 1097 -52 1
265 795 -217 692 71 251 -11 984 1097 -52 1
265 859 -217 692 71 251 -11 984 1097 -52 1
265 507 -217 660 71 251 -11 984 1097 -52 1
267 091 -217 980 71 267 -11 984 1097 -52 1
253 611 -214 308 70 955 -11 976 1097 -52 1
253 323 -214 276 70 955 -11 976 1097 -52 1 )
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253 035	-214 244	70 955	-11 976	1097	-52	1
255 195	-214 628	70 971	-11 976	1097	-52	1
254 907	-214 596	70 971	-11 976	1097	-52	1
254 555	-214 564	70 971	-11 976	1097	-52	1
254 619	-214 564	70 971	-11 976	1097	-52	1
254 331	-214 532	70 971	-11 976	1097	-52	1
256 491	-214 916	70 987	-11 976	1097	-52	1
256 139	-214 884	70 987	-11 976	1097	-52	1
256 203	-214 884	70 987	-11 976	1097	-52	1
255 851	-214 852	70 987	-11 976	1097	-52	1
255 915	-214 852	70 987	-11 976	1097	-52	1
258 075	-215 236	71 003	-11 976	1097	-52	1
257 787	-215 204	71 003	-11 976	1097	-52	1
257 435	-215 172	71 003	-11 976	1097	-52	1
257 499	-215 172	71 003	-11 976	1097	-52	1
257 147	-215 140	71 003	-11 976	1097	-52	1
259 371	-215 524	71 019	-11 976	1097	-52	1
259 019	-215 492	71 019	-11 976	1097	-52	1
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258 731	-215 460	71 019	-11 976	1097	-52	1
258 379	-215 428	71 019	-11 976	1097	-52	1
260 955	-215 844	71 035	-11 976	1097	-52	1
260 603	-215 812	71 035	-11 976	1097	-52	1
260 667	-215 812	71 035	-11 976	1097	-52	1
260 315	-215 780	71 035	-11 976	1097	-52	1
259 963	-215 748	71 035	-11 976	1097	-52	1
262 251	-216 132	71 051	-11 976	1097	-52	1
261 899	-216 100	71 051	-11 976	1097	-52	1
261 547	-216 068	71 051	-11 976	1097	-52	1
244 899	-211 756	70 707	-11 968	1097	-52	1
246 483	-212 076	70 723	-11 968	1097	-52	1
246 195	-212 044	70 723	-11 968	1097	-52	1
247 779	-212 364	70 739	-11 968	1097	-52	1
247 491	-212 332	70 739	-11 968	1097	-52	1
247 203	-212 300	70 739	-11 968	1097	-52	1
249 363	-212 684	70 755	-11 968	1097	-52	1
249 075	-212 652	70 755	-11 968	1097	-52	1
248 787	-212 620	70 755	-11 968	1097	-52	1
250 947	-213 004	70 771	-11 968	1097	-52	1
250 659	-212 972	70 771	-11 968	1097	-52	1
250 307	-212 940	70 771	-11 968	1097	-52	1
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252 243	-213 292	70 787	-11 968	1097	-52	1
251 891	-213 260	70 787	-11 968	1097	-52	1
251 955	-213 260	70 787	-11 968	1097	-52	1
251 603	-213 228	70 787	-11 968	1097	-52	1
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253 539	-213 580	70 803	-11 968	1097	-52	1
253 187	-213 548	70 803	-11 968	1097	-52	1
252 835	-213 516	70 803	-11 968	1097	-52	1
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255 123	-213 900	70 819	-11 968	1097	-52	1
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256 707	-214 220	70 835	-11 968	1097	-52	1

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243531	-210740	70539	-11960	1097	-52	1
243179	-210708	70539	-11960	1097	-52	1
243243	-210708	70539	-11960	1097	-52	1
245115	-211060	70555	-11960	1097	-52	1
244827	-211028	70555	-11960	1097	-52	1
244475	-210996	70555	-11960	1097	-52	1
246699	-211380	70571	-11960	1097	-52	1
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236115	-208476	70307	-11952	1097	-52	1
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237347	-208764	70323	-11952	1097	-52	1
239283	-209116	70339	-11952	1097	-52	1
238931	-209084	70339	-11952	1097	-52	1
240867	-209436	70355	-11952	1097	-52	1
240515	-209404	70355	-11952	1097	-52	1
242451	-209756	70371	-11952	1097	-52	1
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229275	-206276	70075	-11944	1097	-52	1
228987	-206244	70075	-11944	1097	-52	1
230859	-206596	70091	-11944	1097	-52	1
230571	-206564	70091	-11944	1097	-52	1
232155	-206884	70107	-11944	1097	-52	1
231803	-206852	70107	-11944	1097	-52	1
233739	-207204	70123	-11944	1097	-52	1
222147	-204044	69843	-11936	1097	-52	1
223443	-204332	69859	-11936	1097	-52	1
225027	-204652	69875	-11936	1097	-52	1
226611	-204972	69891	-11936	1097	-52	1
216315	-202100	69627	-11928	1097	-52	1
217899	-202420	69643	-11928	1097	-52	1
210771	-200188	69411	-11920	1097	-52	1

Dimensions[A]

{133, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{13049715, -10680332, 3493187, -587296, 53753, -2548, 49}

Array[c, 7].Transpose[A]

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  269 819 c[1] - 219 284 c[2] + 71 451 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
  271 339 c[1] - 219 604 c[2] + 71 467 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
  271 403 c[1] - 219 604 c[2] + 71 467 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
  271 051 c[1] - 219 572 c[2] + 71 467 c[3] - 11 992 c[4] + 1097 c[5] - 52 c[6] + c[7],
  259 875 c[1] - 216 444 c[2] + 71 187 c[3] - 11 984 c[4] + 1097 c[5] - 52 c[6] + c[7],
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  261 395 c[1] - 216 764 c[2] + 71 203 c[3] - 11 984 c[4] + 1097 c[5] - 52 c[6] + c[7],
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  263 619 c[1] - 217 148 c[2] + 71 219 c[3] - 11 984 c[4] + 1097 c[5] - 52 c[6] + c[7],
  263 267 c[1] - 217 116 c[2] + 71 219 c[3] - 11 984 c[4] + 1097 c[5] - 52 c[6] + c[7],
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  265 203 c[1] - 217 468 c[2] + 71 235 c[3] - 11 984 c[4] + 1097 c[5] - 52 c[6] + c[7],
  264 915 c[1] - 217 436 c[2] + 71 235 c[3] - 11 984 c[4] + 1097 c[5] - 52 c[6] + c[7],
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  253 323 c[1] - 214 276 c[2] + 70 955 c[3] - 11 976 c[4] + 1097 c[5] - 52 c[6] + c[7],
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  257 787 c[1] - 215 204 c[2] + 71 003 c[3] - 11 976 c[4] + 1097 c[5] - 52 c[6] + c[7],
  257 435 c[1] - 215 172 c[2] + 71 003 c[3] - 11 976 c[4] + 1097 c[5] - 52 c[6] + c[7],
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 $253\,187\,c[1] - 213\,548\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $252\,835\,c[1] - 213\,516\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $255\,411\,c[1] - 213\,932\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $255\,123\,c[1] - 213\,900\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $254\,771\,c[1] - 213\,868\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $256\,707\,c[1] - 214\,220\,c[2] + 70\,835\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $256\,355\,c[1] - 214\,188\,c[2] + 70\,835\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $258\,291\,c[1] - 214\,540\,c[2] + 70\,851\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $240\,651\,c[1] - 210\,132\,c[2] + 70\,507\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $240\,363\,c[1] - 210\,100\,c[2] + 70\,507\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $242\,235\,c[1] - 210\,452\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $241\,947\,c[1] - 210\,420\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$
 $241\,659\,c[1] - 210\,388\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7],$

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243 531 c[1] - 210 740 c[2] + 70 539 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
243 179 c[1] - 210 708 c[2] + 70 539 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
243 243 c[1] - 210 708 c[2] + 70 539 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
245 115 c[1] - 211 060 c[2] + 70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
244 827 c[1] - 211 028 c[2] + 70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
244 475 c[1] - 210 996 c[2] + 70 555 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
246 699 c[1] - 211 380 c[2] + 70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
246 411 c[1] - 211 348 c[2] + 70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
246 059 c[1] - 211 316 c[2] + 70 571 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
247 995 c[1] - 211 668 c[2] + 70 587 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
247 643 c[1] - 211 636 c[2] + 70 587 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
249 579 c[1] - 211 988 c[2] + 70 603 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
251 163 c[1] - 212 308 c[2] + 70 619 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
233 523 c[1] - 207 900 c[2] + 70 275 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
234 819 c[1] - 208 188 c[2] + 70 291 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
236 403 c[1] - 208 508 c[2] + 70 307 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
236 115 c[1] - 208 476 c[2] + 70 307 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
237 987 c[1] - 208 828 c[2] + 70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
237 699 c[1] - 208 796 c[2] + 70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
237 347 c[1] - 208 764 c[2] + 70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
239 283 c[1] - 209 116 c[2] + 70 339 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
238 931 c[1] - 209 084 c[2] + 70 339 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
240 867 c[1] - 209 436 c[2] + 70 355 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
240 515 c[1] - 209 404 c[2] + 70 355 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
242 451 c[1] - 209 756 c[2] + 70 371 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
227 691 c[1] - 205 956 c[2] + 70 059 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
229 275 c[1] - 206 276 c[2] + 70 075 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
228 987 c[1] - 206 244 c[2] + 70 075 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
230 859 c[1] - 206 596 c[2] + 70 091 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
230 571 c[1] - 206 564 c[2] + 70 091 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
232 155 c[1] - 206 884 c[2] + 70 107 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
231 803 c[1] - 206 852 c[2] + 70 107 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
233 739 c[1] - 207 204 c[2] + 70 123 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
222 147 c[1] - 204 044 c[2] + 69 843 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
223 443 c[1] - 204 332 c[2] + 69 859 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
225 027 c[1] - 204 652 c[2] + 69 875 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
226 611 c[1] - 204 972 c[2] + 69 891 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
216 315 c[1] - 202 100 c[2] + 69 627 c[3] - 11 928 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
217 899 c[1] - 202 420 c[2] + 69 643 c[3] - 11 928 c[4] + 1097 c[5] - 52 c[6] + c[7] ,
210 771 c[1] - 200 188 c[2] + 69 411 c[3] - 11 920 c[4] + 1097 c[5] - 52 c[6] + c[7] }

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Array[c, 7].g

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13 049 715 c[1] - 10 680 332 c[2] + 3 493 187 c[3] -
587 296 c[4] + 53 753 c[5] - 2548 c[6] + 49 c[7]

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cert =

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Flatten[Array[c, 7] /. FindInstance[13 049 715 c[1] - 10 680 332 c[2] + 3 493 187 c[3] -

```

$$\begin{aligned}
& 587\,296\,c[4] + 53\,753\,c[5] - 2548\,c[6] + 49\,c[7] < 0 \&\& \\
& 270\,171\,c[1] - 219\,316\,c[2] + 71\,451\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 269\,819\,c[1] - 219\,284\,c[2] + 71\,451\,c[3] - 11\,992\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 271\,339\,c[1] - 219\,604\,c[2] + \\
& 71\,467\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 271\,403\,c[1] - 219\,604\,c[2] + 71\,467\,c[3] - 11\,992\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 271\,051\,c[1] - 219\,572\,c[2] + 71\,467\,c[3] - 11\,992\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 259\,875\,c[1] - 216\,444\,c[2] + \\
& 71\,187\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 261\,683\,c[1] - 216\,796\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 261\,747\,c[1] - 216\,796\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 261\,395\,c[1] - 216\,764\,c[2] + \\
& 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 261\,459\,c[1] - 216\,764\,c[2] + 71\,203\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 263\,619\,c[1] - 217\,148\,c[2] + 71\,219\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 263\,267\,c[1] - 217\,116\,c[2] + \\
& 71\,219\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 263\,331\,c[1] - 217\,116\,c[2] + 71\,219\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 262\,979\,c[1] - 217\,084\,c[2] + 71\,219\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 263\,043\,c[1] - 217\,084\,c[2] + \\
& 71\,219\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 262\,691\,c[1] - 217\,052\,c[2] + 71\,219\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 265\,203\,c[1] - 217\,468\,c[2] + 71\,235\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 264\,915\,c[1] - 217\,436\,c[2] + \\
& 71\,235\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 264\,563\,c[1] - 217\,404\,c[2] + 71\,235\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 264\,627\,c[1] - 217\,404\,c[2] + 71\,235\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 264\,211\,c[1] - 217\,372\,c[2] + \\
& 71\,235\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 264\,275\,c[1] - 217\,372\,c[2] + 71\,235\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 266\,499\,c[1] - 217\,756\,c[2] + 71\,251\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 266\,147\,c[1] - 217\,724\,c[2] + \\
& 71\,251\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 266\,211\,c[1] - 217\,724\,c[2] + 71\,251\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 265\,795\,c[1] - 217\,692\,c[2] + 71\,251\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 265\,859\,c[1] - 217\,692\,c[2] + \\
& 71\,251\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 265\,507\,c[1] - 217\,660\,c[2] + 71\,251\,c[3] - 11\,984\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 267\,091\,c[1] - 217\,980\,c[2] + 71\,267\,c[3] - 11\,984\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 253\,611\,c[1] - 214\,308\,c[2] + \\
& 70\,955\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 253\,323\,c[1] - 214\,276\,c[2] + 70\,955\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 253\,035\,c[1] - 214\,244\,c[2] + 70\,955\,c[3] - 11\,976\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& 255\,195\,c[1] - 214\,628\,c[2] + \\
& 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&\& \\
& 254\,907\,c[1] - 214\,596\,c[2] + 70\,971\,c[3] - 11\,976\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \&\& 254\,555\,c[1] - 214\,564\,c[2] + 70\,971\,c[3] - 11\,976\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 254\,619 c[1] - 214\,564 c[2] + \\
& 70\,971 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 254\,331 c[1] - 214\,532 c[2] + 70\,971 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 256\,491 c[1] - 214\,916 c[2] + 70\,987 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 256\,139 c[1] - 214\,884 c[2] + \\
& 70\,987 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 256\,203 c[1] - 214\,884 c[2] + 70\,987 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 255\,851 c[1] - 214\,852 c[2] + 70\,987 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 255\,915 c[1] - 214\,852 c[2] + \\
& 70\,987 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 258\,075 c[1] - 215\,236 c[2] + 71\,003 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 257\,787 c[1] - 215\,204 c[2] + 71\,003 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 257\,435 c[1] - 215\,172 c[2] + \\
& 71\,003 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 257\,499 c[1] - 215\,172 c[2] + 71\,003 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 257\,147 c[1] - 215\,140 c[2] + 71\,003 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 259\,371 c[1] - 215\,524 c[2] + \\
& 71\,019 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 259\,019 c[1] - 215\,492 c[2] + 71\,019 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 259\,083 c[1] - 215\,492 c[2] + 71\,019 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 258\,731 c[1] - 215\,460 c[2] + \\
& 71\,019 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 258\,379 c[1] - 215\,428 c[2] + 71\,019 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 260\,955 c[1] - 215\,844 c[2] + 71\,035 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 260\,603 c[1] - 215\,812 c[2] + \\
& 71\,035 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 260\,667 c[1] - 215\,812 c[2] + 71\,035 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 260\,315 c[1] - 215\,780 c[2] + 71\,035 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 259\,963 c[1] - 215\,748 c[2] + \\
& 71\,035 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 262\,251 c[1] - 216\,132 c[2] + 71\,051 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 261\,899 c[1] - 216\,100 c[2] + 71\,051 c[3] - 11\,976 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 261\,547 c[1] - 216\,068 c[2] + \\
& 71\,051 c[3] - 11\,976 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 244\,899 c[1] - 211\,756 c[2] + 70\,707 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 246\,483 c[1] - 212\,076 c[2] + 70\,723 c[3] - 11\,968 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 246\,195 c[1] - 212\,044 c[2] + \\
& 70\,723 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 247\,779 c[1] - 212\,364 c[2] + 70\,739 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 247\,491 c[1] - 212\,332 c[2] + 70\,739 c[3] - 11\,968 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 247\,203 c[1] - 212\,300 c[2] + \\
& 70\,739 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 249\,363 c[1] - 212\,684 c[2] + 70\,755 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq \\
& 0 \& 249\,075 c[1] - 212\,652 c[2] + 70\,755 c[3] - 11\,968 c[4] + \\
& 1097 c[5] - 52 c[6] + c[7] \geq 0 \& 248\,787 c[1] - 212\,620 c[2] + \\
& 70\,755 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq 0 \& \\
& 250\,947 c[1] - 213\,004 c[2] + 70\,771 c[3] - 11\,968 c[4] + 1097 c[5] - 52 c[6] + c[7] \geq
\end{aligned}$$

$$\begin{aligned}
& 0 \& 250\,659\,c[1] - 212\,972\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 250\,307\,c[1] - 212\,940\,c[2] + \\
& 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 250\,371\,c[1] - 212\,940\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 250\,019\,c[1] - 212\,908\,c[2] + 70\,771\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 252\,243\,c[1] - 213\,292\,c[2] + \\
& 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 251\,891\,c[1] - 213\,260\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 251\,955\,c[1] - 213\,260\,c[2] + 70\,787\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 251\,603\,c[1] - 213\,228\,c[2] + \\
& 70\,787\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 253\,827\,c[1] - 213\,612\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 253\,539\,c[1] - 213\,580\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 253\,187\,c[1] - 213\,548\,c[2] + \\
& 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 252\,835\,c[1] - 213\,516\,c[2] + 70\,803\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 255\,411\,c[1] - 213\,932\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 255\,123\,c[1] - 213\,900\,c[2] + \\
& 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 254\,771\,c[1] - 213\,868\,c[2] + 70\,819\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 256\,707\,c[1] - 214\,220\,c[2] + 70\,835\,c[3] - 11\,968\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 256\,355\,c[1] - 214\,188\,c[2] + \\
& 70\,835\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 258\,291\,c[1] - 214\,540\,c[2] + 70\,851\,c[3] - 11\,968\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 240\,651\,c[1] - 210\,132\,c[2] + 70\,507\,c[3] - 11\,960\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 240\,363\,c[1] - 210\,100\,c[2] + \\
& 70\,507\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 242\,235\,c[1] - 210\,452\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 241\,947\,c[1] - 210\,420\,c[2] + 70\,523\,c[3] - 11\,960\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 241\,659\,c[1] - 210\,388\,c[2] + \\
& 70\,523\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 243\,531\,c[1] - 210\,740\,c[2] + 70\,539\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 243\,179\,c[1] - 210\,708\,c[2] + 70\,539\,c[3] - 11\,960\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 243\,243\,c[1] - 210\,708\,c[2] + \\
& 70\,539\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 245\,115\,c[1] - 211\,060\,c[2] + 70\,555\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 244\,827\,c[1] - 211\,028\,c[2] + 70\,555\,c[3] - 11\,960\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 244\,475\,c[1] - 210\,996\,c[2] + \\
& 70\,555\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 246\,699\,c[1] - 211\,380\,c[2] + 70\,571\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 246\,411\,c[1] - 211\,348\,c[2] + 70\,571\,c[3] - 11\,960\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 246\,059\,c[1] - 211\,316\,c[2] + \\
& 70\,571\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& \\
& 247\,995\,c[1] - 211\,668\,c[2] + 70\,587\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq \\
& 0 \& 247\,643\,c[1] - 211\,636\,c[2] + 70\,587\,c[3] - 11\,960\,c[4] + \\
& 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \& 249\,579\,c[1] - 211\,988\,c[2] + \\
& 70\,603\,c[3] - 11\,960\,c[4] + 1097\,c[5] - 52\,c[6] + c[7] \geq 0 \&
\end{aligned}$$

```

251 163 c[1] - 212 308 c[2] + 70 619 c[3] - 11 960 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 233 523 c[1] - 207 900 c[2] + 70 275 c[3] - 11 952 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 234 819 c[1] - 208 188 c[2] +
70 291 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
236 403 c[1] - 208 508 c[2] + 70 307 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 236 115 c[1] - 208 476 c[2] + 70 307 c[3] - 11 952 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 237 987 c[1] - 208 828 c[2] +
70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
237 699 c[1] - 208 796 c[2] + 70 323 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 237 347 c[1] - 208 764 c[2] + 70 323 c[3] - 11 952 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 239 283 c[1] - 209 116 c[2] +
70 339 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
238 931 c[1] - 209 084 c[2] + 70 339 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 240 867 c[1] - 209 436 c[2] + 70 355 c[3] - 11 952 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 240 515 c[1] - 209 404 c[2] +
70 355 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
242 451 c[1] - 209 756 c[2] + 70 371 c[3] - 11 952 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 227 691 c[1] - 205 956 c[2] + 70 059 c[3] - 11 944 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 229 275 c[1] - 206 276 c[2] +
70 075 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
228 987 c[1] - 206 244 c[2] + 70 075 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 230 859 c[1] - 206 596 c[2] + 70 091 c[3] - 11 944 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 230 571 c[1] - 206 564 c[2] +
70 091 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
232 155 c[1] - 206 884 c[2] + 70 107 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 231 803 c[1] - 206 852 c[2] + 70 107 c[3] - 11 944 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 233 739 c[1] - 207 204 c[2] +
70 123 c[3] - 11 944 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
222 147 c[1] - 204 044 c[2] + 69 843 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 223 443 c[1] - 204 332 c[2] + 69 859 c[3] - 11 936 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0 && 225 027 c[1] - 204 652 c[2] +
69 875 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
226 611 c[1] - 204 972 c[2] + 69 891 c[3] - 11 936 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 216 315 c[1] - 202 100 c[2] + 69 627 c[3] -
11 928 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥ 0 &&
217 899 c[1] - 202 420 c[2] + 69 643 c[3] - 11 928 c[4] + 1097 c[5] - 52 c[6] + c[7] ≥
0 && 210 771 c[1] - 200 188 c[2] + 69 411 c[3] - 11 920 c[4] +
1097 c[5] - 52 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{62 203, 559 825, 5 038 432, 45 345 884, 0, 0, 289 768 164 194}

GCD[62 203, 559 825, 5 038 432, 45 345 884, 0, 0, 289 768 164 194]

1

Reverse[cert]

{289 768 164 194, 0, 0, 45 345 884, 5 038 432, 559 825, 62 203}

```

cert.g

-16 521 129

{62 203, 559 825, 5 038 432, 45 345 884, 0, 0, 289 768 164 194}.gpart[listdim17[[139]]]

-16 521 129

cert.Transpose[A]

{8 195 111, 4 214 055, 233 527, 4 214 519, 233 463, 8 191 447, 4 210 983, 8 191 975,
4 210 919, 8 191 911, 8 192 503, 4 211 447, 8 192 439, 4 211 383, 8 192 375, 4 211 319,
8 192 967, 8 192 903, 4 211 847, 8 192 839, 230 791, 4 211 783, 8 193 367, 4 212 311,
8 193 303, 231 255, 4 212 247, 231 191, 231 655, 8 188 903, 8 188 839, 8 188 775,
8 189 367, 8 189 303, 4 208 247, 8 189 239, 8 189 175, 8 189 767, 4 208 711, 8 189 703,
4 208 647, 8 189 639, 8 190 231, 8 190 167, 4 209 111, 8 190 103, 4 209 047, 8 190 631,
4 209 575, 8 190 567, 4 209 511, 228 455, 8 191 095, 4 210 039, 8 191 031, 4 209 975,
228 919, 8 191 495, 4 210 439, 229 383, 8 185 703, 8 186 167, 8 186 103, 8 186 567,
8 186 503, 8 186 439, 8 187 031, 8 186 967, 8 186 903, 8 187 495, 8 187 431, 4 206 375,
8 187 367, 4 206 311, 8 187 895, 4 206 839, 8 187 831, 4 206 775, 8 188 359, 8 188 295,
4 207 239, 226 183, 8 188 823, 8 188 759, 4 207 703, 8 189 223, 4 208 167, 8 189 687,
8 183 831, 8 183 767, 8 184 295, 8 184 231, 8 184 167, 8 184 695, 4 203 639, 8 184 631,
8 185 159, 8 185 095, 4 204 039, 8 185 623, 8 185 559, 4 204 503, 8 186 023, 4 204 967,
8 186 487, 8 186 951, 8 181 095, 8 181 495, 8 181 959, 8 181 895, 8 182 423, 8 182 359,
4 201 303, 8 182 823, 4 201 767, 8 183 287, 4 202 231, 8 183 751, 8 178 759,
8 179 223, 8 179 159, 8 179 687, 8 179 623, 8 180 087, 4 199 031, 8 180 551,
8 176 487, 8 176 887, 8 177 351, 8 177 815, 8 174 151, 8 174 615, 8 171 879}

chi = listdim17[[140]]

$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-63 988 + 36 961 x - 8276 x^2 + 902 x^3 - 48 x^4 + x^5)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

A = {{1, -63, 1669, -24 059, 203 379, -1 005 709, 2 686 471, -2 982 969},
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{1, -63, 1669, -24 043, 202 707, -995 245, 2 614 823, -2 800 809},
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{1, -63, 1669, -24 011, 201 459, -977 069, 2 497 671, -2 518 857},
{1, -63, 1669, -24 011, 201 475, -977 565, 2 502 775, -2 536 281},
{1, -63, 1669, -24 011, 201 475, -977 533, 2 502 135, -2 533 113},
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{1, -63, 1669, -24 003, 201 155, -972 781, 2 471 095, -2 457 873},
{1, -63, 1669, -24 003, 201 155, -972 749, 2 470 455, -2 454 705}};
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```
A // MatrixForm
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( 1 -63 1669 -24 059 203 379 -1 005 709 2 686 471 -2 982 969
 1 -63 1669 -24 059 203 379 -1 005 677 2 685 831 -2 979 801
 1 -63 1669 -24 051 203 027 -999 997 2 645 927 -2 876 625
 1 -63 1669 -24 051 203 043 -1 000 525 2 651 671 -2 897 217
 1 -63 1669 -24 051 203 043 -1 000 493 2 650 967 -2 893 473
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 1 -63 1669 -24 051 203 043 -1 000 461 2 650 327 -2 890 305
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 1 -63 1669 -24 051 203 059 -1 001 021 2 656 711 -2 914 065
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 1 -63 1669 -24 051 203 091 -1 001 917 2 664 999 -2 939 409
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 1 -63 1669 -24 043 202 723 -995 773 2 620 567 -2 821 401
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 1 -63 1669 -24 035 202 371 -989 997 2 578 743 -2 708 721
 1 -63 1669 -24 035 202 371 -989 965 2 578 103 -2 705 553
 1 -63 1669 -24 035 202 387 -990 525 2 584 422 -2 720 727)
```

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1	-63	1669	-24035	202403	-990893	2586967	-2733489
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1	-63	1669	-24035	202419	-991421	2592711	-2754081
1	-63	1669	-24035	202419	-991389	2592071	-2750913
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1	-63	1669	-24035	202435	-991885	2597175	-2768337
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1	-63	1669	-24035	202451	-992349	2601639	-2782593
1	-63	1669	-24035	202467	-992877	2607383	-2803185
1	-63	1669	-24035	202467	-992845	2606743	-2800017
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1	-63	1669	-24027	202051	-985213	2547063	-2630313
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1	-63	1669	-24027	202067	-985677	2551463	-2643993
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1	-63	1669	-24027	202083	-986205	2557207	-2664585
1	-63	1669	-24027	202083	-986173	2556567	-2661417
1	-63	1669	-24027	202083	-986141	2555927	-2658249
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1	-63	1669	-24019	201795	-982317	2533815	-2611521
1	-63	1669	-24019	201811	-982813	2538919	-2628945
1	-63	1669	-24011	201427	-976141	2488743	-2490345
1	-63	1669	-24011	201443	-976605	2493207	-2504601
1	-63	1669	-24011	201459	-977069	2497671	-2518857
1	-63	1669	-24011	201475	-977565	2502775	-2536281
1	-63	1669	-24011	201475	-977533	2502135	-2533113

$$\begin{pmatrix} 1 & -63 & 1669 & -24011 & 201491 & -978029 & 2507239 & -2550537 \\ 1 & -63 & 1669 & -24003 & 201123 & -971821 & 2461527 & -2426193 \\ 1 & -63 & 1669 & -24003 & 201139 & -972285 & 2465991 & -2440449 \\ 1 & -63 & 1669 & -24003 & 201155 & -972781 & 2471095 & -2457873 \\ 1 & -63 & 1669 & -24003 & 201155 & -972749 & 2470455 & -2454705 \end{pmatrix}$$

Dimensions[A]

{109, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1178579, 9953443, -49103981, 130510711, -143465969}

Array[c, 8].Transpose[A]

```
{c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] -
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  24059 c[4] + 203379 c[5] - 1005677 c[6] + 2685831 c[7] - 2979801 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203027 c[5] - 999997 c[6] +
  2645927 c[7] - 2876625 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203043 c[5] - 1000525 c[6] + 2651671 c[7] - 2897217 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203043 c[5] - 1000493 c[6] +
  2650967 c[7] - 2893473 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
  203043 c[5] - 1000493 c[6] + 2651031 c[7] - 2894049 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203043 c[5] - 1000461 c[6] +
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  203043 c[5] - 1000429 c[6] + 2649687 c[7] - 2887137 c[8],
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  2661175 c[7] - 2928321 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
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  2609783 c[7] - 2783961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
  202707 c[5] - 995245 c[6] + 2614823 c[7] - 2800809 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202707 c[5] - 995245 c[6] + 2614887 c[7] -
  2801385 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202707 c[5] -
```

$$\begin{aligned}
& 995\,213\,c[6] + 2\,614\,183\,c[7] - 2\,797\,641\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - \\
& 24\,043\,c[4] + 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,247\,c[7] - 2\,798\,217\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,773\,c[6] + \\
& 2\,620\,567\,c[7] - 2\,821\,401\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,741\,c[6] + 2\,619\,927\,c[7] - 2\,818\,233\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,741\,c[6] + \\
& 2\,619\,991\,c[7] - 2\,818\,809\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,287\,c[7] - 2\,815\,065\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,647\,c[7] - 2\,811\,897\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,237\,c[6] + 2\,625\,031\,c[7] - 2\,835\,657\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,205\,c[6] + \\
& 2\,624\,391\,c[7] - 2\,832\,489\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,173\,c[6] + 2\,623\,751\,c[7] - 2\,829\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& 2\,623\,111\,c[7] - 2\,826\,153\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,471\,c[7] - 2\,822\,985\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,701\,c[6] + \\
& 2\,629\,495\,c[7] - 2\,849\,913\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,669\,c[6] + 2\,628\,855\,c[7] - 2\,846\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,215\,c[7] - 2\,843\,577\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,197\,c[6] + 2\,634\,599\,c[7] - 2\,867\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,165\,c[6] + \\
& 2\,633\,959\,c[7] - 2\,864\,169\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,133\,c[6] + 2\,633\,319\,c[7] - 2\,861\,001\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,661\,c[6] + \\
& 2\,639\,063\,c[7] - 2\,881\,593\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,629\,c[6] + 2\,638\,423\,c[7] - 2\,878\,425\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,125\,c[6] + \\
& 2\,643\,527\,c[7] - 2\,895\,849\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,355\,c[5] - 989\,533\,c[6] + 2\,574\,279\,c[7] - 2\,694\,465\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 990\,029\,c[6] + \\
& 2\,579\,319\,c[7] - 2\,711\,313\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 989\,997\,c[6] + 2\,578\,679\,c[7] - 2\,708\,145\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 989\,997\,c[6] + \\
& 2\,578\,743\,c[7] - 2\,708\,721\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 989\,965\,c[6] + 2\,578\,103\,c[7] - 2\,705\,553\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,525\,c[6] + \\
& 2\,584\,423\,c[7] - 2\,728\,737\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,493\,c[6] + 2\,583\,783\,c[7] - 2\,725\,569\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,461\,c[6] + \\
& 2\,583\,143\,c[7] - 2\,722\,401\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,207\,c[7] - 2\,722\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,989\,c[6] + \\
& 2\,588\,887\,c[7] - 2\,742\,993\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,957\,c[6] + 2\,588\,247\,c[7] - 2\,739\,825\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,925 c[6] + \\
& \quad 2\,587\,607 c[7] - 2\,736\,657 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,893 c[6] + 2\,586\,967 c[7] - 2\,733\,489 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,453 c[6] + \\
& \quad 2\,593\,351 c[7] - 2\,757\,249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,421 c[6] + 2\,592\,711 c[7] - 2\,754\,081 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,389 c[6] + \\
& \quad 2\,592\,071 c[7] - 2\,750\,913 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,357 c[6] + 2\,591\,431 c[7] - 2\,747\,745 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,917 c[6] + \\
& \quad 2\,597\,815 c[7] - 2\,771\,505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,885 c[6] + 2\,597\,175 c[7] - 2\,768\,337 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,853 c[6] + \\
& \quad 2\,596\,535 c[7] - 2\,765\,169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,413 c[6] + 2\,602\,919 c[7] - 2\,788\,929 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,381 c[6] + \\
& \quad 2\,602\,279 c[7] - 2\,785\,761 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,349 c[6] + 2\,601\,639 c[7] - 2\,782\,593 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,877 c[6] + \\
& \quad 2\,607\,383 c[7] - 2\,803\,185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,845 c[6] + 2\,606\,743 c[7] - 2\,800\,017 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,035 c[5] - 984\,781 c[6] + \\
& \quad 2\,543\,175 c[7] - 2\,618\,649 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,051 c[5] - 985\,245 c[6] + 2\,547\,639 c[7] - 2\,632\,905 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,051 c[5] - 985\,213 c[6] + \\
& \quad 2\,547\,063 c[7] - 2\,630\,313 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,067 c[5] - 985\,709 c[6] + 2\,552\,103 c[7] - 2\,647\,161 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,067 c[5] - 985\,677 c[6] + \\
& \quad 2\,551\,463 c[7] - 2\,643\,993 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,067 c[5] - 985\,677 c[6] + 2\,551\,527 c[7] - 2\,644\,569 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,205 c[6] + \\
& \quad 2\,557\,207 c[7] - 2\,664\,585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,173 c[6] + 2\,556\,567 c[7] - 2\,661\,417 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,141 c[6] + \\
& \quad 2\,555\,927 c[7] - 2\,658\,249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,669 c[6] + 2\,561\,671 c[7] - 2\,678\,841 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,637 c[6] + \\
& \quad 2\,561\,031 c[7] - 2\,675\,673 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,605 c[6] + 2\,560\,391 c[7] - 2\,672\,505 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,573 c[6] + \\
& \quad 2\,559\,751 c[7] - 2\,669\,337 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,133 c[6] + 2\,566\,135 c[7] - 2\,693\,097 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,101 c[6] + \\
& \quad 2\,565\,495 c[7] - 2\,689\,929 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,069 c[6] + 2\,564\,855 c[7] - 2\,686\,761 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,597 c[6] + \\
& \quad 2\,570\,599 c[7] - 2\,707\,353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] +
\end{aligned}$$

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202 147 c[5] - 988 093 c[6] + 2 575 703 c[7] - 2 724 777 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 731 c[5] - 980 461 c[6] +
2 515 959 c[7] - 2 554 497 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 731 c[5] - 980 429 c[6] + 2 515 383 c[7] - 2 551 905 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 747 c[5] - 980 925 c[6] +
2 520 423 c[7] - 2 568 753 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 747 c[5] - 980 893 c[6] + 2 519 847 c[7] - 2 566 161 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 763 c[5] - 981 389 c[6] +
2 524 887 c[7] - 2 583 009 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 763 c[5] - 981 357 c[6] + 2 524 247 c[7] - 2 579 841 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 779 c[5] - 981 885 c[6] +
2 529 991 c[7] - 2 600 433 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 779 c[5] - 981 853 c[6] + 2 529 351 c[7] - 2 597 265 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 779 c[5] - 981 821 c[6] +
2 528 711 c[7] - 2 594 097 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 795 c[5] - 982 349 c[6] + 2 534 455 c[7] - 2 614 689 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 317 c[6] +
2 533 815 c[7] - 2 611 521 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 813 c[6] + 2 538 919 c[7] - 2 628 945 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 427 c[5] - 976 141 c[6] +
2 488 743 c[7] - 2 490 345 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 443 c[5] - 976 605 c[6] + 2 493 207 c[7] - 2 504 601 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 069 c[6] +
2 497 671 c[7] - 2 518 857 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 475 c[5] - 977 565 c[6] + 2 502 775 c[7] - 2 536 281 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 533 c[6] +
2 502 135 c[7] - 2 533 113 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 491 c[5] - 978 029 c[6] + 2 507 239 c[7] - 2 550 537 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 123 c[5] - 971 821 c[6] +
2 461 527 c[7] - 2 426 193 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 139 c[5] - 972 285 c[6] + 2 465 991 c[7] - 2 440 449 c[8] ,
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 781 c[6] +
2 471 095 c[7] - 2 457 873 c[8] , c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 155 c[5] - 972 749 c[6] + 2 470 455 c[7] - 2 454 705 c[8] }

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Array[c, 8].g

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49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 579 c[4] +
9 953 443 c[5] - 49 103 981 c[6] + 130 510 711 c[7] - 143 465 969 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 579 c[4] +
9 953 443 c[5] - 49 103 981 c[6] + 130 510 711 c[7] - 143 465 969 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 379 c[5] - 1 005 709 c[6] +
2 686 471 c[7] - 2 982 969 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] +
203 379 c[5] - 1 005 677 c[6] + 2 685 831 c[7] - 2 979 801 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 027 c[5] - 999 997 c[6] +
2 645 927 c[7] - 2 876 625 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +

```

$$\begin{aligned}
& 203\,043\,c[5] - 1\,000\,525\,c[6] + 2\,651\,671\,c[7] - 2\,897\,217\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,493\,c[6] + \\
& \quad 2\,650\,967\,c[7] - 2\,893\,473\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,493\,c[6] + 2\,651\,031\,c[7] - 2\,894\,049\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,043\,c[5] - 1\,000\,461\,c[6] + \\
& \quad 2\,650\,327\,c[7] - 2\,890\,305\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,043\,c[5] - 1\,000\,429\,c[6] + 2\,649\,687\,c[7] - 2\,887\,137\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,001\,021\,c[6] + \\
& \quad 2\,656\,711\,c[7] - 2\,914\,065\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,989\,c[6] + 2\,656\,071\,c[7] - 2\,910\,897\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,957\,c[6] + \\
& \quad 2\,655\,431\,c[7] - 2\,907\,729\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,059\,c[5] - 1\,000\,925\,c[6] + 2\,654\,791\,c[7] - 2\,904\,561\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,893\,c[6] + \\
& \quad 2\,654\,151\,c[7] - 2\,901\,393\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,517\,c[6] + 2\,661\,815\,c[7] - 2\,931\,489\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,485\,c[6] + \\
& \quad 2\,661\,175\,c[7] - 2\,928\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,453\,c[6] + 2\,660\,535\,c[7] - 2\,925\,153\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,421\,c[6] + \\
& \quad 2\,659\,895\,c[7] - 2\,921\,985\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,075\,c[5] - 1\,001\,389\,c[6] + 2\,659\,255\,c[7] - 2\,918\,817\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,917\,c[6] + \\
& \quad 2\,664\,999\,c[7] - 2\,939\,409\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& \quad 203\,091\,c[5] - 1\,001\,885\,c[6] + 2\,664\,359\,c[7] - 2\,936\,241\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,691\,c[5] - 994\,749\,c[6] + \\
& \quad 2\,609\,783\,c[7] - 2\,783\,961\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,245\,c[6] + 2\,614\,823\,c[7] - 2\,800\,809\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,245\,c[6] + \\
& \quad 2\,614\,887\,c[7] - 2\,801\,385\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,707\,c[5] - 995\,213\,c[6] + 2\,614\,183\,c[7] - 2\,797\,641\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,213\,c[6] + \\
& \quad 2\,614\,247\,c[7] - 2\,798\,217\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,773\,c[6] + 2\,620\,567\,c[7] - 2\,821\,401\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,741\,c[6] + \\
& \quad 2\,619\,927\,c[7] - 2\,818\,233\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,741\,c[6] + 2\,619\,991\,c[7] - 2\,818\,809\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,709\,c[6] + \\
& \quad 2\,619\,287\,c[7] - 2\,815\,065\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,723\,c[5] - 995\,677\,c[6] + 2\,618\,647\,c[7] - 2\,811\,897\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,237\,c[6] + \\
& \quad 2\,625\,031\,c[7] - 2\,835\,657\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,205\,c[6] + 2\,624\,391\,c[7] - 2\,832\,489\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& \quad 2\,623\,751\,c[7] - 2\,829\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,111\,c[7] - 2\,826\,153\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,622\,471\,c[7] - 2\,822\,985\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,701\,c[6] + 2\,629\,495\,c[7] - 2\,849\,913\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,669\,c[6] + \\
& 2\,628\,855\,c[7] - 2\,846\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,215\,c[7] - 2\,843\,577\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,197\,c[6] + \\
& 2\,634\,599\,c[7] - 2\,867\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,165\,c[6] + 2\,633\,959\,c[7] - 2\,864\,169\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,133\,c[6] + \\
& 2\,633\,319\,c[7] - 2\,861\,001\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,661\,c[6] + 2\,639\,063\,c[7] - 2\,881\,593\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,629\,c[6] + \\
& 2\,638\,423\,c[7] - 2\,878\,425\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,803\,c[5] - 998\,125\,c[6] + 2\,643\,527\,c[7] - 2\,895\,849\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,355\,c[5] - 989\,533\,c[6] + \\
& 2\,574\,279\,c[7] - 2\,694\,465\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 990\,029\,c[6] + 2\,579\,319\,c[7] - 2\,711\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 989\,997\,c[6] + \\
& 2\,578\,679\,c[7] - 2\,708\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 989\,997\,c[6] + 2\,578\,743\,c[7] - 2\,708\,721\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,371\,c[5] - 989\,965\,c[6] + \\
& 2\,578\,103\,c[7] - 2\,705\,553\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,525\,c[6] + 2\,584\,423\,c[7] - 2\,728\,737\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,493\,c[6] + \\
& 2\,583\,783\,c[7] - 2\,725\,569\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,461\,c[6] + 2\,583\,143\,c[7] - 2\,722\,401\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,461\,c[6] + \\
& 2\,583\,207\,c[7] - 2\,722\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,989\,c[6] + 2\,588\,887\,c[7] - 2\,742\,993\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,957\,c[6] + \\
& 2\,588\,247\,c[7] - 2\,739\,825\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,925\,c[6] + 2\,587\,607\,c[7] - 2\,736\,657\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,893\,c[6] + \\
& 2\,586\,967\,c[7] - 2\,733\,489\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,453\,c[6] + 2\,593\,351\,c[7] - 2\,757\,249\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,421\,c[6] + \\
& 2\,592\,711\,c[7] - 2\,754\,081\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,071\,c[7] - 2\,750\,913\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,431\,c[7] - 2\,747\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,815\,c[7] - 2\,771\,505\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,175\,c[7] - 2\,768\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,535\,c[7] - 2\,765\,169\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,413\,c[6] + \\
& 2\,602\,919\,c[7] - 2\,788\,929\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,279\,c[7] - 2\,785\,761\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,349 c[6] + \\
& \quad 2\,601\,639 c[7] - 2\,782\,593 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,877 c[6] + 2\,607\,383 c[7] - 2\,803\,185 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,845 c[6] + \\
& \quad 2\,606\,743 c[7] - 2\,800\,017 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,035 c[5] - 984\,781 c[6] + 2\,543\,175 c[7] - 2\,618\,649 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,051 c[5] - 985\,245 c[6] + \\
& \quad 2\,547\,639 c[7] - 2\,632\,905 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,051 c[5] - 985\,213 c[6] + 2\,547\,063 c[7] - 2\,630\,313 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,067 c[5] - 985\,709 c[6] + \\
& \quad 2\,552\,103 c[7] - 2\,647\,161 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,067 c[5] - 985\,677 c[6] + 2\,551\,463 c[7] - 2\,643\,993 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,067 c[5] - 985\,677 c[6] + \\
& \quad 2\,551\,527 c[7] - 2\,644\,569 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,205 c[6] + 2\,557\,207 c[7] - 2\,664\,585 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,173 c[6] + \\
& \quad 2\,556\,567 c[7] - 2\,661\,417 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,141 c[6] + 2\,555\,927 c[7] - 2\,658\,249 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,669 c[6] + \\
& \quad 2\,561\,671 c[7] - 2\,678\,841 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,637 c[6] + 2\,561\,031 c[7] - 2\,675\,673 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,605 c[6] + \\
& \quad 2\,560\,391 c[7] - 2\,672\,505 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,573 c[6] + 2\,559\,751 c[7] - 2\,669\,337 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,133 c[6] + \\
& \quad 2\,566\,135 c[7] - 2\,693\,097 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,101 c[6] + 2\,565\,495 c[7] - 2\,689\,929 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,069 c[6] + \\
& \quad 2\,564\,855 c[7] - 2\,686\,761 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,597 c[6] + 2\,570\,599 c[7] - 2\,707\,353 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,093 c[6] + \\
& \quad 2\,575\,703 c[7] - 2\,724\,777 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,731 c[5] - 980\,461 c[6] + 2\,515\,959 c[7] - 2\,554\,497 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,731 c[5] - 980\,429 c[6] + \\
& \quad 2\,515\,383 c[7] - 2\,551\,905 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,747 c[5] - 980\,925 c[6] + 2\,520\,423 c[7] - 2\,568\,753 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,747 c[5] - 980\,893 c[6] + \\
& \quad 2\,519\,847 c[7] - 2\,566\,161 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,763 c[5] - 981\,389 c[6] + 2\,524\,887 c[7] - 2\,583\,009 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,763 c[5] - 981\,357 c[6] + \\
& \quad 2\,524\,247 c[7] - 2\,579\,841 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,779 c[5] - 981\,885 c[6] + 2\,529\,991 c[7] - 2\,600\,433 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,779 c[5] - 981\,853 c[6] + \\
& \quad 2\,529\,351 c[7] - 2\,597\,265 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,779 c[5] - 981\,821 c[6] + 2\,528\,711 c[7] - 2\,594\,097 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,349 c[6] + \\
& \quad 2\,534\,455 c[7] - 2\,614\,689 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] +
\end{aligned}$$

```

201 795 c[5] - 982 317 c[6] + 2 533 815 c[7] - 2 611 521 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 813 c[6] +
2 538 919 c[7] - 2 628 945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 427 c[5] - 976 141 c[6] + 2 488 743 c[7] - 2 490 345 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 443 c[5] - 976 605 c[6] +
2 493 207 c[7] - 2 504 601 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 459 c[5] - 977 069 c[6] + 2 497 671 c[7] - 2 518 857 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 565 c[6] +
2 502 775 c[7] - 2 536 281 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 475 c[5] - 977 533 c[6] + 2 502 135 c[7] - 2 533 113 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 029 c[6] +
2 507 239 c[7] - 2 550 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 123 c[5] - 971 821 c[6] + 2 461 527 c[7] - 2 426 193 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 139 c[5] - 972 285 c[6] +
2 465 991 c[7] - 2 440 449 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 155 c[5] - 972 781 c[6] + 2 471 095 c[7] - 2 457 873 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 749 c[6] +
2 470 455 c[7] - 2 454 705 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -70 323 109, -18 465 693, -3 020 109, -423 600, -55 070}

GCD[0, 0, 0, -70 323 109, -18 465 693, -3 020 109, -423 600, -55 070]
1

```

cert.g

-174 561 729

{0, 0, 0, -70 323 109, -18 465 693, -3 020 109, -423 600, -55 070}.

Reverse[gpart[listdim17[[140]]]]

-174 561 729

cert.Transpose[A]

```

{3 292 295, 3 291 047, 7 843 071, 7 852 575, 3 241 407, 7 851 327, 3 240 159, 3 238 911,
3 250 911, 3 249 663, 3 248 415, 3 247 167, 3 245 919, 3 259 167, 3 257 919, 3 256 671,
3 255 423, 3 254 175, 3 263 679, 3 262 431, 7 790 935, 3 189 271, 7 799 191, 3 188 023,
7 797 943, 3 198 775, 3 197 527, 7 807 447, 3 196 279, 3 195 031, 3 205 783, 3 204 535,
3 203 287, 3 202 039, 3 200 791, 3 212 791, 3 211 543, 3 210 295, 3 221 047, 3 219 799,
3 218 551, 3 228 055, 3 226 807, 3 235 063, 7 740 047, 3 138 383, 3 137 135, 7 747 055,
7 745 807, 3 146 639, 3 145 391, 3 144 143, 7 754 063, 3 153 647, 3 152 399, 3 151 151,
3 149 903, 3 160 655, 3 159 407, 3 158 159, 3 156 911, 3 167 663, 3 166 415, 3 165 167,
3 175 919, 3 174 671, 3 173 423, 3 182 927, 3 181 679, 3 086 247, 3 093 255, 7 701 927,
3 100 263, 3 099 015, 7 708 935, 3 108 519, 3 107 271, 3 106 023, 3 115 527, 3 114 279,
3 113 031, 3 111 783, 3 122 535, 3 121 287, 3 120 039, 3 129 543, 3 137 799, 3 048 127,
7 656 799, 3 055 135, 7 663 807, 3 062 143, 3 060 895, 3 070 399, 3 069 151,
3 067 903, 3 077 407, 3 076 159, 3 084 415, 3 010 007, 3 017 015, 3 024 023,
3 032 279, 3 031 031, 3 039 287, 2 971 887, 2 978 895, 2 987 151, 2 985 903}

```



```
chi = listdim17[[141]]
```

$$(-11 + x)^3 (-9 + x)^9 (5 + x)^{32} (68 - 17x + x^2) (-775 + 267x - 29x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -61, 1565, -21865, 179411, -863175, 2250319, -2446675},
      {1, -61, 1565, -21865, 179411, -863143, 2249743, -2444211},
      {1, -61, 1565, -21857, 179091, -858487, 2220623, -2378475},
      {1, -61, 1565, -21857, 179091, -858455, 2219983, -2375307},
      {1, -61, 1565, -21857, 179107, -858887, 2223807, -2386395},
      {1, -61, 1565, -21857, 179123, -859319, 2227567, -2396779},
      {1, -61, 1565, -21857, 179123, -859319, 2227631, -2397483},
      {1, -61, 1565, -21857, 179139, -859751, 2231391, -2407867},
      {1, -61, 1565, -21849, 178787, -854199, 2193983, -2316915},
      {1, -61, 1565, -21849, 178803, -854663, 2198447, -2331171},
      {1, -61, 1565, -21849, 178803, -854631, 2197871, -2328579},
      {1, -61, 1565, -21849, 178819, -855063, 2201695, -2339667},
      {1, -61, 1565, -21849, 178819, -855031, 2201055, -2336499},
      {1, -61, 1565, -21841, 178515, -850775, 2175119, -2278683},
      {1, -61, 1565, -21841, 178531, -851207, 2178943, -2289771},
      {1, -61, 1565, -21841, 178547, -851639, 2182703, -2300155},
      {1, -61, 1565, -21833, 178227, -846951, 2153007, -2231955},
      {1, -61, 1565, -21833, 178227, -846919, 2152367, -2228787},
      {1, -61, 1565, -21833, 178243, -847383, 2156831, -2243043},
      {1, -61, 1565, -21825, 177939, -843095, 2130255, -2182059},
      {1, -61, 1565, -21825, 177955, -843559, 2134719, -2196315},
      {1, -61, 1565, -21817, 177651, -839271, 2108143, -2135331},
      {1, -61, 1565, -21817, 177667, -839735, 2112607, -2149587}};
```

A // MatrixForm

```
( 1 -61 1565 -21865 179411 -863175 2250319 -2446675
 1 -61 1565 -21865 179411 -863143 2249743 -2444211
 1 -61 1565 -21857 179091 -858487 2220623 -2378475
 1 -61 1565 -21857 179091 -858455 2219983 -2375307
 1 -61 1565 -21857 179107 -858887 2223807 -2386395
 1 -61 1565 -21857 179123 -859319 2227567 -2396779
 1 -61 1565 -21857 179123 -859319 2227631 -2397483
 1 -61 1565 -21857 179139 -859751 2231391 -2407867
 1 -61 1565 -21849 178787 -854199 2193983 -2316915
 1 -61 1565 -21849 178803 -854663 2198447 -2331171
 1 -61 1565 -21849 178803 -854631 2197871 -2328579
 1 -61 1565 -21849 178819 -855063 2201695 -2339667
 1 -61 1565 -21849 178819 -855031 2201055 -2336499
 1 -61 1565 -21841 178515 -850775 2175119 -2278683
 1 -61 1565 -21841 178531 -851207 2178943 -2289771
 1 -61 1565 -21841 178547 -851639 2182703 -2300155
 1 -61 1565 -21833 178227 -846951 2153007 -2231955
 1 -61 1565 -21833 178227 -846919 2152367 -2228787
 1 -61 1565 -21833 178243 -847383 2156831 -2243043
 1 -61 1565 -21825 177939 -843095 2130255 -2182059
 1 -61 1565 -21825 177955 -843559 2134719 -2196315
 1 -61 1565 -21817 177651 -839271 2108143 -2135331
 1 -61 1565 -21817 177667 -839735 2112607 -2149587)
```

Dimensions[A]

```
{23, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -2989, 76685, -1071073, 8780291, -42156167, 109479807, -118243755}
```

Array[c, 8].Transpose[A]

$$\{c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179411 c[5] - 863175 c[6] + 2250319 c[7] - 2446675 c[8], c[1] - 61 c[2] + 1565 c[3] - 21865 c[4] + 179411 c[5] - 863143 c[6] + 2249743 c[7] - 2444211 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179091 c[5] - 858487 c[6] + 2220623 c[7] - 2378475 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179091 c[5] - 858455 c[6] + 2219983 c[7] - 2375307 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179107 c[5] - 858887 c[6] + 2223807 c[7] - 2386395 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179123 c[5] - 859319 c[6] + 2227567 c[7] - 2396779 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179123 c[5] - 859319 c[6] + 2227631 c[7] - 2397483 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179139 c[5] - 859751 c[6] + 2231391 c[7] - 2407867 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178787 c[5] - 854199 c[6] + 2193983 c[7] - 2316915 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178803 c[5] - 854663 c[6] + 2198447 c[7] - 2331171 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178803 c[5] - 854631 c[6] + 2197871 c[7] - 2328579 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178819 c[5] - 855063 c[6] + 2201695 c[7] - 2339667 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178819 c[5] - 855031 c[6] + 2201055 c[7] - 2336499 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178515 c[5] - 850775 c[6] + 2175119 c[7] - 2278683 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178531 c[5] - 851207 c[6] + 2178943 c[7] - 2289771 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178547 c[5] - 851639 c[6] + 2182703 c[7] - 2300155 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178227 c[5] - 846951 c[6] + 2153007 c[7] - 2231955 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178227 c[5] - 846919 c[6] + 2152367 c[7] - 2228787 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178243 c[5] - 847383 c[6] + 2156831 c[7] - 2243043 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177939 c[5] - 843095 c[6] + 2130255 c[7] - 2182059 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177955 c[5] - 843559 c[6] + 2134719 c[7] - 2196315 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177651 c[5] - 839271 c[6] + 2108143 c[7] - 2135331 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177667 c[5] - 839735 c[6] + 2112607 c[7] - 2149587 c[8]\}$$

Array[c, 8].g

$$49 c[1] - 2989 c[2] + 76685 c[3] - 1071073 c[4] + 8780291 c[5] - 42156167 c[6] + 109479807 c[7] - 118243755 c[8]$$

```

cert =
  Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2989 c[2] + 76 685 c[3] - 1 071 073 c[4] +
    8 780 291 c[5] - 42 156 167 c[6] + 109 479 807 c[7] - 118 243 755 c[8] < 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 865 c[4] + 179 411 c[5] - 863 175 c[6] +
    2 250 319 c[7] - 2 446 675 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 865 c[4] +
    179 411 c[5] - 863 143 c[6] + 2 249 743 c[7] - 2 444 211 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] + 179 091 c[5] - 858 487 c[6] +
    2 220 623 c[7] - 2 378 475 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] +
    179 091 c[5] - 858 455 c[6] + 2 219 983 c[7] - 2 375 307 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] + 179 107 c[5] - 858 887 c[6] +
    2 223 807 c[7] - 2 386 395 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] +
    179 123 c[5] - 859 319 c[6] + 2 227 567 c[7] - 2 396 779 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] + 179 123 c[5] - 859 319 c[6] +
    2 227 631 c[7] - 2 397 483 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] +
    179 139 c[5] - 859 751 c[6] + 2 231 391 c[7] - 2 407 867 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] + 178 787 c[5] - 854 199 c[6] +
    2 193 983 c[7] - 2 316 915 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] +
    178 803 c[5] - 854 663 c[6] + 2 198 447 c[7] - 2 331 171 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] + 178 803 c[5] - 854 631 c[6] +
    2 197 871 c[7] - 2 328 579 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] +
    178 819 c[5] - 855 063 c[6] + 2 201 695 c[7] - 2 339 667 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] + 178 819 c[5] - 855 031 c[6] +
    2 201 055 c[7] - 2 336 499 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
    178 515 c[5] - 850 775 c[6] + 2 175 119 c[7] - 2 278 683 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 531 c[5] - 851 207 c[6] +
    2 178 943 c[7] - 2 289 771 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
    178 547 c[5] - 851 639 c[6] + 2 182 703 c[7] - 2 300 155 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 227 c[5] - 846 951 c[6] +
    2 153 007 c[7] - 2 231 955 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
    178 227 c[5] - 846 919 c[6] + 2 152 367 c[7] - 2 228 787 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 243 c[5] - 847 383 c[6] +
    2 156 831 c[7] - 2 243 043 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] +
    177 939 c[5] - 843 095 c[6] + 2 130 255 c[7] - 2 182 059 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] + 177 955 c[5] - 843 559 c[6] +
    2 134 719 c[7] - 2 196 315 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
    177 651 c[5] - 839 271 c[6] + 2 108 143 c[7] - 2 135 331 c[8] ≥ 0 &&
    c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 667 c[5] - 839 735 c[6] +
    2 112 607 c[7] - 2 149 587 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -89 288 753, -23 286 483, -3 710 063, -501 572, -62 051}
GCD[0, 0, 0, -89 288 753, -23 286 483, -3 710 063, -501 572, -62 051]
1
cert.g
-151 671 162

```

```
{0, 0, 0, -89 288 753, -23 286 483, -3 710 063, -501 572, -62 051}.
```

```
Reverse[gpart[listdim17[[141]]]]
```

```
-151 671 162
```

```
cert.Transpose[A]
```

```
{2 641 814, 19 931 606, 10 034 918, 15 741 414, 15 915 062, 4 505 414, 16 088 710, 4 679 062,
 8 084 102, 2 551 254, 11 898 518, 12 072 166, 17 778 662, 13 762 118, 13 935 766,
 2 526 118, 9 919 222, 15 625 718, 10 092 870, 11 782 822, 6 249 974, 7 939 926, 2 407 078}
```

```
chi = listdim17[[142]]
```

```
 $(-11 + x)^4 (-9 + x)^{10} (-7 + x) (5 + x)^{32} (76 - 19 x + x^2)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-24 801, 17 753, -4886, 646, -41, 1},
 {-24 137, 17 593, -4878, 646, -41, 1}, {-24 105, 17 593, -4878, 646, -41, 1},
 {-24 073, 17 593, -4878, 646, -41, 1}, {-24 249, 17 609, -4878, 646, -41, 1},
 {-24 217, 17 609, -4878, 646, -41, 1}, {-24 185, 17 609, -4878, 646, -41, 1},
 {-24 329, 17 625, -4878, 646, -41, 1}, {-24 297, 17 625, -4878, 646, -41, 1},
 {-24 409, 17 641, -4878, 646, -41, 1}, {-23 409, 17 433, -4870, 646, -41, 1},
 {-23 377, 17 433, -4870, 646, -41, 1}, {-23 345, 17 433, -4870, 646, -41, 1},
 {-23 553, 17 449, -4870, 646, -41, 1}, {-23 521, 17 449, -4870, 646, -41, 1},
 {-23 489, 17 449, -4870, 646, -41, 1}, {-23 457, 17 449, -4870, 646, -41, 1},
 {-23 665, 17 465, -4870, 646, -41, 1}, {-23 633, 17 465, -4870, 646, -41, 1},
 {-23 601, 17 465, -4870, 646, -41, 1}, {-23 569, 17 465, -4870, 646, -41, 1},
 {-23 777, 17 481, -4870, 646, -41, 1}, {-23 745, 17 481, -4870, 646, -41, 1},
 {-23 713, 17 481, -4870, 646, -41, 1}, {-23 681, 17 481, -4870, 646, -41, 1},
 {-23 857, 17 497, -4870, 646, -41, 1}, {-23 825, 17 497, -4870, 646, -41, 1},
 {-23 793, 17 497, -4870, 646, -41, 1}, {-22 617, 17 273, -4862, 646, -41, 1},
 {-22 761, 17 289, -4862, 646, -41, 1}, {-22 729, 17 289, -4862, 646, -41, 1},
 {-22 905, 17 305, -4862, 646, -41, 1}, {-22 873, 17 305, -4862, 646, -41, 1},
 {-22 841, 17 305, -4862, 646, -41, 1}, {-23 049, 17 321, -4862, 646, -41, 1},
 {-23 017, 17 321, -4862, 646, -41, 1}, {-22 985, 17 321, -4862, 646, -41, 1},
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 {-23 161, 17 337, -4862, 646, -41, 1}, {-23 129, 17 337, -4862, 646, -41, 1},
 {-23 097, 17 337, -4862, 646, -41, 1}, {-23 065, 17 337, -4862, 646, -41, 1},
 {-23 305, 17 353, -4862, 646, -41, 1}, {-23 273, 17 353, -4862, 646, -41, 1},
 {-23 241, 17 353, -4862, 646, -41, 1}, {-23 209, 17 353, -4862, 646, -41, 1},
 {-23 177, 17 353, -4862, 646, -41, 1}, {-23 385, 17 369, -4862, 646, -41, 1},
 {-23 353, 17 369, -4862, 646, -41, 1}, {-22 113, 17 145, -4854, 646, -41, 1},
 {-22 257, 17 161, -4854, 646, -41, 1}, {-22 225, 17 161, -4854, 646, -41, 1},
 {-22 401, 17 177, -4854, 646, -41, 1}, {-22 369, 17 177, -4854, 646, -41, 1},
```

```
{-22 337, 17 177, -4854, 646, -41, 1}, {-22 545, 17 193, -4854, 646, -41, 1},
{-22 513, 17 193, -4854, 646, -41, 1}, {-22 481, 17 193, -4854, 646, -41, 1},
{-22 449, 17 193, -4854, 646, -41, 1}, {-22 689, 17 209, -4854, 646, -41, 1},
{-22 657, 17 209, -4854, 646, -41, 1}, {-22 625, 17 209, -4854, 646, -41, 1},
{-22 593, 17 209, -4854, 646, -41, 1}, {-22 561, 17 209, -4854, 646, -41, 1},
{-22 833, 17 225, -4854, 646, -41, 1}, {-22 801, 17 225, -4854, 646, -41, 1},
{-22 769, 17 225, -4854, 646, -41, 1}, {-22 737, 17 225, -4854, 646, -41, 1},
{-22 913, 17 241, -4854, 646, -41, 1}, {-21 609, 17 017, -4846, 646, -41, 1},
{-21 753, 17 033, -4846, 646, -41, 1}, {-21 721, 17 033, -4846, 646, -41, 1},
{-21 897, 17 049, -4846, 646, -41, 1}, {-21 865, 17 049, -4846, 646, -41, 1},
{-21 833, 17 049, -4846, 646, -41, 1}, {-22 041, 17 065, -4846, 646, -41, 1},
{-22 009, 17 065, -4846, 646, -41, 1}, {-21 977, 17 065, -4846, 646, -41, 1},
{-21 945, 17 065, -4846, 646, -41, 1}, {-22 185, 17 081, -4846, 646, -41, 1},
{-22 153, 17 081, -4846, 646, -41, 1}, {-22 121, 17 081, -4846, 646, -41, 1},
{-22 329, 17 097, -4846, 646, -41, 1}, {-22 297, 17 097, -4846, 646, -41, 1},
{-21 105, 16 889, -4838, 646, -41, 1}, {-21 249, 16 905, -4838, 646, -41, 1},
{-21 217, 16 905, -4838, 646, -41, 1}, {-21 393, 16 921, -4838, 646, -41, 1},
{-21 361, 16 921, -4838, 646, -41, 1}, {-21 329, 16 921, -4838, 646, -41, 1},
{-21 537, 16 937, -4838, 646, -41, 1}, {-21 505, 16 937, -4838, 646, -41, 1},
{-21 681, 16 953, -4838, 646, -41, 1}, {-20 601, 16 761, -4830, 646, -41, 1},
{-20 745, 16 777, -4830, 646, -41, 1}, {-20 713, 16 777, -4830, 646, -41, 1},
{-20 889, 16 793, -4830, 646, -41, 1}, {-20 097, 16 633, -4822, 646, -41, 1}}
```

A = {{-24 801, 17 753, -4886, 646, -41, 1},

```
{-24 137, 17 593, -4878, 646, -41, 1}, {-24 105, 17 593, -4878, 646, -41, 1},
{-24 073, 17 593, -4878, 646, -41, 1}, {-24 249, 17 609, -4878, 646, -41, 1},
{-24 217, 17 609, -4878, 646, -41, 1}, {-24 185, 17 609, -4878, 646, -41, 1},
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{-24 409, 17 641, -4878, 646, -41, 1}, {-23 409, 17 433, -4870, 646, -41, 1},
{-23 377, 17 433, -4870, 646, -41, 1}, {-23 345, 17 433, -4870, 646, -41, 1},
{-23 553, 17 449, -4870, 646, -41, 1}, {-23 521, 17 449, -4870, 646, -41, 1},
{-23 489, 17 449, -4870, 646, -41, 1}, {-23 457, 17 449, -4870, 646, -41, 1},
{-23 665, 17 465, -4870, 646, -41, 1}, {-23 633, 17 465, -4870, 646, -41, 1},
{-23 601, 17 465, -4870, 646, -41, 1}, {-23 569, 17 465, -4870, 646, -41, 1},
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{-23 713, 17 481, -4870, 646, -41, 1}, {-23 681, 17 481, -4870, 646, -41, 1},
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{-23 793, 17 497, -4870, 646, -41, 1}, {-22 617, 17 273, -4862, 646, -41, 1},
{-22 761, 17 289, -4862, 646, -41, 1}, {-22 729, 17 289, -4862, 646, -41, 1},
{-22 905, 17 305, -4862, 646, -41, 1}, {-22 873, 17 305, -4862, 646, -41, 1},
{-22 841, 17 305, -4862, 646, -41, 1}, {-23 049, 17 321, -4862, 646, -41, 1},
{-23 017, 17 321, -4862, 646, -41, 1}, {-22 985, 17 321, -4862, 646, -41, 1},
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{-23 241, 17 353, -4862, 646, -41, 1}, {-23 209, 17 353, -4862, 646, -41, 1},
```

```
{-23 177, 17 353, -4862, 646, -41, 1}, {-23 385, 17 369, -4862, 646, -41, 1},
{-23 353, 17 369, -4862, 646, -41, 1}, {-22 113, 17 145, -4854, 646, -41, 1},
{-22 257, 17 161, -4854, 646, -41, 1}, {-22 225, 17 161, -4854, 646, -41, 1},
{-22 401, 17 177, -4854, 646, -41, 1}, {-22 369, 17 177, -4854, 646, -41, 1},
{-22 337, 17 177, -4854, 646, -41, 1}, {-22 545, 17 193, -4854, 646, -41, 1},
{-22 513, 17 193, -4854, 646, -41, 1}, {-22 481, 17 193, -4854, 646, -41, 1},
{-22 449, 17 193, -4854, 646, -41, 1}, {-22 689, 17 209, -4854, 646, -41, 1},
{-22 657, 17 209, -4854, 646, -41, 1}, {-22 625, 17 209, -4854, 646, -41, 1},
{-22 593, 17 209, -4854, 646, -41, 1}, {-22 561, 17 209, -4854, 646, -41, 1},
{-22 833, 17 225, -4854, 646, -41, 1}, {-22 801, 17 225, -4854, 646, -41, 1},
{-22 769, 17 225, -4854, 646, -41, 1}, {-22 737, 17 225, -4854, 646, -41, 1},
{-22 913, 17 241, -4854, 646, -41, 1}, {-21 609, 17 017, -4846, 646, -41, 1},
{-21 753, 17 033, -4846, 646, -41, 1}, {-21 721, 17 033, -4846, 646, -41, 1},
{-21 897, 17 049, -4846, 646, -41, 1}, {-21 865, 17 049, -4846, 646, -41, 1},
{-21 833, 17 049, -4846, 646, -41, 1}, {-22 041, 17 065, -4846, 646, -41, 1},
{-22 009, 17 065, -4846, 646, -41, 1}, {-21 977, 17 065, -4846, 646, -41, 1},
{-21 945, 17 065, -4846, 646, -41, 1}, {-22 185, 17 081, -4846, 646, -41, 1},
{-22 153, 17 081, -4846, 646, -41, 1}, {-22 121, 17 081, -4846, 646, -41, 1},
{-22 329, 17 097, -4846, 646, -41, 1}, {-22 297, 17 097, -4846, 646, -41, 1},
{-21 105, 16 889, -4838, 646, -41, 1}, {-21 249, 16 905, -4838, 646, -41, 1},
{-21 217, 16 905, -4838, 646, -41, 1}, {-21 393, 16 921, -4838, 646, -41, 1},
{-21 361, 16 921, -4838, 646, -41, 1}, {-21 329, 16 921, -4838, 646, -41, 1},
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{-21 681, 16 953, -4838, 646, -41, 1}, {-20 601, 16 761, -4830, 646, -41, 1},
{-20 745, 16 777, -4830, 646, -41, 1}, {-20 713, 16 777, -4830, 646, -41, 1},
{-20 889, 16 793, -4830, 646, -41, 1}, {-20 097, 16 633, -4822, 646, -41, 1}};
```

A // MatrixForm

```
(-24 801 17 753 -4886 646 -41 1)
(-24 137 17 593 -4878 646 -41 1)
(-24 105 17 593 -4878 646 -41 1)
(-24 073 17 593 -4878 646 -41 1)
(-24 249 17 609 -4878 646 -41 1)
(-24 217 17 609 -4878 646 -41 1)
(-24 185 17 609 -4878 646 -41 1)
(-24 329 17 625 -4878 646 -41 1)
(-24 297 17 625 -4878 646 -41 1)
(-24 409 17 641 -4878 646 -41 1)
(-23 409 17 433 -4870 646 -41 1)
(-23 377 17 433 -4870 646 -41 1)
(-23 345 17 433 -4870 646 -41 1)
(-23 553 17 449 -4870 646 -41 1)
(-23 521 17 449 -4870 646 -41 1)
(-23 489 17 449 -4870 646 -41 1)
(-23 457 17 449 -4870 646 -41 1)
(-23 665 17 465 -4870 646 -41 1)
(-23 633 17 465 -4870 646 -41 1)
(-23 601 17 465 -4870 646 -41 1)
(-23 569 17 465 -4870 646 -41 1)
(-23 777 17 481 -4870 646 -41 1)
(-23 745 17 481 -4870 646 -41 1)
```

-23 713	17 481	-4870	646	-41	1
-23 681	17 481	-4870	646	-41	1
-23 857	17 497	-4870	646	-41	1
-23 825	17 497	-4870	646	-41	1
-23 793	17 497	-4870	646	-41	1
-22 617	17 273	-4862	646	-41	1
-22 761	17 289	-4862	646	-41	1
-22 729	17 289	-4862	646	-41	1
-22 905	17 305	-4862	646	-41	1
-22 873	17 305	-4862	646	-41	1
-22 841	17 305	-4862	646	-41	1
-23 049	17 321	-4862	646	-41	1
-23 017	17 321	-4862	646	-41	1
-22 985	17 321	-4862	646	-41	1
-22 953	17 321	-4862	646	-41	1
-23 193	17 337	-4862	646	-41	1
-23 161	17 337	-4862	646	-41	1
-23 129	17 337	-4862	646	-41	1
-23 097	17 337	-4862	646	-41	1
-23 065	17 337	-4862	646	-41	1
-23 305	17 353	-4862	646	-41	1
-23 273	17 353	-4862	646	-41	1
-23 241	17 353	-4862	646	-41	1
-23 209	17 353	-4862	646	-41	1
-23 177	17 353	-4862	646	-41	1
-23 385	17 369	-4862	646	-41	1
-23 353	17 369	-4862	646	-41	1
-22 113	17 145	-4854	646	-41	1
-22 257	17 161	-4854	646	-41	1
-22 225	17 161	-4854	646	-41	1
-22 401	17 177	-4854	646	-41	1
-22 369	17 177	-4854	646	-41	1
-22 337	17 177	-4854	646	-41	1
-22 545	17 193	-4854	646	-41	1
-22 513	17 193	-4854	646	-41	1
-22 481	17 193	-4854	646	-41	1
-22 449	17 193	-4854	646	-41	1
-22 689	17 209	-4854	646	-41	1
-22 657	17 209	-4854	646	-41	1
-22 625	17 209	-4854	646	-41	1
-22 593	17 209	-4854	646	-41	1
-22 561	17 209	-4854	646	-41	1
-22 833	17 225	-4854	646	-41	1
-22 801	17 225	-4854	646	-41	1
-22 769	17 225	-4854	646	-41	1
-22 737	17 225	-4854	646	-41	1
-22 913	17 241	-4854	646	-41	1
-21 609	17 017	-4846	646	-41	1
-21 753	17 033	-4846	646	-41	1
-21 721	17 033	-4846	646	-41	1
-21 897	17 049	-4846	646	-41	1
-21 865	17 049	-4846	646	-41	1
-21 833	17 049	-4846	646	-41	1
-22 041	17 065	-4846	646	-41	1
-22 009	17 065	-4846	646	-41	1


```

-----
-21977 17065 -4846 646 -41 1
-21945 17065 -4846 646 -41 1
-22185 17081 -4846 646 -41 1
-22153 17081 -4846 646 -41 1
-22121 17081 -4846 646 -41 1
-22329 17097 -4846 646 -41 1
-22297 17097 -4846 646 -41 1
-21105 16889 -4838 646 -41 1
-21249 16905 -4838 646 -41 1
-21217 16905 -4838 646 -41 1
-21393 16921 -4838 646 -41 1
-21361 16921 -4838 646 -41 1
-21329 16921 -4838 646 -41 1
-21537 16937 -4838 646 -41 1
-21505 16937 -4838 646 -41 1
-21681 16953 -4838 646 -41 1
-20601 16761 -4830 646 -41 1
-20745 16777 -4830 646 -41 1
-20713 16777 -4830 646 -41 1
-20889 16793 -4830 646 -41 1
-20097 16633 -4822 646 -41 1

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1193561, 864505, -239102, 31654, -2009, 49}
```

```
Array[c, 6].Transpose[A]
```

```

{-24801 c[1] + 17753 c[2] - 4886 c[3] + 646 c[4] - 41 c[5] + c[6],
 -24137 c[1] + 17593 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6],
 -24105 c[1] + 17593 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6],
 -24073 c[1] + 17593 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6],
 -24249 c[1] + 17609 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6],
 -24217 c[1] + 17609 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6],
 -24185 c[1] + 17609 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6],
 -24329 c[1] + 17625 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6],
 -24297 c[1] + 17625 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6],
 -24409 c[1] + 17641 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23409 c[1] + 17433 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23377 c[1] + 17433 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23345 c[1] + 17433 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23553 c[1] + 17449 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23521 c[1] + 17449 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23489 c[1] + 17449 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23457 c[1] + 17449 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23665 c[1] + 17465 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23633 c[1] + 17465 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23601 c[1] + 17465 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23569 c[1] + 17465 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23777 c[1] + 17481 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23745 c[1] + 17481 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
 -23713 c[1] + 17481 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],

```

[illegible]

```

-21 753 c[1] + 17 033 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 721 c[1] + 17 033 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 897 c[1] + 17 049 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 865 c[1] + 17 049 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 833 c[1] + 17 049 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-22 041 c[1] + 17 065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-22 009 c[1] + 17 065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 977 c[1] + 17 065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 945 c[1] + 17 065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-22 185 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-22 153 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-22 121 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-22 329 c[1] + 17 097 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-22 297 c[1] + 17 097 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 105 c[1] + 16 889 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 249 c[1] + 16 905 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 217 c[1] + 16 905 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 393 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 361 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 329 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 537 c[1] + 16 937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 505 c[1] + 16 937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-21 681 c[1] + 16 953 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 601 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 745 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 713 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 889 c[1] + 16 793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 097 c[1] + 16 633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] }

```

Array[c, 6].g

```
-1 193 561 c[1] + 864 505 c[2] - 239 102 c[3] + 31 654 c[4] - 2009 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```

-1 193 561 c[1] + 864 505 c[2] - 239 102 c[3] + 31 654 c[4] - 2009 c[5] + 49 c[6] < 0 &&
-24 801 c[1] + 17 753 c[2] - 4886 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 137 c[1] + 17 593 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 105 c[1] + 17 593 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 073 c[1] + 17 593 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 249 c[1] + 17 609 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 217 c[1] + 17 609 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 185 c[1] + 17 609 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 329 c[1] + 17 625 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 297 c[1] + 17 625 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 409 c[1] + 17 641 c[2] - 4878 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 409 c[1] + 17 433 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 377 c[1] + 17 433 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 345 c[1] + 17 433 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&

```

[illegible]

```

-22 689 c[1] + 17 209 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 657 c[1] + 17 209 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 625 c[1] + 17 209 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 593 c[1] + 17 209 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 561 c[1] + 17 209 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 833 c[1] + 17 225 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 801 c[1] + 17 225 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 769 c[1] + 17 225 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 737 c[1] + 17 225 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 913 c[1] + 17 241 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 609 c[1] + 17 017 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 753 c[1] + 17 033 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 721 c[1] + 17 033 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 897 c[1] + 17 049 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 865 c[1] + 17 049 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 833 c[1] + 17 049 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 041 c[1] + 17 065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 009 c[1] + 17 065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 977 c[1] + 17 065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 945 c[1] + 17 065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 185 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 153 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 121 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 329 c[1] + 17 097 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 297 c[1] + 17 097 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 105 c[1] + 16 889 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 249 c[1] + 16 905 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 217 c[1] + 16 905 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 393 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 361 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 329 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 537 c[1] + 16 937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 505 c[1] + 16 937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 681 c[1] + 16 953 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 601 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 745 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 713 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 889 c[1] + 16 793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 097 c[1] + 16 633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```
chi = listdim17[[143]]
```

$$(-11 + x)^3 (-9 + x)^9 (5 + x)^{32} (-52636 + 31331x - 7286x^2 + 828x^3 - 46x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -61, 1565, -21857, 179107, -858823, 2222655, -2381339},
      {1, -61, 1565, -21857, 179123, -859351, 2228271, -2400651},
      {1, -61, 1565, -21857, 179123, -859351, 2228335, -2401227},
      {1, -61, 1565, -21857, 179123, -859319, 2227695, -2398059},
      {1, -61, 1565, -21857, 179123, -859287, 2227055, -2395019},
      {1, -61, 1565, -21857, 179139, -859783, 2232095, -2411739},
      {1, -61, 1565, -21857, 179139, -859751, 2231519, -2409275},
      {1, -61, 1565, -21849, 178787, -854135, 2192831, -2311731},
      {1, -61, 1565, -21849, 178803, -854599, 2197231, -2325411},
      {1, -61, 1565, -21849, 178803, -854599, 2197295, -2325987},
      {1, -61, 1565, -21849, 178803, -854567, 2196655, -2322819},
      {1, -61, 1565, -21849, 178819, -855063, 2201695, -2339667},
      {1, -61, 1565, -21849, 178819, -855031, 2201055, -2336499},
      {1, -61, 1565, -21849, 178819, -855031, 2201119, -2337075},
      {1, -61, 1565, -21849, 178835, -855527, 2206159, -2353923},
      {1, -61, 1565, -21849, 178835, -855495, 2205519, -2350755},
      {1, -61, 1565, -21849, 178835, -855431, 2204303, -2345123},
      {1, -61, 1565, -21849, 178851, -855959, 2209983, -2365011},
      {1, -61, 1565, -21849, 178851, -855927, 2209343, -2361843},
      {1, -61, 1565, -21849, 178851, -855895, 2208767, -2359379},
      {1, -61, 1565, -21849, 178867, -856359, 2213167, -2372931},
      {1, -61, 1565, -21849, 178867, -856327, 2212591, -2370467},
      {1, -61, 1565, -21841, 178483, -849847, 2166191, -2250171},
      {1, -61, 1565, -21841, 178499, -850279, 2170015, -2261259},
      {1, -61, 1565, -21841, 178499, -850279, 2170079, -2261835},
      {1, -61, 1565, -21841, 178515, -850743, 2174479, -2275515},
      {1, -61, 1565, -21841, 178531, -851207, 2178943, -2289771},
      {1, -61, 1565, -21841, 178531, -851175, 2178303, -2286603},
      {1, -61, 1565, -21841, 178547, -851639, 2182767, -2300859},
      {1, -61, 1565, -21841, 178547, -851607, 2182127, -2297691},
      {1, -61, 1565, -21841, 178547, -851575, 2181551, -2295227},
      {1, -61, 1565, -21841, 178563, -852103, 2187231, -2315115},
      {1, -61, 1565, -21841, 178563, -852071, 2186591, -2311947},
      {1, -61, 1565, -21841, 178579, -852535, 2191055, -2326203},
      {1, -61, 1565, -21833, 178195, -845991, 2143439, -2200275},
      {1, -61, 1565, -21833, 178195, -845959, 2142863, -2197683},
      {1, -61, 1565, -21833, 178211, -846423, 2147263, -2211363},
```

```

{1, -61, 1565, -21833, 178227, -846887, 2151727, -2225619},
{1, -61, 1565, -21833, 178243, -847351, 2156191, -2239875},
{1, -61, 1565, -21833, 178243, -847319, 2155551, -2236707},
{1, -61, 1565, -21833, 178259, -847783, 2160015, -2250963},
{1, -61, 1565, -21833, 178259, -847751, 2159375, -2247795},
{1, -61, 1565, -21833, 178275, -848247, 2164479, -2265219},
{1, -61, 1565, -21825, 177891, -841671, 2116223, -2136123},
{1, -61, 1565, -21825, 177923, -842567, 2124511, -2161467},
{1, -61, 1565, -21825, 177939, -843031, 2128975, -2175723},
{1, -61, 1565, -21825, 177939, -842999, 2128335, -2172555},
{1, -61, 1565, -21817, 177603, -837815, 2093471, -2086227},
{1, -61, 1565, -21817, 177619, -838247, 2097295, -2097315},
{1, -61, 1565, -21817, 177635, -838711, 2101759, -2111571}};

A // MatrixForm

```

```

1 -61 1565 -21857 179107 -858823 2222655 -2381339
1 -61 1565 -21857 179123 -859351 2228271 -2400651
1 -61 1565 -21857 179123 -859351 2228335 -2401227
1 -61 1565 -21857 179123 -859319 2227695 -2398059
1 -61 1565 -21857 179123 -859287 2227055 -2395019
1 -61 1565 -21857 179139 -859783 2232095 -2411739
1 -61 1565 -21857 179139 -859751 2231519 -2409275
1 -61 1565 -21849 178787 -854135 2192831 -2311731
1 -61 1565 -21849 178803 -854599 2197231 -2325411
1 -61 1565 -21849 178803 -854599 2197295 -2325987
1 -61 1565 -21849 178803 -854567 2196655 -2322819
1 -61 1565 -21849 178819 -855063 2201695 -2339667
1 -61 1565 -21849 178819 -855031 2201055 -2336499
1 -61 1565 -21849 178819 -855031 2201119 -2337075
1 -61 1565 -21849 178835 -855527 2206159 -2353923
1 -61 1565 -21849 178835 -855495 2205519 -2350755
1 -61 1565 -21849 178835 -855431 2204303 -2345123
1 -61 1565 -21849 178851 -855959 2209983 -2365011
1 -61 1565 -21849 178851 -855927 2209343 -2361843
1 -61 1565 -21849 178851 -855895 2208767 -2359379
1 -61 1565 -21849 178867 -856359 2213167 -2372931
1 -61 1565 -21849 178867 -856327 2212591 -2370467
1 -61 1565 -21841 178483 -849847 2166191 -2250171
1 -61 1565 -21841 178499 -850279 2170015 -2261259
1 -61 1565 -21841 178499 -850279 2170079 -2261835
1 -61 1565 -21841 178515 -850743 2174479 -2275515
1 -61 1565 -21841 178531 -851207 2178943 -2289771
1 -61 1565 -21841 178531 -851175 2178303 -2286603
1 -61 1565 -21841 178547 -851639 2182767 -2300859
1 -61 1565 -21841 178547 -851607 2182127 -2297691
1 -61 1565 -21841 178547 -851575 2181551 -2295227
1 -61 1565 -21841 178563 -852103 2187231 -2315115
1 -61 1565 -21841 178563 -852071 2186591 -2311947
1 -61 1565 -21841 178579 -852535 2191055 -2326203
1 -61 1565 -21833 178195 -845991 2143439 -2200275
1 -61 1565 -21833 178195 -845959 2142863 -2197683
1 -61 1565 -21833 178211 -846423 2147263 -2211363
1 -61 1565 -21833 178227 -846887 2151727 -2225619
1 -61 1565 -21833 178243 -847351 2156191 -2239875
1 -61 1565 -21833 178243 -847319 2155551 -2236707
1 -61 1565 -21833 178259 -847783 2160015 -2250963
1 -61 1565 -21833 178259 -847751 2159375 -2247795
1 -61 1565 -21833 178275 -848247 2164479 -2265219
1 -61 1565 -21825 177891 -841671 2116223 -2136123
1 -61 1565 -21825 177923 -842567 2124511 -2161467
1 -61 1565 -21825 177939 -843031 2128975 -2175723
1 -61 1565 -21825 177939 -842999 2128335 -2172555
1 -61 1565 -21817 177603 -837815 2093471 -2086227
1 -61 1565 -21817 177619 -838247 2097295 -2097315
1 -61 1565 -21817 177635 -838711 2101759 -2111571

```

Dimensions[A]

{50, 8}


```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse
{49, -2989, 76685, -1071073, 8780291, -42153351, 109434623, -118081323}
```

```
Array[c, 8].Transpose[A]
```

```
{c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179107 c[5] -
  858823 c[6] + 2222655 c[7] - 2381339 c[8], c[1] - 61 c[2] + 1565 c[3] -
  21857 c[4] + 179123 c[5] - 859351 c[6] + 2228271 c[7] - 2400651 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179123 c[5] - 859351 c[6] +
  2228335 c[7] - 2401227 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] +
  179123 c[5] - 859319 c[6] + 2227695 c[7] - 2398059 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179123 c[5] - 859287 c[6] +
  2227055 c[7] - 2395019 c[8], c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] +
  179139 c[5] - 859783 c[6] + 2232095 c[7] - 2411739 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21857 c[4] + 179139 c[5] - 859751 c[6] +
  2231519 c[7] - 2409275 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178787 c[5] - 854135 c[6] + 2192831 c[7] - 2311731 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178803 c[5] - 854599 c[6] +
  2197231 c[7] - 2325411 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178803 c[5] - 854599 c[6] + 2197295 c[7] - 2325987 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178803 c[5] - 854567 c[6] +
  2196655 c[7] - 2322819 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178819 c[5] - 855063 c[6] + 2201695 c[7] - 2339667 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178819 c[5] - 855031 c[6] +
  2201055 c[7] - 2336499 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178819 c[5] - 855031 c[6] + 2201119 c[7] - 2337075 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178835 c[5] - 855527 c[6] +
  2206159 c[7] - 2353923 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178835 c[5] - 855495 c[6] + 2205519 c[7] - 2350755 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178835 c[5] - 855431 c[6] +
  2204303 c[7] - 2345123 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178851 c[5] - 855959 c[6] + 2209983 c[7] - 2365011 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178851 c[5] - 855927 c[6] +
  2209343 c[7] - 2361843 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178851 c[5] - 855895 c[6] + 2208767 c[7] - 2359379 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178867 c[5] - 856359 c[6] +
  2213167 c[7] - 2372931 c[8], c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178867 c[5] - 856327 c[6] + 2212591 c[7] - 2370467 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178483 c[5] - 849847 c[6] +
  2166191 c[7] - 2250171 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] +
  178499 c[5] - 850279 c[6] + 2170015 c[7] - 2261259 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178499 c[5] - 850279 c[6] +
  2170079 c[7] - 2261835 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] +
  178515 c[5] - 850743 c[6] + 2174479 c[7] - 2275515 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178531 c[5] - 851207 c[6] +
  2178943 c[7] - 2289771 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] +
  178531 c[5] - 851175 c[6] + 2178303 c[7] - 2286603 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178547 c[5] - 851639 c[6] +
```

```

2 182 767 c[7] - 2 300 859 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 547 c[5] - 851 607 c[6] + 2 182 127 c[7] - 2 297 691 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 547 c[5] - 851 575 c[6] +
2 181 551 c[7] - 2 295 227 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 563 c[5] - 852 103 c[6] + 2 187 231 c[7] - 2 315 115 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 563 c[5] - 852 071 c[6] +
2 186 591 c[7] - 2 311 947 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 579 c[5] - 852 535 c[6] + 2 191 055 c[7] - 2 326 203 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 195 c[5] - 845 991 c[6] +
2 143 439 c[7] - 2 200 275 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 195 c[5] - 845 959 c[6] + 2 142 863 c[7] - 2 197 683 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 211 c[5] - 846 423 c[6] +
2 147 263 c[7] - 2 211 363 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 227 c[5] - 846 887 c[6] + 2 151 727 c[7] - 2 225 619 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 243 c[5] - 847 351 c[6] +
2 156 191 c[7] - 2 239 875 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 243 c[5] - 847 319 c[6] + 2 155 551 c[7] - 2 236 707 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 259 c[5] - 847 783 c[6] +
2 160 015 c[7] - 2 250 963 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 259 c[5] - 847 751 c[6] + 2 159 375 c[7] - 2 247 795 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 275 c[5] - 848 247 c[6] +
2 164 479 c[7] - 2 265 219 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] +
177 891 c[5] - 841 671 c[6] + 2 116 223 c[7] - 2 136 123 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] + 177 923 c[5] - 842 567 c[6] +
2 124 511 c[7] - 2 161 467 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] +
177 939 c[5] - 843 031 c[6] + 2 128 975 c[7] - 2 175 723 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] + 177 939 c[5] - 842 999 c[6] +
2 128 335 c[7] - 2 172 555 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 603 c[5] - 837 815 c[6] + 2 093 471 c[7] - 2 086 227 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 619 c[5] - 838 247 c[6] +
2 097 295 c[7] - 2 097 315 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 635 c[5] - 838 711 c[6] + 2 101 759 c[7] - 2 111 571 c[8] }

```

Array[c, 8].g

```

49 c[1] - 2989 c[2] + 76 685 c[3] - 1 071 073 c[4] +
8 780 291 c[5] - 42 153 351 c[6] + 109 434 623 c[7] - 118 081 323 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2989 c[2] + 76 685 c[3] - 1 071 073 c[4] +
8 780 291 c[5] - 42 153 351 c[6] + 109 434 623 c[7] - 118 081 323 c[8] < 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] + 179 107 c[5] - 858 823 c[6] +
2 222 655 c[7] - 2 381 339 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] +
179 123 c[5] - 859 351 c[6] + 2 228 271 c[7] - 2 400 651 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] + 179 123 c[5] - 859 351 c[6] +
2 228 335 c[7] - 2 401 227 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] +
179 123 c[5] - 859 319 c[6] + 2 227 695 c[7] - 2 398 059 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 857 c[4] + 179 123 c[5] -

```

$$\begin{aligned}
& 859\,287\,c[6] + 2\,227\,055\,c[7] - 2\,395\,019\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + 179\,139\,c[5] - 859\,783\,c[6] + \\
& \quad 2\,232\,095\,c[7] - 2\,411\,739\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,857\,c[4] + \\
& \quad 179\,139\,c[5] - 859\,751\,c[6] + 2\,231\,519\,c[7] - 2\,409\,275\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,787\,c[5] - 854\,135\,c[6] + \\
& \quad 2\,192\,831\,c[7] - 2\,311\,731\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& \quad 178\,803\,c[5] - 854\,599\,c[6] + 2\,197\,231\,c[7] - 2\,325\,411\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,803\,c[5] - 854\,599\,c[6] + \\
& \quad 2\,197\,295\,c[7] - 2\,325\,987\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& \quad 178\,803\,c[5] - 854\,567\,c[6] + 2\,196\,655\,c[7] - 2\,322\,819\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,819\,c[5] - 855\,063\,c[6] + \\
& \quad 2\,201\,695\,c[7] - 2\,339\,667\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& \quad 178\,819\,c[5] - 855\,031\,c[6] + 2\,201\,055\,c[7] - 2\,336\,499\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,819\,c[5] - 855\,031\,c[6] + \\
& \quad 2\,201\,119\,c[7] - 2\,337\,075\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& \quad 178\,835\,c[5] - 855\,527\,c[6] + 2\,206\,159\,c[7] - 2\,353\,923\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,835\,c[5] - 855\,495\,c[6] + \\
& \quad 2\,205\,519\,c[7] - 2\,350\,755\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& \quad 178\,835\,c[5] - 855\,431\,c[6] + 2\,204\,303\,c[7] - 2\,345\,123\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,851\,c[5] - 855\,959\,c[6] + \\
& \quad 2\,209\,983\,c[7] - 2\,365\,011\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& \quad 178\,851\,c[5] - 855\,927\,c[6] + 2\,209\,343\,c[7] - 2\,361\,843\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,851\,c[5] - 855\,895\,c[6] + \\
& \quad 2\,208\,767\,c[7] - 2\,359\,379\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + \\
& \quad 178\,867\,c[5] - 856\,359\,c[6] + 2\,213\,167\,c[7] - 2\,372\,931\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,849\,c[4] + 178\,867\,c[5] - 856\,327\,c[6] + \\
& \quad 2\,212\,591\,c[7] - 2\,370\,467\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + \\
& \quad 178\,483\,c[5] - 849\,847\,c[6] + 2\,166\,191\,c[7] - 2\,250\,171\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + 178\,499\,c[5] - 850\,279\,c[6] + \\
& \quad 2\,170\,015\,c[7] - 2\,261\,259\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + \\
& \quad 178\,499\,c[5] - 850\,279\,c[6] + 2\,170\,079\,c[7] - 2\,261\,835\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + 178\,515\,c[5] - 850\,743\,c[6] + \\
& \quad 2\,174\,479\,c[7] - 2\,275\,515\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + \\
& \quad 178\,531\,c[5] - 851\,207\,c[6] + 2\,178\,943\,c[7] - 2\,289\,771\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + 178\,531\,c[5] - 851\,175\,c[6] + \\
& \quad 2\,178\,303\,c[7] - 2\,286\,603\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + \\
& \quad 178\,547\,c[5] - 851\,639\,c[6] + 2\,182\,767\,c[7] - 2\,300\,859\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + 178\,547\,c[5] - 851\,607\,c[6] + \\
& \quad 2\,182\,127\,c[7] - 2\,297\,691\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + \\
& \quad 178\,547\,c[5] - 851\,575\,c[6] + 2\,181\,551\,c[7] - 2\,295\,227\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + 178\,563\,c[5] - 852\,103\,c[6] + \\
& \quad 2\,187\,231\,c[7] - 2\,315\,115\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + \\
& \quad 178\,563\,c[5] - 852\,071\,c[6] + 2\,186\,591\,c[7] - 2\,311\,947\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,841\,c[4] + 178\,579\,c[5] - 852\,535\,c[6] + \\
& \quad 2\,191\,055\,c[7] - 2\,326\,203\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& \quad 178\,195\,c[5] - 845\,991\,c[6] + 2\,143\,439\,c[7] - 2\,200\,275\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,195\,c[5] - 845\,959\,c[6] +
\end{aligned}$$

```

2 142 863 c[7] - 2 197 683 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 211 c[5] - 846 423 c[6] + 2 147 263 c[7] - 2 211 363 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 227 c[5] - 846 887 c[6] +
2 151 727 c[7] - 2 225 619 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 243 c[5] - 847 351 c[6] + 2 156 191 c[7] - 2 239 875 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 243 c[5] - 847 319 c[6] +
2 155 551 c[7] - 2 236 707 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 259 c[5] - 847 783 c[6] + 2 160 015 c[7] - 2 250 963 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 259 c[5] - 847 751 c[6] +
2 159 375 c[7] - 2 247 795 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 275 c[5] - 848 247 c[6] + 2 164 479 c[7] - 2 265 219 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] + 177 891 c[5] - 841 671 c[6] +
2 116 223 c[7] - 2 136 123 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] +
177 923 c[5] - 842 567 c[6] + 2 124 511 c[7] - 2 161 467 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] + 177 939 c[5] - 843 031 c[6] +
2 128 975 c[7] - 2 175 723 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] +
177 939 c[5] - 842 999 c[6] + 2 128 335 c[7] - 2 172 555 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 603 c[5] - 837 815 c[6] +
2 093 471 c[7] - 2 086 227 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 619 c[5] - 838 247 c[6] + 2 097 295 c[7] - 2 097 315 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 635 c[5] - 838 711 c[6] +
2 101 759 c[7] - 2 111 571 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, 0, -15 046, -7958, -2003}

GCD[0, 0, 0, 0, 0, -15 046, -7958, -2003]
1

cert.g
-124 520 719

{0, 0, 0, 0, 0, -15 046, -7958, -2003}.Reverse[gpart[listdim17[[143]]]]
-124 520 719

cert.Transpose[A]
{3 784 385, 5 718 481, 6 362 897, 4 629 041, 3 151 569, 3 996 225, 3 163 169, 31 163 305,
30 530 489, 31 174 905, 29 441 049, 30 542 089, 28 808 233, 29 452 649, 30 553 689,
28 819 833, 26 252 921, 28 831 433, 27 097 577, 26 264 521, 25 375 321, 24 542 265,
55 342 497, 53 620 241, 54 264 657, 53 631 841, 53 643 441, 51 909 585, 51 921 185,
50 187 329, 49 354 273, 51 932 785, 50 198 929, 50 210 529, 78 443 849, 77 354 409,
76 721 593, 76 733 193, 76 744 793, 75 010 937, 75 022 537, 73 288 681, 75 034 137,
101 533 601, 99 822 945, 99 834 545, 98 100 689, 124 634 953, 122 912 697, 122 924 297}

```

```
chi = listdim17[[144]]
```

$$(-11+x)^2 (-9+x)^{10} (5+x)^{32} (-64340 + 36993x - 8276x^2 + 902x^3 - 48x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -63, 1669, -24059, 203395, -1006045, 2688247, -2983145},
      {1, -63, 1669, -24059, 203411, -1006541, 2693223, -2999161},
      {1, -63, 1669, -24059, 203411, -1006541, 2693287, -2999865},
      {1, -63, 1669, -24051, 203059, -1000829, 2652871, -2895057},
      {1, -63, 1669, -24051, 203075, -1001357, 2658551, -2914945},
      {1, -63, 1669, -24051, 203075, -1001357, 2658551, -2914817},
      {1, -63, 1669, -24051, 203075, -1001357, 2658615, -2915649},
      {1, -63, 1669, -24051, 203075, -1001325, 2657847, -2911073},
      {1, -63, 1669, -24051, 203075, -1001325, 2657911, -2911777},
      {1, -63, 1669, -24051, 203075, -1001325, 2657975, -2912481},
      {1, -63, 1669, -24051, 203091, -1001853, 2663527, -2930961},
      {1, -63, 1669, -24051, 203091, -1001853, 2663591, -2931665},
      {1, -63, 1669, -24051, 203091, -1001853, 2663655, -2932369},
      {1, -63, 1669, -24051, 203091, -1001853, 2663719, -2933073},
      {1, -63, 1669, -24051, 203091, -1001821, 2662887, -2927793},
      {1, -63, 1669, -24051, 203091, -1001821, 2662951, -2928497},
      {1, -63, 1669, -24051, 203091, -1001821, 2663015, -2929201},
      {1, -63, 1669, -24051, 203091, -1001789, 2662247, -2924625},
      {1, -63, 1669, -24051, 203091, -1001789, 2662311, -2925329},
      {1, -63, 1669, -24051, 203107, -1002317, 2667991, -2945217},
      {1, -63, 1669, -24051, 203107, -1002285, 2667287, -2941345},
      {1, -63, 1669, -24051, 203107, -1002285, 2667351, -2942049},
      {1, -63, 1669, -24051, 203107, -1002253, 2666647, -2938177},
      {1, -63, 1669, -24043, 202723, -995613, 2617431, -2806137},
      {1, -63, 1669, -24043, 202739, -996141, 2623111, -2826025},
      {1, -63, 1669, -24043, 202739, -996141, 2623175, -2826729},
      {1, -63, 1669, -24043, 202739, -996109, 2622407, -2822281},
      {1, -63, 1669, -24043, 202739, -996109, 2622471, -2822985},
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      {1, -63, 1669, -24043, 202755, -996637, 2628151, -2842873},
      {1, -63, 1669, -24043, 202755, -996637, 2628215, -2843577},
      {1, -63, 1669, -24043, 202755, -996637, 2628279, -2844153},
      {1, -63, 1669, -24043, 202755, -996605, 2627447, -2839001},
      {1, -63, 1669, -24043, 202755, -996605, 2627511, -2839705},
      {1, -63, 1669, -24043, 202755, -996605, 2627575, -2840409},
      {1, -63, 1669, -24043, 202755, -996605, 2627575, -2840281},
      {1, -63, 1669, -24043, 202755, -996573, 2626807, -2835833},
      {1, -63, 1669, -24043, 202755, -996573, 2626871, -2836537},
      {1, -63, 1669, -24043, 202755, -996573, 2626935, -2837241},
      {1, -63, 1669, -24043, 202755, -996541, 2626231, -2833369},
```

```

{1, -63, 1669, -24 043, 202 771, -997 165, 2 633 895, -2 863 465},
{1, -63, 1669, -24 043, 202 771, -997 165, 2 633 959, -2 864 169},
{1, -63, 1669, -24 043, 202 771, -997 165, 2 634 023, -2 864 745},
{1, -63, 1669, -24 043, 202 771, -997 133, 2 633 191, -2 859 593},
{1, -63, 1669, -24 043, 202 771, -997 133, 2 633 255, -2 860 297},
{1, -63, 1669, -24 043, 202 771, -997 133, 2 633 319, -2 861 001},
{1, -63, 1669, -24 043, 202 771, -997 101, 2 632 551, -2 856 425},
{1, -63, 1669, -24 043, 202 771, -997 101, 2 632 615, -2 857 129},
{1, -63, 1669, -24 043, 202 771, -997 101, 2 632 679, -2 857 833},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 631 847, -2 852 553},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 631 911, -2 853 257},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 631 975, -2 853 961},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 632 039, -2 854 665},
{1, -63, 1669, -24 043, 202 771, -997 037, 2 631 271, -2 850 089},
{1, -63, 1669, -24 043, 202 787, -997 629, 2 638 359, -2 877 721},
{1, -63, 1669, -24 043, 202 787, -997 597, 2 637 655, -2 873 849},
{1, -63, 1669, -24 043, 202 787, -997 597, 2 637 719, -2 874 553},
{1, -63, 1669, -24 043, 202 787, -997 597, 2 637 783, -2 875 257},
{1, -63, 1669, -24 043, 202 787, -997 565, 2 637 015, -2 870 681},
{1, -63, 1669, -24 043, 202 787, -997 565, 2 637 079, -2 871 385},
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1	-63	1669	-24 019	201 795	-982 381	2 535 095	-2 617 857
1	-63	1669	-24 019	201 795	-982 349	2 534 455	-2 614 689
1	-63	1669	-24 019	201 795	-982 317	2 533 815	-2 611 521
1	-63	1669	-24 019	201 811	-982 845	2 539 559	-2 632 113
1	-63	1669	-24 019	201 811	-982 813	2 538 855	-2 628 241
1	-63	1669	-24 019	201 811	-982 813	2 538 919	-2 628 945
1	-63	1669	-24 019	201 811	-982 781	2 538 215	-2 625 073
1	-63	1669	-24 019	201 811	-982 781	2 538 279	-2 625 777
1	-63	1669	-24 019	201 827	-983 341	2 544 663	-2 649 537
1	-63	1669	-24 019	201 827	-983 309	2 544 023	-2 646 369
1	-63	1669	-24 019	201 827	-983 277	2 543 319	-2 642 497
1	-63	1669	-24 019	201 843	-983 837	2 549 767	-2 666 961
1	-63	1669	-24 019	201 843	-983 805	2 549 127	-2 663 793
1	-63	1669	-24 019	201 843	-983 773	2 548 423	-2 659 921
1	-63	1669	-24 019	201 859	-984 301	2 554 231	-2 681 217
1	-63	1669	-24 011	201 475	-977 597	2 503 415	-2 539 449
1	-63	1669	-24 011	201 491	-978 061	2 507 879	-2 553 705
1	-63	1669	-24 011	201 491	-978 029	2 507 239	-2 550 537
1	-63	1669	-24 011	201 507	-978 557	2 512 983	-2 571 129
1	-63	1669	-24 011	201 507	-978 525	2 512 343	-2 567 961
1	-63	1669	-24 003	201 171	-973 277	2 476 199	-2 475 297

Dimensions[A]

{165, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81 781, -1 178 579, 9 954 883, -49 142 605, 130 840 791, -144 339 985}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 395 c[5] -
 1 006 045 c[6] + 2 688 247 c[7] - 2 983 145 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24 059 c[4] + 203 411 c[5] - 1 006 541 c[6] + 2 693 223 c[7] - 2 999 161 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 411 c[5] - 1 006 541 c[6] +
 2 693 287 c[7] - 2 999 865 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
 203 059 c[5] - 1 000 829 c[6] + 2 652 871 c[7] - 2 895 057 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 075 c[5] - 1 001 357 c[6] +
 2 658 551 c[7] - 2 914 945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +

$$\begin{aligned}
& 203\,075\,c[5] - 1\,001\,357\,c[6] + 2\,658\,551\,c[7] - 2\,914\,817\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,357\,c[6] + \\
& 2\,658\,615\,c[7] - 2\,915\,649\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,847\,c[7] - 2\,911\,073\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,325\,c[6] + \\
& 2\,657\,911\,c[7] - 2\,911\,777\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,325\,c[6] + 2\,657\,975\,c[7] - 2\,912\,481\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,853\,c[6] + \\
& 2\,663\,527\,c[7] - 2\,930\,961\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,853\,c[6] + 2\,663\,591\,c[7] - 2\,931\,665\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,853\,c[6] + \\
& 2\,663\,655\,c[7] - 2\,932\,369\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,853\,c[6] + 2\,663\,719\,c[7] - 2\,933\,073\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,821\,c[6] + \\
& 2\,662\,887\,c[7] - 2\,927\,793\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,821\,c[6] + 2\,662\,951\,c[7] - 2\,928\,497\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,821\,c[6] + \\
& 2\,663\,015\,c[7] - 2\,929\,201\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,789\,c[6] + 2\,662\,247\,c[7] - 2\,924\,625\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,789\,c[6] + \\
& 2\,662\,311\,c[7] - 2\,925\,329\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,107\,c[5] - 1\,002\,317\,c[6] + 2\,667\,991\,c[7] - 2\,945\,217\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,107\,c[5] - 1\,002\,285\,c[6] + \\
& 2\,667\,287\,c[7] - 2\,941\,345\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,107\,c[5] - 1\,002\,285\,c[6] + 2\,667\,351\,c[7] - 2\,942\,049\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,107\,c[5] - 1\,002\,253\,c[6] + \\
& 2\,666\,647\,c[7] - 2\,938\,177\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,613\,c[6] + 2\,617\,431\,c[7] - 2\,806\,137\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,111\,c[7] - \\
& 2\,826\,025\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - \\
& 996\,141\,c[6] + 2\,623\,175\,c[7] - 2\,826\,729\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - \\
& 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,407\,c[7] - 2\,822\,281\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& 2\,622\,471\,c[7] - 2\,822\,985\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,471\,c[7] - 2\,822\,857\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,077\,c[6] + \\
& 2\,621\,831\,c[7] - 2\,819\,817\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,669\,c[6] + 2\,628\,919\,c[7] - 2\,847\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,151\,c[7] - 2\,842\,873\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,215\,c[7] - 2\,843\,577\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,279\,c[7] - 2\,844\,153\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,447\,c[7] - 2\,839\,001\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,511\,c[7] - 2\,839\,705\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,575\,c[7] - 2\,840\,409\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,605 c[6] + \\
& \quad 2\,627\,575 c[7] - 2\,840\,281 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,573 c[6] + 2\,626\,807 c[7] - 2\,835\,833 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,573 c[6] + \\
& \quad 2\,626\,871 c[7] - 2\,836\,537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,573 c[6] + 2\,626\,935 c[7] - 2\,837\,241 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,541 c[6] + \\
& \quad 2\,626\,231 c[7] - 2\,833\,369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,165 c[6] + 2\,633\,895 c[7] - 2\,863\,465 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,165 c[6] + \\
& \quad 2\,633\,959 c[7] - 2\,864\,169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,165 c[6] + 2\,634\,023 c[7] - 2\,864\,745 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,133 c[6] + \\
& \quad 2\,633\,191 c[7] - 2\,859\,593 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,133 c[6] + 2\,633\,255 c[7] - 2\,860\,297 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,133 c[6] + \\
& \quad 2\,633\,319 c[7] - 2\,861\,001 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,101 c[6] + 2\,632\,551 c[7] - 2\,856\,425 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,101 c[6] + \\
& \quad 2\,632\,615 c[7] - 2\,857\,129 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,101 c[6] + 2\,632\,679 c[7] - 2\,857\,833 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] + \\
& \quad 2\,631\,847 c[7] - 2\,852\,553 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,069 c[6] + 2\,631\,911 c[7] - 2\,853\,257 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] + \\
& \quad 2\,631\,975 c[7] - 2\,853\,961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,069 c[6] + 2\,632\,039 c[7] - 2\,854\,665 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,037 c[6] + \\
& \quad 2\,631\,271 c[7] - 2\,850\,089 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,629 c[6] + 2\,638\,359 c[7] - 2\,877\,721 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,597 c[6] + \\
& \quad 2\,637\,655 c[7] - 2\,873\,849 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,597 c[6] + 2\,637\,719 c[7] - 2\,874\,553 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,597 c[6] + \\
& \quad 2\,637\,783 c[7] - 2\,875\,257 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,565 c[6] + 2\,637\,015 c[7] - 2\,870\,681 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,565 c[6] + \\
& \quad 2\,637\,079 c[7] - 2\,871\,385 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,533 c[6] + 2\,636\,311 c[7] - 2\,866\,809 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,533 c[6] + \\
& \quad 2\,636\,375 c[7] - 2\,867\,513 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,803 c[5] - 998\,061 c[6] + 2\,642\,119 c[7] - 2\,888\,105 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,803 c[5] - 998\,029 c[6] + \\
& \quad 2\,641\,415 c[7] - 2\,884\,233 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,893 c[6] + 2\,587\,031 c[7] - 2\,734\,065 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,389 c[6] + \\
& \quad 2\,592\,007 c[7] - 2\,750\,209 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,071\,c[7] - 2\,750\,913\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,135\,c[7] - 2\,751\,489\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,431\,c[7] - 2\,747\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,431\,c[7] - 2\,747\,617\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,495\,c[7] - 2\,748\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,917\,c[6] + \\
& 2\,597\,751\,c[7] - 2\,770\,801\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,815\,c[7] - 2\,771\,505\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,111\,c[7] - 2\,767\,633\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,175\,c[7] - 2\,768\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,239\,c[7] - 2\,768\,913\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,407\,c[7] - 2\,763\,761\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,471\,c[7] - 2\,764\,465\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,535\,c[7] - 2\,765\,169\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,821\,c[6] + \\
& 2\,595\,831\,c[7] - 2\,761\,297\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,895\,c[7] - 2\,762\,001\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,789\,c[6] + \\
& 2\,595\,255\,c[7] - 2\,758\,833\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,445\,c[6] + 2\,603\,559\,c[7] - 2\,792\,097\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,413\,c[6] + \\
& 2\,602\,919\,c[7] - 2\,788\,929\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,215\,c[7] - 2\,785\,057\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,381\,c[6] + \\
& 2\,602\,279\,c[7] - 2\,785\,761\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,343\,c[7] - 2\,786\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,575\,c[7] - 2\,781\,889\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,349\,c[6] + 2\,601\,639\,c[7] - 2\,782\,593\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,317\,c[6] + \\
& 2\,600\,871\,c[7] - 2\,778\,017\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,935\,c[7] - 2\,778\,721\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,317\,c[6] + \\
& 2\,600\,999\,c[7] - 2\,779\,425\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,285\,c[6] + 2\,600\,231\,c[7] - 2\,774\,849\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,285\,c[6] + \\
& 2\,600\,295\,c[7] - 2\,775\,553\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,909\,c[6] + 2\,608\,023\,c[7] - 2\,806\,353\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,877\,c[6] + \\
& 2\,607\,319\,c[7] - 2\,802\,481\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,877\,c[6] + 2\,607\,383\,c[7] - 2\,803\,185\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,606\,679\,c[7] - 2\,799\,313\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,845\,c[6] + 2\,606\,743\,c[7] - 2\,800\,017\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& 2\,605\,975\,c[7] - 2\,795\,441\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,813\,c[6] + 2\,606\,039\,c[7] - 2\,796\,145\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& 2\,606\,103\,c[7] - 2\,796\,849\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,781\,c[6] + 2\,605\,335\,c[7] - 2\,792\,273\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,749\,c[6] + \\
& 2\,604\,631\,c[7] - 2\,788\,401\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,373\,c[6] + 2\,612\,487\,c[7] - 2\,820\,609\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,341\,c[6] + \\
& 2\,611\,783\,c[7] - 2\,816\,737\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,341\,c[6] + 2\,611\,847\,c[7] - 2\,817\,441\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,309\,c[6] + \\
& 2\,611\,143\,c[7] - 2\,813\,569\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,277\,c[6] + 2\,610\,439\,c[7] - 2\,809\,697\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,669\,c[6] + \\
& 2\,561\,671\,c[7] - 2\,678\,841\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,637\,c[6] + 2\,560\,967\,c[7] - 2\,674\,969\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,637\,c[6] + \\
& 2\,561\,031\,c[7] - 2\,675\,673\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,605\,c[6] + 2\,560\,391\,c[7] - 2\,672\,505\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,605\,c[6] + \\
& 2\,560\,455\,c[7] - 2\,673\,081\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,165\,c[6] + 2\,566\,775\,c[7] - 2\,696\,265\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,133\,c[6] + \\
& 2\,566\,135\,c[7] - 2\,693\,097\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,431\,c[7] - 2\,689\,225\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& 2\,565\,495\,c[7] - 2\,689\,929\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,559\,c[7] - 2\,690\,505\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& 2\,564\,855\,c[7] - 2\,686\,761\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,037\,c[6] + 2\,564\,215\,c[7] - 2\,683\,593\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,661\,c[6] + \\
& 2\,571\,879\,c[7] - 2\,713\,689\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,629\,c[6] + 2\,571\,239\,c[7] - 2\,710\,521\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,597\,c[6] + \\
& 2\,570\,535\,c[7] - 2\,706\,649\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,599\,c[7] - 2\,707\,353\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,565\,c[6] + \\
& 2\,569\,895\,c[7] - 2\,703\,481\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,565\,c[6] + 2\,569\,959\,c[7] - 2\,704\,185\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,533\,c[6] + \\
& 2\,569\,255\,c[7] - 2\,700\,313\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,125\,c[6] + 2\,576\,343\,c[7] - 2\,727\,945\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,093 c[6] + \\
& \quad 2\,575\,703 c[7] - 2\,724\,777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,147 c[5] - 988\,061 c[6] + 2\,574\,999 c[7] - 2\,720\,905 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,061 c[6] + \\
& \quad 2\,575\,063 c[7] - 2\,721\,609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,147 c[5] - 988\,029 c[6] + 2\,574\,295 c[7] - 2\,717\,033 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,029 c[6] + \\
& \quad 2\,574\,359 c[7] - 2\,717\,737 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,163 c[5] - 988\,621 c[6] + 2\,581\,447 c[7] - 2\,745\,369 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,163 c[5] - 988\,589 c[6] + \\
& \quad 2\,580\,807 c[7] - 2\,742\,201 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,163 c[5] - 988\,557 c[6] + 2\,580\,103 c[7] - 2\,738\,329 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,163 c[5] - 988\,557 c[6] + \\
& \quad 2\,580\,167 c[7] - 2\,739\,033 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,179 c[5] - 989\,085 c[6] + 2\,585\,911 c[7] - 2\,759\,625 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,179 c[5] - 989\,053 c[6] + \\
& \quad 2\,585\,207 c[7] - 2\,755\,753 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,195 c[5] - 989\,581 c[6] + 2\,591\,015 c[7] - 2\,777\,049 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,779 c[5] - 981\,885 c[6] + \\
& \quad 2\,529\,991 c[7] - 2\,600\,433 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,795 c[5] - 982\,381 c[6] + 2\,535\,095 c[7] - 2\,617\,857 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,349 c[6] + \\
& \quad 2\,534\,455 c[7] - 2\,614\,689 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,795 c[5] - 982\,317 c[6] + 2\,533\,815 c[7] - 2\,611\,521 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,845 c[6] + \\
& \quad 2\,539\,559 c[7] - 2\,632\,113 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,811 c[5] - 982\,813 c[6] + 2\,538\,855 c[7] - 2\,628\,241 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,813 c[6] + \\
& \quad 2\,538\,919 c[7] - 2\,628\,945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,811 c[5] - 982\,781 c[6] + 2\,538\,215 c[7] - 2\,625\,073 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,781 c[6] + \\
& \quad 2\,538\,279 c[7] - 2\,625\,777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,827 c[5] - 983\,341 c[6] + 2\,544\,663 c[7] - 2\,649\,537 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,827 c[5] - 983\,309 c[6] + \\
& \quad 2\,544\,023 c[7] - 2\,646\,369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,827 c[5] - 983\,277 c[6] + 2\,543\,319 c[7] - 2\,642\,497 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,843 c[5] - 983\,837 c[6] + \\
& \quad 2\,549\,767 c[7] - 2\,666\,961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,843 c[5] - 983\,805 c[6] + 2\,549\,127 c[7] - 2\,663\,793 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,843 c[5] - 983\,773 c[6] + \\
& \quad 2\,548\,423 c[7] - 2\,659\,921 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,859 c[5] - 984\,301 c[6] + 2\,554\,231 c[7] - 2\,681\,217 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + 201\,475 c[5] - 977\,597 c[6] + \\
& \quad 2\,503\,415 c[7] - 2\,539\,449 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + \\
& \quad 201\,491 c[5] - 978\,061 c[6] + 2\,507\,879 c[7] - 2\,553\,705 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + 201\,491 c[5] - 978\,029 c[6] + \\
& \quad 2\,507\,239 c[7] - 2\,550\,537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] +
\end{aligned}$$


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201507 c[5] - 978557 c[6] + 2512983 c[7] - 2571129 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201507 c[5] - 978525 c[6] +
2512343 c[7] - 2567961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] +
201171 c[5] - 973277 c[6] + 2476199 c[7] - 2475297 c[8] }

```

```
Array[c, 8].g
```

```

49 c[1] - 3087 c[2] + 81781 c[3] - 1178579 c[4] +
9954883 c[5] - 49142605 c[6] + 130840791 c[7] - 144339985 c[8]

```

```
cert =
```

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81781 c[3] - 1178579 c[4] +
9954883 c[5] - 49142605 c[6] + 130840791 c[7] - 144339985 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203395 c[5] - 1006045 c[6] +
2688247 c[7] - 2983145 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] +
203411 c[5] - 1006541 c[6] + 2693223 c[7] - 2999161 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203411 c[5] - 1006541 c[6] +
2693287 c[7] - 2999865 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203059 c[5] - 1000829 c[6] + 2652871 c[7] - 2895057 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001357 c[6] +
2658551 c[7] - 2914945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203075 c[5] - 1001357 c[6] + 2658551 c[7] - 2914817 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001357 c[6] +
2658615 c[7] - 2915649 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203075 c[5] - 1001325 c[6] + 2657847 c[7] - 2911073 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001325 c[6] +
2657911 c[7] - 2911777 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203075 c[5] - 1001325 c[6] + 2657975 c[7] - 2912481 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001853 c[6] +
2663527 c[7] - 2930961 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203091 c[5] - 1001853 c[6] + 2663591 c[7] - 2931665 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001853 c[6] +
2663655 c[7] - 2932369 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203091 c[5] - 1001853 c[6] + 2663719 c[7] - 2933073 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001821 c[6] +
2662887 c[7] - 2927793 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203091 c[5] - 1001821 c[6] + 2662951 c[7] - 2928497 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001821 c[6] +
2663015 c[7] - 2929201 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203091 c[5] - 1001789 c[6] + 2662247 c[7] - 2924625 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001789 c[6] +
2662311 c[7] - 2925329 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203107 c[5] - 1002317 c[6] + 2667991 c[7] - 2945217 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203107 c[5] - 1002285 c[6] +
2667287 c[7] - 2941345 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203107 c[5] - 1002285 c[6] + 2667351 c[7] - 2942049 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203107 c[5] - 1002253 c[6] +
2666647 c[7] - 2938177 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +

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$$\begin{aligned}
& 202\,723\,c[5] - 995\,613\,c[6] + 2\,617\,431\,c[7] - 2\,806\,137\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,141\,c[6] + \\
& \quad 2\,623\,111\,c[7] - 2\,826\,025\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,141\,c[6] + 2\,623\,175\,c[7] - 2\,826\,729\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& \quad 2\,622\,407\,c[7] - 2\,822\,281\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,109\,c[6] + 2\,622\,471\,c[7] - 2\,822\,985\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& \quad 2\,622\,471\,c[7] - 2\,822\,857\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,739\,c[5] - 996\,077\,c[6] + 2\,621\,831\,c[7] - 2\,819\,817\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,669\,c[6] + \\
& \quad 2\,628\,919\,c[7] - 2\,847\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,151\,c[7] - 2\,842\,873\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& \quad 2\,628\,215\,c[7] - 2\,843\,577\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,279\,c[7] - 2\,844\,153\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& \quad 2\,627\,447\,c[7] - 2\,839\,001\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,511\,c[7] - 2\,839\,705\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& \quad 2\,627\,575\,c[7] - 2\,840\,409\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,575\,c[7] - 2\,840\,281\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& \quad 2\,626\,807\,c[7] - 2\,835\,833\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,573\,c[6] + 2\,626\,871\,c[7] - 2\,836\,537\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& \quad 2\,626\,935\,c[7] - 2\,837\,241\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,231\,c[7] - 2\,833\,369\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,165\,c[6] + \\
& \quad 2\,633\,895\,c[7] - 2\,863\,465\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,165\,c[6] + 2\,633\,959\,c[7] - 2\,864\,169\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,165\,c[6] + \\
& \quad 2\,634\,023\,c[7] - 2\,864\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,133\,c[6] + 2\,633\,191\,c[7] - 2\,859\,593\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,133\,c[6] + \\
& \quad 2\,633\,255\,c[7] - 2\,860\,297\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,133\,c[6] + 2\,633\,319\,c[7] - 2\,861\,001\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,101\,c[6] + \\
& \quad 2\,632\,551\,c[7] - 2\,856\,425\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,101\,c[6] + 2\,632\,615\,c[7] - 2\,857\,129\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,101\,c[6] + \\
& \quad 2\,632\,679\,c[7] - 2\,857\,833\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,069\,c[6] + 2\,631\,847\,c[7] - 2\,852\,553\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& \quad 2\,631\,911\,c[7] - 2\,853\,257\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,069\,c[6] + 2\,631\,975\,c[7] - 2\,853\,961\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,632\,039\,c[7] - 2\,854\,665\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,037\,c[6] + 2\,631\,271\,c[7] - 2\,850\,089\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,629\,c[6] + \\
& 2\,638\,359\,c[7] - 2\,877\,721\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,597\,c[6] + 2\,637\,655\,c[7] - 2\,873\,849\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,597\,c[6] + \\
& 2\,637\,719\,c[7] - 2\,874\,553\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,597\,c[6] + 2\,637\,783\,c[7] - 2\,875\,257\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,565\,c[6] + \\
& 2\,637\,015\,c[7] - 2\,870\,681\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,565\,c[6] + 2\,637\,079\,c[7] - 2\,871\,385\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,533\,c[6] + \\
& 2\,636\,311\,c[7] - 2\,866\,809\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,533\,c[6] + 2\,636\,375\,c[7] - 2\,867\,513\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,061\,c[6] + \\
& 2\,642\,119\,c[7] - 2\,888\,105\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,803\,c[5] - 998\,029\,c[6] + 2\,641\,415\,c[7] - 2\,884\,233\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,893\,c[6] + \\
& 2\,587\,031\,c[7] - 2\,734\,065\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,007\,c[7] - 2\,750\,209\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,071\,c[7] - 2\,750\,913\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,135\,c[7] - 2\,751\,489\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,431\,c[7] - 2\,747\,745\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,431\,c[7] - 2\,747\,617\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,495\,c[7] - 2\,748\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,751\,c[7] - 2\,770\,801\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,917\,c[6] + \\
& 2\,597\,815\,c[7] - 2\,771\,505\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,111\,c[7] - 2\,767\,633\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,175\,c[7] - 2\,768\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,239\,c[7] - 2\,768\,913\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,407\,c[7] - 2\,763\,761\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,471\,c[7] - 2\,764\,465\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,535\,c[7] - 2\,765\,169\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,831\,c[7] - 2\,761\,297\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,821\,c[6] + \\
& 2\,595\,895\,c[7] - 2\,762\,001\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,789\,c[6] + 2\,595\,255\,c[7] - 2\,758\,833\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,445\,c[6] + \\
& 2\,603\,559\,c[7] - 2\,792\,097\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,413\,c[6] + 2\,602\,919\,c[7] - 2\,788\,929\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,381 c[6] + \\
& \quad 2\,602\,215 c[7] - 2\,785\,057 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,381 c[6] + 2\,602\,279 c[7] - 2\,785\,761 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,381 c[6] + \\
& \quad 2\,602\,343 c[7] - 2\,786\,337 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,349 c[6] + 2\,601\,575 c[7] - 2\,781\,889 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,349 c[6] + \\
& \quad 2\,601\,639 c[7] - 2\,782\,593 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,317 c[6] + 2\,600\,871 c[7] - 2\,778\,017 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,317 c[6] + \\
& \quad 2\,600\,935 c[7] - 2\,778\,721 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,317 c[6] + 2\,600\,999 c[7] - 2\,779\,425 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,285 c[6] + \\
& \quad 2\,600\,231 c[7] - 2\,774\,849 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,285 c[6] + 2\,600\,295 c[7] - 2\,775\,553 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,909 c[6] + \\
& \quad 2\,608\,023 c[7] - 2\,806\,353 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,877 c[6] + 2\,607\,319 c[7] - 2\,802\,481 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,877 c[6] + \\
& \quad 2\,607\,383 c[7] - 2\,803\,185 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,845 c[6] + 2\,606\,679 c[7] - 2\,799\,313 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,845 c[6] + \\
& \quad 2\,606\,743 c[7] - 2\,800\,017 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,813 c[6] + 2\,605\,975 c[7] - 2\,795\,441 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,813 c[6] + \\
& \quad 2\,606\,039 c[7] - 2\,796\,145 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,813 c[6] + 2\,606\,103 c[7] - 2\,796\,849 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,781 c[6] + \\
& \quad 2\,605\,335 c[7] - 2\,792\,273 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,749 c[6] + 2\,604\,631 c[7] - 2\,788\,401 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,373 c[6] + \\
& \quad 2\,612\,487 c[7] - 2\,820\,609 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,483 c[5] - 993\,341 c[6] + 2\,611\,783 c[7] - 2\,816\,737 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,341 c[6] + \\
& \quad 2\,611\,847 c[7] - 2\,817\,441 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,483 c[5] - 993\,309 c[6] + 2\,611\,143 c[7] - 2\,813\,569 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,277 c[6] + \\
& \quad 2\,610\,439 c[7] - 2\,809\,697 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,669 c[6] + 2\,561\,671 c[7] - 2\,678\,841 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,637 c[6] + \\
& \quad 2\,560\,967 c[7] - 2\,674\,969 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,637 c[6] + 2\,561\,031 c[7] - 2\,675\,673 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,605 c[6] + \\
& \quad 2\,560\,391 c[7] - 2\,672\,505 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,605 c[6] + 2\,560\,455 c[7] - 2\,673\,081 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,165 c[6] + \\
& \quad 2\,566\,775 c[7] - 2\,696\,265 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,115\,c[5] - 987\,133\,c[6] + 2\,566\,135\,c[7] - 2\,693\,097\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& \quad 2\,565\,431\,c[7] - 2\,689\,225\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,495\,c[7] - 2\,689\,929\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& \quad 2\,565\,559\,c[7] - 2\,690\,505\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,855\,c[7] - 2\,686\,761\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,037\,c[6] + \\
& \quad 2\,564\,215\,c[7] - 2\,683\,593\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,661\,c[6] + 2\,571\,879\,c[7] - 2\,713\,689\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,629\,c[6] + \\
& \quad 2\,571\,239\,c[7] - 2\,710\,521\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,535\,c[7] - 2\,706\,649\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,597\,c[6] + \\
& \quad 2\,570\,599\,c[7] - 2\,707\,353\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,565\,c[6] + 2\,569\,895\,c[7] - 2\,703\,481\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,565\,c[6] + \\
& \quad 2\,569\,959\,c[7] - 2\,704\,185\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,533\,c[6] + 2\,569\,255\,c[7] - 2\,700\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,125\,c[6] + \\
& \quad 2\,576\,343\,c[7] - 2\,727\,945\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,147\,c[5] - 988\,093\,c[6] + 2\,575\,703\,c[7] - 2\,724\,777\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,061\,c[6] + \\
& \quad 2\,574\,999\,c[7] - 2\,720\,905\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,147\,c[5] - 988\,061\,c[6] + 2\,575\,063\,c[7] - 2\,721\,609\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,029\,c[6] + \\
& \quad 2\,574\,295\,c[7] - 2\,717\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,147\,c[5] - 988\,029\,c[6] + 2\,574\,359\,c[7] - 2\,717\,737\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,621\,c[6] + \\
& \quad 2\,581\,447\,c[7] - 2\,745\,369\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,163\,c[5] - 988\,589\,c[6] + 2\,580\,807\,c[7] - 2\,742\,201\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,557\,c[6] + \\
& \quad 2\,580\,103\,c[7] - 2\,738\,329\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,163\,c[5] - 988\,557\,c[6] + 2\,580\,167\,c[7] - 2\,739\,033\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,179\,c[5] - 989\,085\,c[6] + \\
& \quad 2\,585\,911\,c[7] - 2\,759\,625\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,179\,c[5] - 989\,053\,c[6] + 2\,585\,207\,c[7] - 2\,755\,753\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,195\,c[5] - 989\,581\,c[6] + \\
& \quad 2\,591\,015\,c[7] - 2\,777\,049\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,779\,c[5] - 981\,885\,c[6] + 2\,529\,991\,c[7] - 2\,600\,433\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,381\,c[6] + \\
& \quad 2\,535\,095\,c[7] - 2\,617\,857\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,795\,c[5] - 982\,349\,c[6] + 2\,534\,455\,c[7] - 2\,614\,689\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,317\,c[6] + \\
& \quad 2\,533\,815\,c[7] - 2\,611\,521\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,811\,c[5] - 982\,845\,c[6] + 2\,539\,559\,c[7] - 2\,632\,113\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,811\,c[5] - 982\,813\,c[6] +
\end{aligned}$$

```

2 538 855 c[7] - 2 628 241 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 813 c[6] + 2 538 919 c[7] - 2 628 945 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 781 c[6] +
2 538 215 c[7] - 2 625 073 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 781 c[6] + 2 538 279 c[7] - 2 625 777 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 341 c[6] +
2 544 663 c[7] - 2 649 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 827 c[5] - 983 309 c[6] + 2 544 023 c[7] - 2 646 369 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 277 c[6] +
2 543 319 c[7] - 2 642 497 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 843 c[5] - 983 837 c[6] + 2 549 767 c[7] - 2 666 961 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 805 c[6] +
2 549 127 c[7] - 2 663 793 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 843 c[5] - 983 773 c[6] + 2 548 423 c[7] - 2 659 921 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 859 c[5] - 984 301 c[6] +
2 554 231 c[7] - 2 681 217 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 475 c[5] - 977 597 c[6] + 2 503 415 c[7] - 2 539 449 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 061 c[6] +
2 507 879 c[7] - 2 553 705 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 491 c[5] - 978 029 c[6] + 2 507 239 c[7] - 2 550 537 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 507 c[5] - 978 557 c[6] +
2 512 983 c[7] - 2 571 129 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 507 c[5] - 978 525 c[6] + 2 512 343 c[7] - 2 567 961 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 171 c[5] - 973 277 c[6] +
2 476 199 c[7] - 2 475 297 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, -55 007 201 398, -7 858 513 065, -756 481 319, -73 298 937, -7 158 493, -705 767}

GCD[0, 0, -55 007 201 398, -7 858 513 065,
-756 481 319, -73 298 937, -7 158 493, -705 767]
1

cert.g
-270 609 463

{0, 0, -55 007 201 398, -7 858 513 065, -756 481 319, -73 298 937, -7 158 493, -705 767}.
Reverse[gpart[listdim17[[144]]]
-270 609 463

```

cert.Transpose[A]

```
{65 859 177, 1 333 929, 40 050 345, 117 467 321, 91 658 809, 1 320 633, 130 375 225,
52 942 073, 91 658 489, 130 374 905, 27 133 561, 65 849 977, 104 566 393, 143 282 809,
27 133 241, 65 849 657, 104 566 073, 27 132 921, 65 849 337, 40 040 825, 1 324 089,
40 040 505, 1 323 769, 40 020 873, 14 212 361, 52 928 777, 65 833 801, 104 550 217,
14 212 041, 104 549 897, 65 836 681, 78 741 705, 117 458 121, 65 836 361, 40 024 969,
78 741 385, 117 457 801, 27 119 625, 40 024 649, 78 741 065, 117 457 481, 78 740 745,
91 649 609, 130 366 025, 78 744 265, 52 932 873, 91 649 289, 130 365 705, 52 932 553,
91 648 969, 130 365 385, 14 215 817, 52 932 233, 91 648 649, 130 365 065, 52 931 913,
104 556 873, 65 840 137, 104 556 553, 143 272 969, 65 839 817, 104 556 233, 27 123 081,
65 839 497, 78 747 401, 40 030 665, 27 103 769, 52 916 697, 91 633 113, 40 011 353,
91 632 793, 1 294 617, 40 011 033, 65 824 601, 104 541 017, 65 824 281, 104 540 697,
52 918 937, 27 107 545, 65 823 961, 104 540 377, 65 823 641, 104 540 057, 104 539 737,
117 448 921, 117 448 601, 78 731 865, 117 448 281, 65 826 521, 78 731 545, 117 447 961,
40 014 809, 78 731 225, 117 447 641, 40 014 489, 78 730 905, 130 356 185, 91 639 449,
130 355 865, 91 639 129, 130 355 545, 52 922 393, 91 638 809, 130 355 225, 52 922 073,
14 205 337, 143 263 449, 104 546 713, 143 263 129, 104 546 393, 65 829 657, 78 716 009,
39 999 273, 78 715 689, 78 715 369, 27 093 609, 91 623 593, 91 623 273, 52 906 537,
91 622 953, 40 001 193, 91 622 633, 91 622 313, 104 531 177, 104 530 857, 65 814 121,
104 530 537, 65 813 801, 104 530 217, 65 813 481, 117 438 441, 117 438 121,
78 721 385, 117 437 801, 40 004 649, 78 721 065, 130 346 025, 130 345 705, 91 628 969,
130 345 385, 143 253 289, 104 536 553, 156 160 873, 65 798 265, 78 705 849,
78 705 529, 78 705 209, 91 613 113, 52 896 377, 91 612 793, 52 896 057, 91 612 473,
104 520 697, 104 520 377, 65 803 641, 117 428 281, 117 427 961, 78 711 225,
130 335 545, 65 788 105, 78 695 369, 78 695 049, 91 602 953, 91 602 633, 65 777 625}
```

chi = listdim17[[145]]

$$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (69 - 18x + x^2) (-932 + 293x - 30x^2 + x^3)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
A = {{1, -63, 1669, -24 059, 203 411, -1 006 509, 2 692 839, -2 998 809},
{1, -63, 1669, -24 051, 203 075, -1 001 293, 2 657 399, -2 909 889},
{1, -63, 1669, -24 051, 203 075, -1 001 261, 2 656 695, -2 906 145},
{1, -63, 1669, -24 051, 203 091, -1 001 853, 2 663 847, -2 934 225},
{1, -63, 1669, -24 051, 203 091, -1 001 821, 2 663 143, -2 930 481},
{1, -63, 1669, -24 051, 203 091, -1 001 789, 2 662 439, -2 926 737},
{1, -63, 1669, -24 051, 203 091, -1 001 757, 2 661 735, -2 922 865},
{1, -63, 1669, -24 051, 203 107, -1 002 285, 2 667 479, -2 943 457},
{1, -63, 1669, -24 051, 203 107, -1 002 285, 2 667 543, -2 944 161},
{1, -63, 1669, -24 051, 203 107, -1 002 253, 2 666 775, -2 939 585},
{1, -63, 1669, -24 043, 202 739, -996 077, 2 621 959, -2 820 969},
```

```

{1, -63, 1669, -24 043, 202 739, -996 045, 2 621 255, -2 817 225},
{1, -63, 1669, -24 043, 202 755, -996 605, 2 627 703, -2 841 561},
{1, -63, 1669, -24 043, 202 755, -996 573, 2 626 999, -2 837 817},
{1, -63, 1669, -24 043, 202 755, -996 541, 2 626 295, -2 833 945},
{1, -63, 1669, -24 043, 202 755, -996 509, 2 625 655, -2 830 905},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 632 039, -2 854 537},
{1, -63, 1669, -24 043, 202 771, -997 069, 2 632 103, -2 855 241},
{1, -63, 1669, -24 043, 202 771, -997 037, 2 631 335, -2 850 793},
{1, -63, 1669, -24 043, 202 771, -997 037, 2 631 399, -2 851 497},
{1, -63, 1669, -24 043, 202 771, -997 005, 2 630 695, -2 847 625},
{1, -63, 1669, -24 043, 202 787, -997 597, 2 637 847, -2 875 833},
{1, -63, 1669, -24 043, 202 787, -997 565, 2 637 079, -2 871 385},
{1, -63, 1669, -24 043, 202 787, -997 565, 2 637 143, -2 872 089},
{1, -63, 1669, -24 043, 202 787, -997 533, 2 636 439, -2 868 217},
{1, -63, 1669, -24 043, 202 803, -998 061, 2 642 183, -2 888 809},
{1, -63, 1669, -24 043, 202 803, -998 061, 2 642 247, -2 889 513},
{1, -63, 1669, -24 035, 202 435, -991 853, 2 596 663, -2 766 321},
{1, -63, 1669, -24 035, 202 435, -991 821, 2 595 959, -2 762 577},
{1, -63, 1669, -24 035, 202 435, -991 789, 2 595 255, -2 758 833},
{1, -63, 1669, -24 035, 202 435, -991 789, 2 595 255, -2 758 705},
{1, -63, 1669, -24 035, 202 451, -992 349, 2 601 703, -2 783 169},
{1, -63, 1669, -24 035, 202 451, -992 317, 2 600 999, -2 779 425},
{1, -63, 1669, -24 035, 202 451, -992 285, 2 600 295, -2 775 553},
{1, -63, 1669, -24 035, 202 451, -992 285, 2 600 359, -2 776 257},
{1, -63, 1669, -24 035, 202 467, -992 845, 2 606 743, -2 800 017},
{1, -63, 1669, -24 035, 202 467, -992 845, 2 606 807, -2 800 593},
{1, -63, 1669, -24 035, 202 467, -992 813, 2 606 039, -2 796 145},
{1, -63, 1669, -24 035, 202 467, -992 813, 2 606 103, -2 796 849},
{1, -63, 1669, -24 035, 202 467, -992 781, 2 605 399, -2 792 977},
{1, -63, 1669, -24 035, 202 483, -993 373, 2 612 487, -2 820 609},
{1, -63, 1669, -24 035, 202 483, -993 341, 2 611 847, -2 817 441},
{1, -63, 1669, -24 035, 202 499, -993 837, 2 616 951, -2 834 865},
{1, -63, 1669, -24 027, 202 099, -986 573, 2 559 815, -2 669 913},
{1, -63, 1669, -24 027, 202 115, -987 101, 2 565 559, -2 690 505},
{1, -63, 1669, -24 027, 202 115, -987 069, 2 564 855, -2 686 761},
{1, -63, 1669, -24 027, 202 115, -987 069, 2 564 919, -2 687 337},
{1, -63, 1669, -24 027, 202 115, -987 037, 2 564 215, -2 683 593},
{1, -63, 1669, -24 027, 202 131, -987 597, 2 570 599, -2 707 353},
{1, -63, 1669, -24 027, 202 131, -987 565, 2 569 959, -2 704 185},
{1, -63, 1669, -24 027, 202 131, -987 533, 2 569 255, -2 700 313},
{1, -63, 1669, -24 027, 202 147, -988 093, 2 575 703, -2 724 777},
{1, -63, 1669, -24 027, 202 147, -988 061, 2 575 063, -2 721 609},
{1, -63, 1669, -24 027, 202 163, -988 589, 2 580 807, -2 742 201},
{1, -63, 1669, -24 019, 201 779, -981 821, 2 528 775, -2 594 673},
{1, -63, 1669, -24 019, 201 795, -982 317, 2 533 815, -2 611 521},
{1, -63, 1669, -24 019, 201 795, -982 317, 2 533 879, -2 612 097},
{1, -63, 1669, -24 019, 201 795, -982 285, 2 533 175, -2 608 353},

```



```
{1, -63, 1669, -24 019, 201 811, -982 845, 2 539 559, -2 632 113},
{1, -63, 1669, -24 019, 201 811, -982 813, 2 538 919, -2 628 945},
{1, -63, 1669, -24 011, 201 475, -977 565, 2 502 775, -2 536 281},
{1, -63, 1669, -24 011, 201 475, -977 533, 2 502 135, -2 533 113}};
```

```
A // MatrixForm
```

1	-63	1669	-24 059	203 411	-1 006 509	2 692 839	-2 998 809
1	-63	1669	-24 051	203 075	-1 001 293	2 657 399	-2 909 889
1	-63	1669	-24 051	203 075	-1 001 261	2 656 695	-2 906 145
1	-63	1669	-24 051	203 091	-1 001 853	2 663 847	-2 934 225
1	-63	1669	-24 051	203 091	-1 001 821	2 663 143	-2 930 481
1	-63	1669	-24 051	203 091	-1 001 789	2 662 439	-2 926 737
1	-63	1669	-24 051	203 091	-1 001 757	2 661 735	-2 922 865
1	-63	1669	-24 051	203 107	-1 002 285	2 667 479	-2 943 457
1	-63	1669	-24 051	203 107	-1 002 285	2 667 543	-2 944 161
1	-63	1669	-24 051	203 107	-1 002 253	2 666 775	-2 939 585
1	-63	1669	-24 043	202 739	-996 077	2 621 959	-2 820 969
1	-63	1669	-24 043	202 739	-996 045	2 621 255	-2 817 225
1	-63	1669	-24 043	202 755	-996 605	2 627 703	-2 841 561
1	-63	1669	-24 043	202 755	-996 573	2 626 999	-2 837 817
1	-63	1669	-24 043	202 755	-996 541	2 626 295	-2 833 945
1	-63	1669	-24 043	202 755	-996 509	2 625 655	-2 830 905
1	-63	1669	-24 043	202 771	-997 069	2 632 039	-2 854 537
1	-63	1669	-24 043	202 771	-997 069	2 632 103	-2 855 241
1	-63	1669	-24 043	202 771	-997 037	2 631 335	-2 850 793
1	-63	1669	-24 043	202 771	-997 037	2 631 399	-2 851 497
1	-63	1669	-24 043	202 771	-997 005	2 630 695	-2 847 625
1	-63	1669	-24 043	202 787	-997 597	2 637 847	-2 875 833
1	-63	1669	-24 043	202 787	-997 565	2 637 079	-2 871 385
1	-63	1669	-24 043	202 787	-997 565	2 637 143	-2 872 089
1	-63	1669	-24 043	202 787	-997 533	2 636 439	-2 868 217
1	-63	1669	-24 043	202 803	-998 061	2 642 183	-2 888 809
1	-63	1669	-24 043	202 803	-998 061	2 642 247	-2 889 513
1	-63	1669	-24 035	202 435	-991 853	2 596 663	-2 766 321
1	-63	1669	-24 035	202 435	-991 821	2 595 959	-2 762 577
1	-63	1669	-24 035	202 435	-991 789	2 595 255	-2 758 833
1	-63	1669	-24 035	202 435	-991 789	2 595 255	-2 758 705
1	-63	1669	-24 035	202 451	-992 349	2 601 703	-2 783 169
1	-63	1669	-24 035	202 451	-992 317	2 600 999	-2 779 425
1	-63	1669	-24 035	202 451	-992 285	2 600 295	-2 775 553
1	-63	1669	-24 035	202 451	-992 285	2 600 359	-2 776 257
1	-63	1669	-24 035	202 467	-992 845	2 606 743	-2 800 017
1	-63	1669	-24 035	202 467	-992 845	2 606 807	-2 800 593
1	-63	1669	-24 035	202 467	-992 813	2 606 039	-2 796 145
1	-63	1669	-24 035	202 467	-992 813	2 606 103	-2 796 849
1	-63	1669	-24 035	202 467	-992 781	2 605 399	-2 792 977
1	-63	1669	-24 035	202 483	-993 373	2 612 487	-2 820 609
1	-63	1669	-24 035	202 483	-993 341	2 611 847	-2 817 441
1	-63	1669	-24 035	202 499	-993 837	2 616 951	-2 834 865
1	-63	1669	-24 027	202 099	-986 573	2 559 815	-2 669 913
1	-63	1669	-24 027	202 115	-987 101	2 565 559	-2 690 505
1	-63	1669	-24 027	202 115	-987 069	2 564 85	

1	-63	1669	-24027	202131	-987597	2570599	-2707353
1	-63	1669	-24027	202131	-987565	2569959	-2704185
1	-63	1669	-24027	202131	-987533	2569255	-2700313
1	-63	1669	-24027	202147	-988093	2575703	-2724777
1	-63	1669	-24027	202147	-988061	2575063	-2721609
1	-63	1669	-24027	202163	-988589	2580807	-2742201
1	-63	1669	-24019	201779	-981821	2528775	-2594673
1	-63	1669	-24019	201795	-982317	2533815	-2611521
1	-63	1669	-24019	201795	-982317	2533879	-2612097
1	-63	1669	-24019	201795	-982285	2533175	-2608353
1	-63	1669	-24019	201811	-982845	2539559	-2632113
1	-63	1669	-24019	201811	-982813	2538919	-2628945
1	-63	1669	-24011	201475	-977565	2502775	-2536281
1	-63	1669	-24011	201475	-977533	2502135	-2533113

Dimensions[A]

{62, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1178579, 9954883, -49141197, 130818135, -144259089}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203411 c[5] -
1006509 c[6] + 2692839 c[7] - 2998809 c[8], c[1] - 63 c[2] + 1669 c[3] -
24051 c[4] + 203075 c[5] - 1001293 c[6] + 2657399 c[7] - 2909889 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001261 c[6] +
2656695 c[7] - 2906145 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203091 c[5] - 1001853 c[6] + 2663847 c[7] - 2934225 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001821 c[6] +
2663143 c[7] - 2930481 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203091 c[5] - 1001789 c[6] + 2662439 c[7] - 2926737 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001757 c[6] +
2661735 c[7] - 2922865 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203107 c[5] - 1002285 c[6] + 2667479 c[7] - 2943457 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203107 c[5] - 1002285 c[6] +
2667543 c[7] - 2944161 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203107 c[5] - 1002253 c[6] + 2666775 c[7] - 2939585 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202739 c[5] - 996077 c[6] +
2621959 c[7] - 2820969 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
202739 c[5] - 996045 c[6] + 2621255 c[7] - 2817225 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202755 c[5] - 996605 c[6] +
2627703 c[7] - 2841561 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
202755 c[5] - 996573 c[6] + 2626999 c[7] - 2837817 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202755 c[5] - 996541 c[6] +
2626295 c[7] - 2833945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
202755 c[5] - 996509 c[6] + 2625655 c[7] - 2830905 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202771 c[5] - 997069 c[6] +
2632039 c[7] - 2854537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
202771 c[5] - 997069 c[6] + 2632103 c[7] - 2855241 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202771 c[5] - 997037 c[6] +

$$\begin{aligned}
& 2\,631\,335\,c[7] - 2\,850\,793\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,037\,c[6] + 2\,631\,399\,c[7] - 2\,851\,497\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,005\,c[6] + \\
& 2\,630\,695\,c[7] - 2\,847\,625\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,597\,c[6] + 2\,637\,847\,c[7] - 2\,875\,833\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,565\,c[6] + \\
& 2\,637\,079\,c[7] - 2\,871\,385\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,565\,c[6] + 2\,637\,143\,c[7] - 2\,872\,089\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,533\,c[6] + \\
& 2\,636\,439\,c[7] - 2\,868\,217\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,803\,c[5] - 998\,061\,c[6] + 2\,642\,183\,c[7] - 2\,888\,809\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,061\,c[6] + \\
& 2\,642\,247\,c[7] - 2\,889\,513\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,663\,c[7] - 2\,766\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,821\,c[6] + \\
& 2\,595\,959\,c[7] - 2\,762\,577\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,789\,c[6] + 2\,595\,255\,c[7] - 2\,758\,833\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,789\,c[6] + \\
& 2\,595\,255\,c[7] - 2\,758\,705\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,349\,c[6] + 2\,601\,703\,c[7] - 2\,783\,169\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,317\,c[6] + \\
& 2\,600\,999\,c[7] - 2\,779\,425\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,285\,c[6] + 2\,600\,295\,c[7] - 2\,775\,553\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,285\,c[6] + \\
& 2\,600\,359\,c[7] - 2\,776\,257\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,845\,c[6] + 2\,606\,743\,c[7] - 2\,800\,017\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] + \\
& 2\,606\,807\,c[7] - 2\,800\,593\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,813\,c[6] + 2\,606\,039\,c[7] - 2\,796\,145\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& 2\,606\,103\,c[7] - 2\,796\,849\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,781\,c[6] + 2\,605\,399\,c[7] - 2\,792\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,373\,c[6] + \\
& 2\,612\,487\,c[7] - 2\,820\,609\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,341\,c[6] + 2\,611\,847\,c[7] - 2\,817\,441\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,837\,c[6] + \\
& 2\,616\,951\,c[7] - 2\,834\,865\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,573\,c[6] + 2\,559\,815\,c[7] - 2\,669\,913\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& 2\,565\,559\,c[7] - 2\,690\,505\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,855\,c[7] - 2\,686\,761\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& 2\,564\,919\,c[7] - 2\,687\,337\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,037\,c[6] + 2\,564\,215\,c[7] - 2\,683\,593\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,597\,c[6] + \\
& 2\,570\,599\,c[7] - 2\,707\,353\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,565\,c[6] + 2\,569\,959\,c[7] - 2\,704\,185\,c[8],
\end{aligned}$$

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c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 533 c[6] +
  2 569 255 c[7] - 2 700 313 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 147 c[5] - 988 093 c[6] + 2 575 703 c[7] - 2 724 777 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 061 c[6] +
  2 575 063 c[7] - 2 721 609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 163 c[5] - 988 589 c[6] + 2 580 807 c[7] - 2 742 201 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 779 c[5] - 981 821 c[6] +
  2 528 775 c[7] - 2 594 673 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 795 c[5] - 982 317 c[6] + 2 533 815 c[7] - 2 611 521 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 317 c[6] +
  2 533 879 c[7] - 2 612 097 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 795 c[5] - 982 285 c[6] + 2 533 175 c[7] - 2 608 353 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 845 c[6] +
  2 539 559 c[7] - 2 632 113 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 811 c[5] - 982 813 c[6] + 2 538 919 c[7] - 2 628 945 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 565 c[6] +
  2 502 775 c[7] - 2 536 281 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 475 c[5] - 977 533 c[6] + 2 502 135 c[7] - 2 533 113 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 579 c[4] +
  9 954 883 c[5] - 49 141 197 c[6] + 130 818 135 c[7] - 144 259 089 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 579 c[4] +
  9 954 883 c[5] - 49 141 197 c[6] + 130 818 135 c[7] - 144 259 089 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 059 c[4] + 203 411 c[5] -
  1 006 509 c[6] + 2 692 839 c[7] - 2 998 809 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 075 c[5] - 1 001 293 c[6] +
  2 657 399 c[7] - 2 909 889 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 075 c[5] - 1 001 261 c[6] + 2 656 695 c[7] - 2 906 145 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 091 c[5] - 1 001 853 c[6] +
  2 663 847 c[7] - 2 934 225 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 091 c[5] - 1 001 821 c[6] + 2 663 143 c[7] - 2 930 481 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 091 c[5] - 1 001 789 c[6] +
  2 662 439 c[7] - 2 926 737 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 091 c[5] - 1 001 757 c[6] + 2 661 735 c[7] - 2 922 865 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 107 c[5] - 1 002 285 c[6] +
  2 667 479 c[7] - 2 943 457 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 107 c[5] - 1 002 285 c[6] + 2 667 543 c[7] - 2 944 161 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 107 c[5] - 1 002 253 c[6] +
  2 666 775 c[7] - 2 939 585 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
  202 739 c[5] - 996 077 c[6] + 2 621 959 c[7] - 2 820 969 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 045 c[6] +
  2 621 255 c[7] - 2 817 225 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
  202 755 c[5] - 996 605 c[6] + 2 627 703 c[7] - 2 841 561 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 755 c[5] - 996 573 c[6] +

```

$$\begin{aligned}
& 2\,626\,999\,c[7] - 2\,837\,817\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,295\,c[7] - 2\,833\,945\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,509\,c[6] + \\
& 2\,625\,655\,c[7] - 2\,830\,905\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,069\,c[6] + 2\,632\,039\,c[7] - 2\,854\,537\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& 2\,632\,103\,c[7] - 2\,855\,241\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,037\,c[6] + 2\,631\,335\,c[7] - 2\,850\,793\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,037\,c[6] + \\
& 2\,631\,399\,c[7] - 2\,851\,497\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,005\,c[6] + 2\,630\,695\,c[7] - 2\,847\,625\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,597\,c[6] + \\
& 2\,637\,847\,c[7] - 2\,875\,833\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,565\,c[6] + 2\,637\,079\,c[7] - 2\,871\,385\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,565\,c[6] + \\
& 2\,637\,143\,c[7] - 2\,872\,089\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,533\,c[6] + 2\,636\,439\,c[7] - 2\,868\,217\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,061\,c[6] + \\
& 2\,642\,183\,c[7] - 2\,888\,809\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,803\,c[5] - 998\,061\,c[6] + 2\,642\,247\,c[7] - 2\,889\,513\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,663\,c[7] - 2\,766\,321\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,959\,c[7] - 2\,762\,577\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,789\,c[6] + \\
& 2\,595\,255\,c[7] - 2\,758\,833\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,789\,c[6] + 2\,595\,255\,c[7] - 2\,758\,705\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,703\,c[7] - 2\,783\,169\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,999\,c[7] - 2\,779\,425\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,285\,c[6] + \\
& 2\,600\,295\,c[7] - 2\,775\,553\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,285\,c[6] + 2\,600\,359\,c[7] - 2\,776\,257\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] + \\
& 2\,606\,743\,c[7] - 2\,800\,017\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,845\,c[6] + 2\,606\,807\,c[7] - 2\,800\,593\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& 2\,606\,039\,c[7] - 2\,796\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,813\,c[6] + 2\,606\,103\,c[7] - 2\,796\,849\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,781\,c[6] + \\
& 2\,605\,399\,c[7] - 2\,792\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,373\,c[6] + 2\,612\,487\,c[7] - 2\,820\,609\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,341\,c[6] + \\
& 2\,611\,847\,c[7] - 2\,817\,441\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,837\,c[6] + 2\,616\,951\,c[7] - 2\,834\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,573\,c[6] + \\
& 2\,559\,815\,c[7] - 2\,669\,913\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,559\,c[7] - 2\,690\,505\,c[8] \geq 0 \&\&
\end{aligned}$$

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c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 069 c[6] +
  2 564 855 c[7] - 2 686 761 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 115 c[5] - 987 069 c[6] + 2 564 919 c[7] - 2 687 337 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 115 c[5] - 987 037 c[6] +
  2 564 215 c[7] - 2 683 593 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 131 c[5] - 987 597 c[6] + 2 570 599 c[7] - 2 707 353 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 131 c[5] - 987 565 c[6] +
  2 569 959 c[7] - 2 704 185 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 131 c[5] - 987 533 c[6] + 2 569 255 c[7] - 2 700 313 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] - 988 093 c[6] +
  2 575 703 c[7] - 2 724 777 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 147 c[5] - 988 061 c[6] + 2 575 063 c[7] - 2 721 609 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 163 c[5] - 988 589 c[6] +
  2 580 807 c[7] - 2 742 201 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 779 c[5] - 981 821 c[6] + 2 528 775 c[7] - 2 594 673 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 317 c[6] +
  2 533 815 c[7] - 2 611 521 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 795 c[5] - 982 317 c[6] + 2 533 879 c[7] - 2 612 097 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 285 c[6] +
  2 533 175 c[7] - 2 608 353 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 811 c[5] - 982 845 c[6] + 2 539 559 c[7] - 2 632 113 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 813 c[6] +
  2 538 919 c[7] - 2 628 945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 475 c[5] - 977 565 c[6] + 2 502 775 c[7] - 2 536 281 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 533 c[6] +
  2 502 135 c[7] - 2 533 113 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -7 607 112, -2 990 049, -680 855, -123 814}

GCD[0, 0, 0, 0, -7 607 112, -2 990 049, -680 855, -123 814]
1

cert.g
-209 439 222

{0, 0, 0, 0, -7 607 112, -2 990 049, -680 855, -123 814}.
Reverse[gpart[listdim17[[145]]]
-209 439 222

```

cert.Transpose[A]

```
{2 610 090, 82 464 458, 2 545 194, 258 162 570, 178 243 306, 98 324 042, 2 556 586,
 98 335 434, 141 925 770, 2 567 978, 162 318 826, 82 399 562, 258 097 674, 178 178 410,
 82 410 954, 46 082 026, 178 189 802, 221 780 138, 98 270 538, 141 860 874,
 46 093 418, 317 558 986, 194 049 386, 237 639 722, 141 872 266, 237 651 114,
 281 241 450, 301 634 506, 221 715 242, 141 795 978, 125 947 786, 317 494 090,
 237 574 826, 141 807 370, 185 397 706, 333 353 674, 361 095 818, 237 586 218,
 281 176 554, 185 409 098, 429 132 522, 376 955 402, 420 557 130, 221 650 346,
 317 429 194, 237 509 930, 265 252 074, 185 332 810, 333 288 778, 281 111 658,
 185 344 202, 376 890 506, 324 713 386, 420 492 234, 265 187 178, 281 046 762,
 308 788 906, 228 869 642, 376 825 610, 324 648 490, 324 583 594, 272 406 474}
```

chi = listdim17[[146]]

$$(-11 + x)^2 (-9 + x)^8 (5 + x)^{32}$$

$$(-5\,225\,156 + 4\,158\,953\,x - 1\,401\,034\,x^2 + 259\,039\,x^3 - 28\,400\,x^4 + 1847\,x^5 - 66\,x^6 + x^7)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
A = {{1, -81, 2884, -59 204, 771 662, -6 616 654, 37 284 820,
      -132 972 692, 271 923 353, -242 444 169}, {1, -81, 2884, -59 196,
      771 182, -6 604 742, 37 128 340, -131 825 212, 267 469 753, -235 296 369},
 {1, -81, 2884, -59 196, 771 198, -6 605 558, 37 144 820, -131 989 980,
      268 285 257, -236 894 625}, {1, -81, 2884, -59 196, 771 198, -6 605 526,
      37 143 604, -131 972 828, 268 178 953, -236 650 689}, {1, -81, 2884, -59 196,
      771 214, -6 606 342, 37 160 020, -132 135 740, 268 976 601, -238 191 921},
 {1, -81, 2884, -59 196, 771 214, -6 606 342, 37 160 084, -132 137 724,
      268 997 017, -238 261 617}, {1, -81, 2884, -59 196, 771 214,
      -6 606 342, 37 160 084, -132 137 596, 268 994 457, -238 248 945},
 {1, -81, 2884, -59 196, 771 214, -6 606 342, 37 160 148, -132 139 452,
      269 012 313, -238 305 969}, {1, -81, 2884, -59 196, 771 214,
      -6 606 310, 37 158 804, -132 118 588, 268 870 297, -237 947 985},
 {1, -81, 2884, -59 196, 771 214, -6 606 310, 37 158 868, -132 120 444,
      268 888 153, -238 005 009}, {1, -81, 2884, -59 196, 771 214,
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 {1, -81, 2884, -59 196, 771 230, -6 607 094, 37 174 068, -132 266 076,
      269 576 937, -239 289 633}, {1, -81, 2884, -59 188, 770 734,
      -6 594 430, 37 003 540, -130 988 388, 264 525 561, -231 056 793},
 {1, -81, 2884, -59 188, 770 734, -6 594 430, 37 003 604, -130 990 244,
      264 543 417, -231 113 817}, {1, -81, 2884, -59 188, 770 734,
      -6 594 398, 37 002 324, -130 971 236, 264 419 257, -230 812 857},
 {1, -81, 2884, -59 188, 770 734, -6 594 398, 37 002 388, -130 972 964,
      264 434 553, -230 857 209}, {1, -81, 2884, -59 188, 770 734,
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-6594366, 37001108, -130953956, 264310393, -230556249},
{1, -81, 2884, -59188, 770750, -6595246, 37020084, -131155140,
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{1, -81, 2884, -59188, 770750, -6595182, 37017588, -131118724,
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{1, -81, 2884, -59188, 770782, -6596718, 37046964, -131398532,
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-6583270, 36861044, -129969516, 260657001, -224962353},
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260674857, -225019377}, {1, -81, 2884, -59180, 770270,
-6583238, 36859892, -129954092, 260565993, -224762769},
{1, -81, 2884, -59180, 770286, -6584054, 36876372, -130118988,
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-6584022, 36875156, -130101708, 261275193, -226117089},
{1, -81, 2884, -59180, 770286, -6584022, 36875220, -130103564,
261293049, -226174113}, {1, -81, 2884, -59180, 770286,
-6583990, 36873940, -130084428, 261166329, -225860481},
{1, -81, 2884, -59180, 770302, -6584838, 36891636, -130266476,
262090697, -227715345}, {1, -81, 2884, -59180, 770302,
-6584806, 36890484, -130251180, 262002249, -227528433},
{1, -81, 2884, -59180, 770302, -6584774, 36889204, -130232044,
261875529, -227214801}, {1, -81, 2884, -59180, 770318,
-6585590, 36905748, -130398668, 262708889, -228870081},
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262582169, -228556449}, {1, -81, 2884, -59180, 770318,
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{1, -81, 2884, -59172, 769806, -6572110, 36718612, -128952500,
256806297, -218924937}, {1, -81, 2884, -59172, 769838,
-6573614, 36746772, -129215028, 258024825, -221177385}};

```

```
A // MatrixForm
```



```

1 -81 2884 -59 204 771 662 -6 616 654 37 284 820 -132 972 692 271 923 353 -242 444 16
1 -81 2884 -59 196 771 182 -6 604 742 37 128 340 -131 825 212 267 469 753 -235 296 36
1 -81 2884 -59 196 771 198 -6 605 558 37 144 820 -131 989 980 268 285 257 -236 894 62
1 -81 2884 -59 196 771 198 -6 605 526 37 143 604 -131 972 828 268 178 953 -236 650 68
1 -81 2884 -59 196 771 214 -6 606 342 37 160 020 -132 135 740 268 976 601 -238 191 92
1 -81 2884 -59 196 771 214 -6 606 342 37 160 084 -132 137 724 268 997 017 -238 261 61
1 -81 2884 -59 196 771 214 -6 606 342 37 160 084 -132 137 596 268 994 457 -238 248 94
1 -81 2884 -59 196 771 214 -6 606 342 37 160 148 -132 139 452 269 012 313 -238 305 96
1 -81 2884 -59 196 771 214 -6 606 310 37 158 804 -132 118 588 268 870 297 -237 947 98
1 -81 2884 -59 196 771 214 -6 606 310 37 158 868 -132 120 444 268 888 153 -238 005 00
1 -81 2884 -59 196 771 214 -6 606 310 37 158 868 -132 120 316 268 885 593 -237 992 33
1 -81 2884 -59 196 771 230 -6 607 094 37 174 068 -132 266 076 269 576 937 -239 289 63
1 -81 2884 -59 188 770 734 -6 594 430 37 003 540 -130 988 388 264 525 561 -231 056 79
1 -81 2884 -59 188 770 734 -6 594 430 37 003 604 -130 990 244 264 543 417 -231 113 81
1 -81 2884 -59 188 770 734 -6 594 398 37 002 324 -130 971 236 264 419 257 -230 812 85
1 -81 2884 -59 188 770 734 -6 594 398 37 002 388 -130 972 964 264 434 553 -230 857 20
1 -81 2884 -59 188 770 734 -6 594 366 37 001 108 -130 953 956 264 310 393 -230 556 24
1 -81 2884 -59 188 770 750 -6 595 246 37 020 084 -131 155 140 265 361 481 -232 724 74
1 -81 2884 -59 188 770 750 -6 595 214 37 018 868 -131 137 860 265 252 617 -232 468 13
1 -81 2884 -59 188 770 750 -6 595 182 37 017 588 -131 118 724 265 125 897 -232 154 50
1 -81 2884 -59 188 770 750 -6 595 182 37 017 652 -131 120 580 265 143 753 -232 211 52
1 -81 2884 -59 188 770 750 -6 595 182 37 017 716 -131 122 436 265 161 609 -232 268 55
1 -81 2884 -59 188 770 750 -6 595 150 37 016 372 -131 101 572 265 019 593 -231 910 56
1 -81 2884 -59 188 770 766 -6 595 998 37 034 068 -131 283 492 265 941 401 -233 752 76
1 -81 2884 -59 188 770 766 -6 595 966 37 032 852 -131 266 212 265 832 537 -233 496 15
1 -81 2884 -59 188 770 766 -6 595 966 37 032 916 -131 268 196 265 852 953 -233 565 84
1 -81 2884 -59 188 770 766 -6 595 966 37 032 980 -131 270 052 265 870 809 -233 622 87
1 -81 2884 -59 188 770 766 -6 595 934 37 031 636 -131 249 060 265 726 233 -233 252 21
1 -81 2884 -59 188 770 766 -6 595 934 37 031 700 -131 250 916 265 744 089 -233 309 24
1 -81 2884 -59 188 770 782 -6 596 718 37 046 900 -131 396 548 266 432 873 -234 593 86
1 -81 2884 -59 188 770 782 -6 596 718 37 046 964 -131 398 532 266 453 289 -234 663 56
1 -81 2884 -59 180 770 270 -6 583 270 36 861 044 -129 969 516 260 657 001 -224 962 35
1 -81 2884 -59 180 770 270 -6 583 270 36 861 108 -129 971 372 260 674 857 -225 019 37
1 -81 2884 -59 180 770 270 -6 583 238 36 859 892 -129 954 092 260 565 993 -224 762 76
1 -81 2884 -59 180 770 286 -6 584 054 36 876 372 -130 118 988 261 384 057 -226 373 69
1 -81 2884 -59 180 770 286 -6 584 022 36 875 156 -130 101 708 261 275 193 -226 117 08
1 -81 2884 -59 180 770 286 -6 584 022 36 875 220 -130 103 564 261 293 049 -226 174 11
1 -81 2884 -59 180 770 286 -6 583 990 36 873 940 -130 084 428 261 166 329 -225 860 48
1 -81 2884 -59 180 770 302 -6 584 838 36 891 636 -130 266 476 262 090 697 -227 715 34
1 -81 2884 -59 180 770 302 -6 584 806 36 890 484 -130 251 180 262 002 249 -227 528 43
1 -81 2884 -59 180 770 302 -6 584 774 36 889 204 -130 232 044 261 875 529 -227 214 80
1 -81 2884 -59 180 770 318 -6 585 590 36 905 748 -130 398 668 262 708 889 -228 870 08
1 -81 2884 -59 180 770 318 -6 585 558 36 904 468 -130 379 532 262 582 169 -228 556 44
1 -81 2884 -59 180 770 318 -6 585 558 36 904 532 -130 381 516 262 602 585 -228 626 14
1 -81 2884 -59 172 769 806 -6 572 110 36 718 612 -128 952 500 256 806 297 -218 924 93
1 -81 2884 -59 172 769 838 -6 573 614 36 746 772 -129 215 028 258 024 825 -221 177 38

```

Dimensions[A]

{46, 10}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```

{49, -3969, 141 316, -2 900 684, 37 794 286, -323 827 670,
 1 822 321 428, -6 484 924 844, 13 216 843 977, -11 725 279 793}

```

Array[c, 10].Transpose[A]

```
{c[1] - 81 c[2] + 2884 c[3] - 59 204 c[4] + 771 662 c[5] - 6 616 654 c[6] +
  37 284 820 c[7] - 132 972 692 c[8] + 271 923 353 c[9] - 242 444 169 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 182 c[5] - 6 604 742 c[6] +
  37 128 340 c[7] - 131 825 212 c[8] + 267 469 753 c[9] - 235 296 369 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 198 c[5] - 6 605 558 c[6] +
  37 144 820 c[7] - 131 989 980 c[8] + 268 285 257 c[9] - 236 894 625 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 198 c[5] - 6 605 526 c[6] +
  37 143 604 c[7] - 131 972 828 c[8] + 268 178 953 c[9] - 236 650 689 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 342 c[6] +
  37 160 020 c[7] - 132 135 740 c[8] + 268 976 601 c[9] - 238 191 921 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 342 c[6] +
  37 160 084 c[7] - 132 137 724 c[8] + 268 997 017 c[9] - 238 261 617 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 342 c[6] +
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c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 342 c[6] +
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c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 734 c[5] - 6 594 398 c[6] +
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c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 734 c[5] - 6 594 398 c[6] +
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c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 734 c[5] - 6 594 366 c[6] +
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c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 750 c[5] - 6 595 246 c[6] +
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c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 750 c[5] - 6 595 214 c[6] +
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c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 750 c[5] - 6 595 182 c[6] +
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c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 750 c[5] - 6 595 182 c[6] +
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c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 750 c[5] - 6 595 150 c[6] +
  37 016 372 c[7] - 131 101 572 c[8] + 265 019 593 c[9] - 231 910 569 c[10],
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$c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770766 c[5] - 6595998 c[6] +$
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 $36861044 c[7] - 129969516 c[8] + 260657001 c[9] - 224962353 c[10],$
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 $36861108 c[7] - 129971372 c[8] + 260674857 c[9] - 225019377 c[10],$
 $c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770270 c[5] - 6583238 c[6] +$
 $36859892 c[7] - 129954092 c[8] + 260565993 c[9] - 224762769 c[10],$
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 $36876372 c[7] - 130118988 c[8] + 261384057 c[9] - 226373697 c[10],$
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 $36875156 c[7] - 130101708 c[8] + 261275193 c[9] - 226117089 c[10],$
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 $36875220 c[7] - 130103564 c[8] + 261293049 c[9] - 226174113 c[10],$
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 $36873940 c[7] - 130084428 c[8] + 261166329 c[9] - 225860481 c[10],$
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 $36889204 c[7] - 130232044 c[8] + 261875529 c[9] - 227214801 c[10],$
 $c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770318 c[5] - 6585590 c[6] +$
 $36905748 c[7] - 130398668 c[8] + 262708889 c[9] - 228870081 c[10],$
 $c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770318 c[5] - 6585558 c[6] +$
 $36904468 c[7] - 130379532 c[8] + 262582169 c[9] - 228556449 c[10],$
 $c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770318 c[5] - 6585558 c[6] +$
 $36904532 c[7] - 130381516 c[8] + 262602585 c[9] - 228626145 c[10],$
 $c[1] - 81 c[2] + 2884 c[3] - 59172 c[4] + 769806 c[5] - 6572110 c[6] +$
 $36718612 c[7] - 128952500 c[8] + 256806297 c[9] - 218924937 c[10],$
 $c[1] - 81 c[2] + 2884 c[3] - 59172 c[4] + 769838 c[5] - 6573614 c[6] +$
 $36746772 c[7] - 129215028 c[8] + 258024825 c[9] - 221177385 c[10] \}$

Array[c, 10].g

49 c[1] - 3969 c[2] + 141 316 c[3] - 2 900 684 c[4] + 37 794 286 c[5] - 323 827 670 c[6] +
1 822 321 428 c[7] - 6 484 924 844 c[8] + 13 216 843 977 c[9] - 11 725 279 793 c[10]

cert = Flatten[Array[c, 10] /. FindInstance[

49 c[1] - 3969 c[2] + 141 316 c[3] - 2 900 684 c[4] + 37 794 286 c[5] - 323 827 670 c[6] +
1 822 321 428 c[7] - 6 484 924 844 c[8] + 13 216 843 977 c[9] - 11 725 279 793 c[10] <
0 && c[1] - 81 c[2] + 2884 c[3] - 59 204 c[4] + 771 662 c[5] - 6 616 654 c[6] +
37 284 820 c[7] - 132 972 692 c[8] + 271 923 353 c[9] - 242 444 169 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 182 c[5] - 6 604 742 c[6] +
37 128 340 c[7] - 131 825 212 c[8] + 267 469 753 c[9] - 235 296 369 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 198 c[5] - 6 605 558 c[6] +
37 144 820 c[7] - 131 989 980 c[8] + 268 285 257 c[9] - 236 894 625 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 198 c[5] - 6 605 526 c[6] +
37 143 604 c[7] - 131 972 828 c[8] + 268 178 953 c[9] - 236 650 689 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 342 c[6] +
37 160 020 c[7] - 132 135 740 c[8] + 268 976 601 c[9] - 238 191 921 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 342 c[6] +
37 160 084 c[7] - 132 137 724 c[8] + 268 997 017 c[9] - 238 261 617 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 342 c[6] +
37 160 084 c[7] - 132 137 596 c[8] + 268 994 457 c[9] - 238 248 945 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 342 c[6] +
37 160 148 c[7] - 132 139 452 c[8] + 269 012 313 c[9] - 238 305 969 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 310 c[6] +
37 158 804 c[7] - 132 118 588 c[8] + 268 870 297 c[9] - 237 947 985 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 310 c[6] +
37 158 868 c[7] - 132 120 444 c[8] + 268 888 153 c[9] - 238 005 009 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 214 c[5] - 6 606 310 c[6] +
37 158 868 c[7] - 132 120 316 c[8] + 268 885 593 c[9] - 237 992 337 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 196 c[4] + 771 230 c[5] - 6 607 094 c[6] +
37 174 068 c[7] - 132 266 076 c[8] + 269 576 937 c[9] - 239 289 633 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 734 c[5] - 6 594 430 c[6] +
37 003 540 c[7] - 130 988 388 c[8] + 264 525 561 c[9] - 231 056 793 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 734 c[5] - 6 594 430 c[6] +
37 003 604 c[7] - 130 990 244 c[8] + 264 543 417 c[9] - 231 113 817 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 734 c[5] - 6 594 398 c[6] +
37 002 324 c[7] - 130 971 236 c[8] + 264 419 257 c[9] - 230 812 857 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 734 c[5] - 6 594 398 c[6] +
37 002 388 c[7] - 130 972 964 c[8] + 264 434 553 c[9] - 230 857 209 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 734 c[5] - 6 594 366 c[6] +
37 001 108 c[7] - 130 953 956 c[8] + 264 310 393 c[9] - 230 556 249 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 750 c[5] - 6 595 246 c[6] +
37 020 084 c[7] - 131 155 140 c[8] + 265 361 481 c[9] - 232 724 745 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 750 c[5] - 6 595 214 c[6] +
37 018 868 c[7] - 131 137 860 c[8] + 265 252 617 c[9] - 232 468 137 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 188 c[4] + 770 750 c[5] - 6 595 182 c[6] +
37 017 588 c[7] - 131 118 724 c[8] + 265 125 897 c[9] - 232 154 505 c[10] ≥ 0 &&

$$\begin{aligned}
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770750 c[5] - 6595182 c[6] + \\
& \quad 37017652 c[7] - 131120580 c[8] + 265143753 c[9] - 232211529 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770750 c[5] - 6595182 c[6] + \\
& \quad 37017716 c[7] - 131122436 c[8] + 265161609 c[9] - 232268553 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770750 c[5] - 6595150 c[6] + \\
& \quad 37016372 c[7] - 131101572 c[8] + 265019593 c[9] - 231910569 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770766 c[5] - 6595998 c[6] + \\
& \quad 37034068 c[7] - 131283492 c[8] + 265941401 c[9] - 233752761 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770766 c[5] - 6595966 c[6] + \\
& \quad 37032852 c[7] - 131266212 c[8] + 265832537 c[9] - 233496153 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770766 c[5] - 6595966 c[6] + \\
& \quad 37032916 c[7] - 131268196 c[8] + 265852953 c[9] - 233565849 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770766 c[5] - 6595966 c[6] + \\
& \quad 37032980 c[7] - 131270052 c[8] + 265870809 c[9] - 233622873 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770766 c[5] - 6595934 c[6] + \\
& \quad 37031636 c[7] - 131249060 c[8] + 265726233 c[9] - 233252217 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770766 c[5] - 6595934 c[6] + \\
& \quad 37031700 c[7] - 131250916 c[8] + 265744089 c[9] - 233309241 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770782 c[5] - 6596718 c[6] + \\
& \quad 37046900 c[7] - 131396548 c[8] + 266432873 c[9] - 234593865 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770782 c[5] - 6596718 c[6] + \\
& \quad 37046964 c[7] - 131398532 c[8] + 266453289 c[9] - 234663561 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770270 c[5] - 6583270 c[6] + \\
& \quad 36861044 c[7] - 129969516 c[8] + 260657001 c[9] - 224962353 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770270 c[5] - 6583270 c[6] + \\
& \quad 36861108 c[7] - 129971372 c[8] + 260674857 c[9] - 225019377 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770270 c[5] - 6583238 c[6] + \\
& \quad 36859892 c[7] - 129954092 c[8] + 260565993 c[9] - 224762769 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770286 c[5] - 6584054 c[6] + \\
& \quad 36876372 c[7] - 130118988 c[8] + 261384057 c[9] - 226373697 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770286 c[5] - 6584022 c[6] + \\
& \quad 36875156 c[7] - 130101708 c[8] + 261275193 c[9] - 226117089 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770286 c[5] - 6584022 c[6] + \\
& \quad 36875220 c[7] - 130103564 c[8] + 261293049 c[9] - 226174113 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770286 c[5] - 6583990 c[6] + \\
& \quad 36873940 c[7] - 130084428 c[8] + 261166329 c[9] - 225860481 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770302 c[5] - 6584838 c[6] + \\
& \quad 36891636 c[7] - 130266476 c[8] + 262090697 c[9] - 227715345 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770302 c[5] - 6584806 c[6] + \\
& \quad 36890484 c[7] - 130251180 c[8] + 262002249 c[9] - 227528433 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770302 c[5] - 6584774 c[6] + \\
& \quad 36889204 c[7] - 130232044 c[8] + 261875529 c[9] - 227214801 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770318 c[5] - 6585590 c[6] + \\
& \quad 36905748 c[7] - 130398668 c[8] + 262708889 c[9] - 228870081 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770318 c[5] - 6585558 c[6] + \\
& \quad 36904468 c[7] - 130379532 c[8] + 262582169 c[9] - 228556449 c[10] \geq 0 \&\& \\
& c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770318 c[5] - 6585558 c[6] +
\end{aligned}$$

```

36 904 532 c[7] - 130 381 516 c[8] + 262 602 585 c[9] - 228 626 145 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 172 c[4] + 769 806 c[5] - 6 572 110 c[6] +
36 718 612 c[7] - 128 952 500 c[8] + 256 806 297 c[9] - 218 924 937 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59 172 c[4] + 769 838 c[5] - 6 573 614 c[6] +
36 746 772 c[7] - 129 215 028 c[8] + 258 024 825 c[9] -
221 177 385 c[10] ≥ 0, Array[c, 10], Integers]]
{0, 0, 0, 0, 0, 0, -2 570 051, -1 576 448, -546 592, -143 665}

```

```
GCD[0, 0, 0, 0, 0, 0, -2 570 051, -1 576 448, -546 592, -143 665]
```

```
1
```

```
cert.g
```

```
-21 069 493 755
```

```
{0, 0, 0, 0, 0, 0, -2 570 051, -1 576 448, -546 592, -143 665}.
```

```
Reverse[gpart[listdim17[[146]]]]
```

```
-21 069 493 755
```

```
cert.Transpose[A]
```

```

{257 608 605, 890 082 245, 2 149 311 701, 1 295 108 149, 1 360 527 173, 3 177 370 309,
2 554 337 605, 3 748 148 037, 506 323 621, 1 700 134 053, 1 077 101 349, 288 316 821,
2 616 033 517, 3 809 843 949, 1 761 829 965, 2 332 607 693, 284 593 709, 5 692 106 109,
4 214 869 853, 1 543 823 165, 2 737 633 597, 3 931 444 029, 689 619 613, 2 803 052 621,
1 325 816 365, 3 142 659 501, 4 336 469 933, 471 612 813, 1 665 423 245, 253 606 013,
2 070 449 149, 1 605 519 077, 2 799 329 509, 1 322 093 253, 3 204 355 413,
1 727 119 157, 2 920 929 589, 249 882 901, 2 986 348 613, 3 325 955 493,
654 908 805, 3 107 948 693, 436 902 005, 2 253 745 141, 1 788 815 069, 838 204 797}

```

```
chi = listdim17[[147]]
```

```
(-13 + x) (-11 + x)4 (-9 + x)8 (-7 + x)2 (5 + x)32 (68 - 17 x + x2)
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {287 287, -228 396, 73 147, -12 128, 1101, -52, 1},
  {288 519, -228 684, 73 163, -12 128, 1101, -52, 1},
  {279 279, -225 908, 72 899, -12 120, 1101, -52, 1},
  {280 799, -226 228, 72 915, -12 120, 1101, -52, 1},
  {280 863, -226 228, 72 915, -12 120, 1101, -52, 1},
  {280 511, -226 196, 72 915, -12 120, 1101, -52, 1},
  {281 743, -226 484, 72 931, -12 120, 1101, -52, 1},
  {282 975, -226 772, 72 947, -12 120, 1101, -52, 1},
  {274 023, -224 028, 72 683, -12 112, 1101, -52, 1},
  {273 735, -223 996, 72 683, -12 112, 1101, -52, 1},
  {275 319, -224 316, 72 699, -12 112, 1101, -52, 1},
  {274 967, -224 284, 72 699, -12 112, 1101, -52, 1},
  {276 551, -224 604, 72 715, -12 112, 1101, -52, 1},
  {276 199, -224 572, 72 715, -12 112, 1101, -52, 1},
  {268 479, -222 116, 72 467, -12 104, 1101, -52, 1},
  {268 191, -222 084, 72 467, -12 104, 1101, -52, 1},
  {269 775, -222 404, 72 483, -12 104, 1101, -52, 1},
  {269 423, -222 372, 72 483, -12 104, 1101, -52, 1},
  {271 007, -222 692, 72 499, -12 104, 1101, -52, 1},
  {270 655, -222 660, 72 499, -12 104, 1101, -52, 1},
  {262 647, -220 172, 72 251, -12 096, 1101, -52, 1},
  {264 231, -220 492, 72 267, -12 096, 1101, -52, 1},
  {263 879, -220 460, 72 267, -12 096, 1101, -52, 1},
  {257 103, -218 260, 72 035, -12 088, 1101, -52, 1},
  {258 687, -218 580, 72 051, -12 088, 1101, -52, 1} }
```

```

A = {{287 287, -228 396, 73 147, -12 128, 1101, -52, 1},
      {288 519, -228 684, 73 163, -12 128, 1101, -52, 1},
      {279 279, -225 908, 72 899, -12 120, 1101, -52, 1},
      {280 799, -226 228, 72 915, -12 120, 1101, -52, 1},
      {280 863, -226 228, 72 915, -12 120, 1101, -52, 1},
      {280 511, -226 196, 72 915, -12 120, 1101, -52, 1},
      {281 743, -226 484, 72 931, -12 120, 1101, -52, 1},
      {282 975, -226 772, 72 947, -12 120, 1101, -52, 1},
      {274 023, -224 028, 72 683, -12 112, 1101, -52, 1},
      {273 735, -223 996, 72 683, -12 112, 1101, -52, 1},
      {275 319, -224 316, 72 699, -12 112, 1101, -52, 1},
      {274 967, -224 284, 72 699, -12 112, 1101, -52, 1},
      {276 551, -224 604, 72 715, -12 112, 1101, -52, 1},
      {276 199, -224 572, 72 715, -12 112, 1101, -52, 1},
      {268 479, -222 116, 72 467, -12 104, 1101, -52, 1},
      {268 191, -222 084, 72 467, -12 104, 1101, -52, 1},
      {269 775, -222 404, 72 483, -12 104, 1101, -52, 1},
      {269 423, -222 372, 72 483, -12 104, 1101, -52, 1},
      {271 007, -222 692, 72 499, -12 104, 1101, -52, 1},
      {270 655, -222 660, 72 499, -12 104, 1101, -52, 1},
      {262 647, -220 172, 72 251, -12 096, 1101, -52, 1},
      {264 231, -220 492, 72 267, -12 096, 1101, -52, 1},
      {263 879, -220 460, 72 267, -12 096, 1101, -52, 1},
      {257 103, -218 260, 72 035, -12 088, 1101, -52, 1},
      {258 687, -218 580, 72 051, -12 088, 1101, -52, 1}};

```


A // MatrixForm

$$\begin{pmatrix} 287\,287 & -228\,396 & 73\,147 & -12\,128 & 1101 & -52 & 1 \\ 288\,519 & -228\,684 & 73\,163 & -12\,128 & 1101 & -52 & 1 \\ 279\,279 & -225\,908 & 72\,899 & -12\,120 & 1101 & -52 & 1 \\ 280\,799 & -226\,228 & 72\,915 & -12\,120 & 1101 & -52 & 1 \\ 280\,863 & -226\,228 & 72\,915 & -12\,120 & 1101 & -52 & 1 \\ 280\,511 & -226\,196 & 72\,915 & -12\,120 & 1101 & -52 & 1 \\ 281\,743 & -226\,484 & 72\,931 & -12\,120 & 1101 & -52 & 1 \\ 282\,975 & -226\,772 & 72\,947 & -12\,120 & 1101 & -52 & 1 \\ 274\,023 & -224\,028 & 72\,683 & -12\,112 & 1101 & -52 & 1 \\ 273\,735 & -223\,996 & 72\,683 & -12\,112 & 1101 & -52 & 1 \\ 275\,319 & -224\,316 & 72\,699 & -12\,112 & 1101 & -52 & 1 \\ 274\,967 & -224\,284 & 72\,699 & -12\,112 & 1101 & -52 & 1 \\ 276\,551 & -224\,604 & 72\,715 & -12\,112 & 1101 & -52 & 1 \\ 276\,199 & -224\,572 & 72\,715 & -12\,112 & 1101 & -52 & 1 \\ 268\,479 & -222\,116 & 72\,467 & -12\,104 & 1101 & -52 & 1 \\ 268\,191 & -222\,084 & 72\,467 & -12\,104 & 1101 & -52 & 1 \\ 269\,775 & -222\,404 & 72\,483 & -12\,104 & 1101 & -52 & 1 \\ 269\,423 & -222\,372 & 72\,483 & -12\,104 & 1101 & -52 & 1 \\ 271\,007 & -222\,692 & 72\,499 & -12\,104 & 1101 & -52 & 1 \\ 270\,655 & -222\,660 & 72\,499 & -12\,104 & 1101 & -52 & 1 \\ 262\,647 & -220\,172 & 72\,251 & -12\,096 & 1101 & -52 & 1 \\ 264\,231 & -220\,492 & 72\,267 & -12\,096 & 1101 & -52 & 1 \\ 263\,879 & -220\,460 & 72\,267 & -12\,096 & 1101 & -52 & 1 \\ 257\,103 & -218\,260 & 72\,035 & -12\,088 & 1101 & -52 & 1 \\ 258\,687 & -218\,580 & 72\,051 & -12\,088 & 1101 & -52 & 1 \end{pmatrix}$$

Dimensions[A]

{25, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{13 890 479, -11 122 532, 3 576 035, -593 960, 53 949, -2548, 49}

Array[c, 7].Transpose[A]

```
{ 287 287 c[1] - 228 396 c[2] + 73 147 c[3] - 12 128 c[4] + 1101 c[5] - 52 c[6] + c[7],
 288 519 c[1] - 228 684 c[2] + 73 163 c[3] - 12 128 c[4] + 1101 c[5] - 52 c[6] + c[7],
 279 279 c[1] - 225 908 c[2] + 72 899 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7],
 280 799 c[1] - 226 228 c[2] + 72 915 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7],
 280 863 c[1] - 226 228 c[2] + 72 915 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7],
 280 511 c[1] - 226 196 c[2] + 72 915 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7],
 281 743 c[1] - 226 484 c[2] + 72 931 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7],
 282 975 c[1] - 226 772 c[2] + 72 947 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7],
 274 023 c[1] - 224 028 c[2] + 72 683 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7],
 273 735 c[1] - 223 996 c[2] + 72 683 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7],
 275 319 c[1] - 224 316 c[2] + 72 699 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7],
 274 967 c[1] - 224 284 c[2] + 72 699 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7],
 276 551 c[1] - 224 604 c[2] + 72 715 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7],
 276 199 c[1] - 224 572 c[2] + 72 715 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7],
 268 479 c[1] - 222 116 c[2] + 72 467 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 268 191 c[1] - 222 084 c[2] + 72 467 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 269 775 c[1] - 222 404 c[2] + 72 483 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 269 423 c[1] - 222 372 c[2] + 72 483 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 271 007 c[1] - 222 692 c[2] + 72 499 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 270 655 c[1] - 222 660 c[2] + 72 499 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 262 647 c[1] - 220 172 c[2] + 72 251 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 264 231 c[1] - 220 492 c[2] + 72 267 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 263 879 c[1] - 220 460 c[2] + 72 267 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 257 103 c[1] - 218 260 c[2] + 72 035 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7],
 258 687 c[1] - 218 580 c[2] + 72 051 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7]}
```

Array[c, 7].g

```
13 890 479 c[1] - 11 122 532 c[2] + 3 576 035 c[3] -
 593 960 c[4] + 53 949 c[5] - 2548 c[6] + 49 c[7]
```

```

cert =
  Flatten[Array[c, 7] /. FindInstance[13 890 479 c[1] - 11 122 532 c[2] + 3 576 035 c[3] -
    593 960 c[4] + 53 949 c[5] - 2548 c[6] + 49 c[7] < 0 &&
    287 287 c[1] - 228 396 c[2] + 73 147 c[3] - 12 128 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
    0 && 288 519 c[1] - 228 684 c[2] + 73 163 c[3] - 12 128 c[4] +
    1101 c[5] - 52 c[6] + c[7] ≥ 0 && 279 279 c[1] - 225 908 c[2] +
    72 899 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
    280 799 c[1] - 226 228 c[2] + 72 915 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
    0 && 280 863 c[1] - 226 228 c[2] + 72 915 c[3] - 12 120 c[4] +
    1101 c[5] - 52 c[6] + c[7] ≥ 0 && 280 511 c[1] - 226 196 c[2] +
    72 915 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
    281 743 c[1] - 226 484 c[2] + 72 931 c[3] - 12 120 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
    0 && 282 975 c[1] - 226 772 c[2] + 72 947 c[3] - 12 120 c[4] +
    1101 c[5] - 52 c[6] + c[7] ≥ 0 && 274 023 c[1] - 224 028 c[2] +
    72 683 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
    273 735 c[1] - 223 996 c[2] + 72 683 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
    0 && 275 319 c[1] - 224 316 c[2] + 72 699 c[3] - 12 112 c[4] +
    1101 c[5] - 52 c[6] + c[7] ≥ 0 && 274 967 c[1] - 224 284 c[2] +
    72 699 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
    276 551 c[1] - 224 604 c[2] + 72 715 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
    0 && 276 199 c[1] - 224 572 c[2] + 72 715 c[3] - 12 112 c[4] +
    1101 c[5] - 52 c[6] + c[7] ≥ 0 && 268 479 c[1] - 222 116 c[2] +
    72 467 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
    268 191 c[1] - 222 084 c[2] + 72 467 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
    0 && 269 775 c[1] - 222 404 c[2] + 72 483 c[3] - 12 104 c[4] +
    1101 c[5] - 52 c[6] + c[7] ≥ 0 && 269 423 c[1] - 222 372 c[2] +
    72 483 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
    271 007 c[1] - 222 692 c[2] + 72 499 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
    0 && 270 655 c[1] - 222 660 c[2] + 72 499 c[3] - 12 104 c[4] +
    1101 c[5] - 52 c[6] + c[7] ≥ 0 && 262 647 c[1] - 220 172 c[2] +
    72 251 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
    264 231 c[1] - 220 492 c[2] + 72 267 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
    0 && 263 879 c[1] - 220 460 c[2] + 72 267 c[3] -
    12 096 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
    257 103 c[1] - 218 260 c[2] + 72 035 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
    0 && 258 687 c[1] - 218 580 c[2] + 72 051 c[3] - 12 088 c[4] +
    1101 c[5] - 52 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-19 863, 0, 1 383 849, 23 889 531, 0, 0, 194 216 963 712}

GCD[-19 863, 0, 1 383 849, 23 889 531, 0, 0, 194 216 963 712]
3

cert = cert / 3
{-6621, 0, 461 283, 7 963 177, 0, 0, 64 738 987 904}

Reverse[cert]
{64 738 987 904, 0, 0, 7 963 177, 461 283, 0, -6621}

```

cert.g

-2 912 178

{-6621, 0, 461 283, 7 963 177, 0, 0, 64 738 987 904}.gpart[listdim17[[147]]

-2 912 178

cert.Transpose[A]

{917 622, 141 078, 3 245 822, 562 430, 138 686, 2 469 278, 1 692 734, 916 190, 2 114 086,
4 020 934, 913 798, 3 244 390, 137 254, 2 467 846, 2 889 198, 4 796 046, 1 688 910,
4 019 502, 912 366, 3 242 958, 5 571 158, 2 464 022, 4 794 614, 6 346 270, 3 239 134}

chi = listdim17[[148]]

$(-11 + x)^3 (-9 + x)^8 (-7 + x) (5 + x)^{32} (73 - 18 x + x^2) (-932 + 293 x - 30 x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```

A = {{1, -70, 2114, -35950, 376244, -2479442, 10037646, -22796666, 22203643},
      {1, -70, 2114, -35950, 376244, -2479442, 10037710, -22797818, 22208571},
      {1, -70, 2114, -35942, 375852, -2471906, 9966622, -22468466, 21608307},
      {1, -70, 2114, -35942, 375868, -2472514, 9975198, -22521618, 21730275},
      {1, -70, 2114, -35942, 375868, -2472482, 9974206, -22511794, 21699139},
      {1, -70, 2114, -35942, 375868, -2472482, 9974270, -22512946, 21704067},
      {1, -70, 2114, -35942, 375868, -2472482, 9974334, -22514098, 21709251},
      {1, -70, 2114, -35942, 375868, -2472450, 9973406, -22505298, 21681891},
      {1, -70, 2114, -35942, 375884, -2473058, 9981918, -22557298, 21798931},
      {1, -70, 2114, -35942, 375884, -2473058, 9981982, -22558450, 21803859},
      {1, -70, 2114, -35934, 375476, -2464914, 9902318, -22175946, 21081627},
      {1, -70, 2114, -35934, 375476, -2464882, 9901390, -22167274, 21055419},
      {1, -70, 2114, -35934, 375492, -2465554, 9911758, -22236874, 21226923},
      {1, -70, 2114, -35934, 375492, -2465522, 9910830, -22228074, 21199563},
      {1, -70, 2114, -35934, 375492, -2465522, 9910894, -22229226, 21204747},
      {1, -70, 2114, -35934, 375492, -2465522, 9910894, -22229098, 21203595},
      {1, -70, 2114, -35934, 375492, -2465490, 9909966, -22220426, 21177387},
      {1, -70, 2114, -35934, 375492, -2465490, 9910030, -22221578, 21182571},
      {1, -70, 2114, -35934, 375492, -2465458, 9909102, -22212778, 21155211},
      {1, -70, 2114, -35934, 375508, -2466130, 9919406, -22281226, 21321531},
      {1, -70, 2114, -35934, 375508, -2466098, 9918542, -22273578, 21299355},
      {1, -70, 2114, -35934, 375508, -2466098, 9918606, -22274730, 21304539},
      {1, -70, 2114, -35934, 375508, -2466066, 9917614, -22264778, 21272251},
      {1, -70, 2114, -35934, 375508, -2466066, 9917678, -22265930, 21277179},
      {1, -70, 2114, -35934, 375508, -2466034, 9916750, -22257130, 21250075},
      {1, -70, 2114, -35934, 375524, -2466674, 9926254, -22319082, 21399147},
      {1, -70, 2114, -35926, 375100, -2457922, 9837950, -21882402, 20550915},
      {1, -70, 2114, -35926, 375100, -2457890, 9837150, -21875778, 20532771},
      {1, -70, 2114, -35926, 375116, -2458530, 9846526, -21935554, 20672883},
      {1, -70, 2114, -35926, 375116, -2458498, 9845662, -21927906, 20650707},
      {1, -70, 2114, -35926, 375116, -2458498, 9845726, -21929058, 20655891},
      {1, -70, 2114, -35926, 375116, -2458466, 9844798, -21920258, 20628531},
      {1, -70, 2114, -35926, 375132, -2459138, 9855166, -21989986, 20801187},
      {1, -70, 2114, -35926, 375132, -2459106, 9854238, -21981058, 20772675},
      {1, -70, 2114, -35926, 375132, -2459106, 9854302, -21982210, 20777859},
      {1, -70, 2114, -35926, 375132, -2459074, 9853374, -21973410, 20750499},
      {1, -70, 2114, -35926, 375148, -2459714, 9862814, -22034210, 20894643},
      {1, -70, 2114, -35926, 375148, -2459682, 9861950, -22026562, 20872467},
      {1, -70, 2114, -35926, 375148, -2459682, 9862014, -22027842, 20878803},
      {1, -70, 2114, -35926, 375164, -2460290, 9870526, -22079714, 20994435},
      {1, -70, 2114, -35918, 374740, -2451506, 9781358, -21635386, 20124027},
      {1, -70, 2114, -35918, 374740, -2451474, 9780494, -21627738, 20101851},
      {1, -70, 2114, -35918, 374756, -2452082, 9789070, -21680890, 20223819},
      {1, -70, 2114, -35918, 374756, -2452050, 9788206, -21673242, 20201643},
      {1, -70, 2114, -35910, 374380, -2445058, 9723902, -21380722, 19674963}};

```

A // MatrixForm

```
( 1 -70 2114 -35950 376244 -2479442 10037646 -22796666 22203643 )
( 1 -70 2114 -35950 376244 -2479442 10037710 -22797818 22208571 )
( 1 -70 2114 -35942 375852 -2471906 9966622 -22468466 21608307 )
( 1 -70 2114 -35942 375868 -2472514 9975198 -22521618 21730275 )
( 1 -70 2114 -35942 375868 -2472482 9974206 -22511794 21699139 )
( 1 -70 2114 -35942 375868 -2472482 9974270 -22512946 21704067 )
( 1 -70 2114 -35942 375868 -2472482 9974334 -22514098 21709251 )
( 1 -70 2114 -35942 375868 -2472450 9973406 -22505298 21681891 )
( 1 -70 2114 -35942 375884 -2473058 9981918 -22557298 21798931 )
( 1 -70 2114 -35942 375884 -2473058 9981982 -22558450 21803859 )
( 1 -70 2114 -35934 375476 -2464914 9902318 -22175946 21081627 )
( 1 -70 2114 -35934 375476 -2464882 9901390 -22167274 21055419 )
( 1 -70 2114 -35934 375492 -2465554 9911758 -22236874 21226923 )
( 1 -70 2114 -35934 375492 -2465522 9910830 -22228074 21199563 )
( 1 -70 2114 -35934 375492 -2465522 9910894 -22229226 21204747 )
( 1 -70 2114 -35934 375492 -2465522 9910894 -22229098 21203595 )
( 1 -70 2114 -35934 375492 -2465490 9909966 -22220426 21177387 )
( 1 -70 2114 -35934 375492 -2465490 9910030 -22221578 21182571 )
( 1 -70 2114 -35934 375492 -2465458 9909102 -22212778 21155211 )
( 1 -70 2114 -35934 375508 -2466130 9919406 -22281226 21321531 )
( 1 -70 2114 -35934 375508 -2466098 9918542 -22273578 21299355 )
( 1 -70 2114 -35934 375508 -2466098 9918606 -22274730 21304539 )
( 1 -70 2114 -35934 375508 -2466066 9917614 -22264778 21272251 )
( 1 -70 2114 -35934 375508 -2466066 9917678 -22265930 21277179 )
( 1 -70 2114 -35934 375508 -2466034 9916750 -22257130 21250075 )
( 1 -70 2114 -35934 375524 -2466674 9926254 -22319082 21399147 )
( 1 -70 2114 -35926 375100 -2457922 9837950 -21882402 20550915 )
( 1 -70 2114 -35926 375100 -2457890 9837150 -21875778 20532771 )
( 1 -70 2114 -35926 375116 -2458530 9846526 -21935554 20672883 )
( 1 -70 2114 -35926 375116 -2458498 9845662 -21927906 20650707 )
( 1 -70 2114 -35926 375116 -2458498 9845726 -21929058 20655891 )
( 1 -70 2114 -35926 375116 -2458466 9844798 -21920258 20628531 )
( 1 -70 2114 -35926 375132 -2459138 9855166 -21989986 20801187 )
( 1 -70 2114 -35926 375132 -2459106 9854238 -21981058 20772675 )
( 1 -70 2114 -35926 375132 -2459106 9854302 -21982210 20777859 )
( 1 -70 2114 -35926 375132 -2459074 9853374 -21973410 20750499 )
( 1 -70 2114 -35926 375148 -2459714 9862814 -22034210 20894643 )
( 1 -70 2114 -35926 375148 -2459682 9861950 -22026562 20872467 )
( 1 -70 2114 -35926 375148 -2459682 9862014 -22027842 20878803 )
( 1 -70 2114 -35926 375164 -2460290 9870526 -22079714 20994435 )
( 1 -70 2114 -35918 374740 -2451506 9781358 -21635386 20124027 )
( 1 -70 2114 -35918 374740 -2451474 9780494 -21627738 20101851 )
( 1 -70 2114 -35918 374756 -2452082 9789070 -21680890 20223819 )
( 1 -70 2114 -35918 374756 -2452050 9788206 -21673242 20201643 )
( 1 -70 2114 -35910 374380 -2445058 9723902 -21380722 19674963 )
```

Dimensions[A]

{45, 9}

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse
```

```
{49, -3430, 103586, -1761238, 18421388,  
-121224674, 489418238, -1106223842, 1069001891}
```

```
Array[c, 9].Transpose[A]
```

```
{c[1] - 70 c[2] + 2114 c[3] - 35950 c[4] + 376244 c[5] -  
2479442 c[6] + 10037646 c[7] - 22796666 c[8] + 22203643 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35950 c[4] + 376244 c[5] - 2479442 c[6] +  
10037710 c[7] - 22797818 c[8] + 22208571 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] + 375852 c[5] - 2471906 c[6] + 9966622 c[7] -  
22468466 c[8] + 21608307 c[9], c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] +  
375868 c[5] - 2472514 c[6] + 9975198 c[7] - 22521618 c[8] + 21730275 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] + 375868 c[5] - 2472482 c[6] + 9974206 c[7] -  
22511794 c[8] + 21699139 c[9], c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] +  
375868 c[5] - 2472482 c[6] + 9974270 c[7] - 22512946 c[8] + 21704067 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] + 375868 c[5] - 2472482 c[6] + 9974334 c[7] -  
22514098 c[8] + 21709251 c[9], c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] +  
375868 c[5] - 2472450 c[6] + 9973406 c[7] - 22505298 c[8] + 21681891 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] + 375884 c[5] - 2473058 c[6] + 9981918 c[7] -  
22557298 c[8] + 21798931 c[9], c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] +  
375884 c[5] - 2473058 c[6] + 9981982 c[7] - 22558450 c[8] + 21803859 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375476 c[5] - 2464914 c[6] + 9902318 c[7] -  
22175946 c[8] + 21081627 c[9], c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] +  
375476 c[5] - 2464882 c[6] + 9901390 c[7] - 22167274 c[8] + 21055419 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465554 c[6] + 9911758 c[7] -  
22236874 c[8] + 21226923 c[9], c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] +  
375492 c[5] - 2465522 c[6] + 9910830 c[7] - 22228074 c[8] + 21199563 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465522 c[6] + 9910894 c[7] -  
22229226 c[8] + 21204747 c[9], c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] +  
375492 c[5] - 2465522 c[6] + 9910894 c[7] - 22229098 c[8] + 21203595 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465490 c[6] + 9909966 c[7] -  
22220426 c[8] + 21177387 c[9], c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] +  
375492 c[5] - 2465490 c[6] + 9910030 c[7] - 22221578 c[8] + 21182571 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465458 c[6] + 9909102 c[7] -  
22212778 c[8] + 21155211 c[9], c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] +  
375508 c[5] - 2466130 c[6] + 9919406 c[7] - 22281226 c[8] + 21321531 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375508 c[5] - 2466098 c[6] + 9918542 c[7] -  
22273578 c[8] + 21299355 c[9], c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] +  
375508 c[5] - 2466098 c[6] + 9918606 c[7] - 22274730 c[8] + 21304539 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375508 c[5] - 2466066 c[6] + 9917614 c[7] -  
22264778 c[8] + 21272251 c[9], c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] +  
375508 c[5] - 2466066 c[6] + 9917678 c[7] - 22265930 c[8] + 21277179 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375508 c[5] - 2466034 c[6] + 9916750 c[7] -  
22257130 c[8] + 21250075 c[9], c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] +  
375524 c[5] - 2466674 c[6] + 9926254 c[7] - 22319082 c[8] + 21399147 c[9],  
c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375100 c[5] - 2457922 c[6] + 9837950 c[7] -  
21882402 c[8] + 20550915 c[9], c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] +
```

```

375 100 c[5] - 2 457 890 c[6] + 9 837 150 c[7] - 21 875 778 c[8] + 20 532 771 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 116 c[5] - 2 458 530 c[6] + 9 846 526 c[7] -
21 935 554 c[8] + 20 672 883 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] +
375 116 c[5] - 2 458 498 c[6] + 9 845 662 c[7] - 21 927 906 c[8] + 20 650 707 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 116 c[5] - 2 458 498 c[6] + 9 845 726 c[7] -
21 929 058 c[8] + 20 655 891 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] +
375 116 c[5] - 2 458 466 c[6] + 9 844 798 c[7] - 21 920 258 c[8] + 20 628 531 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 132 c[5] - 2 459 138 c[6] + 9 855 166 c[7] -
21 989 986 c[8] + 20 801 187 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] +
375 132 c[5] - 2 459 106 c[6] + 9 854 238 c[7] - 21 981 058 c[8] + 20 772 675 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 132 c[5] - 2 459 106 c[6] + 9 854 302 c[7] -
21 982 210 c[8] + 20 777 859 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] +
375 132 c[5] - 2 459 074 c[6] + 9 853 374 c[7] - 21 973 410 c[8] + 20 750 499 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 148 c[5] - 2 459 714 c[6] + 9 862 814 c[7] -
22 034 210 c[8] + 20 894 643 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] +
375 148 c[5] - 2 459 682 c[6] + 9 861 950 c[7] - 22 026 562 c[8] + 20 872 467 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 148 c[5] - 2 459 682 c[6] + 9 862 014 c[7] -
22 027 842 c[8] + 20 878 803 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] +
375 164 c[5] - 2 460 290 c[6] + 9 870 526 c[7] - 22 079 714 c[8] + 20 994 435 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] + 374 740 c[5] - 2 451 506 c[6] + 9 781 358 c[7] -
21 635 386 c[8] + 20 124 027 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] +
374 740 c[5] - 2 451 474 c[6] + 9 780 494 c[7] - 21 627 738 c[8] + 20 101 851 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] + 374 756 c[5] - 2 452 082 c[6] + 9 789 070 c[7] -
21 680 890 c[8] + 20 223 819 c[9], c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] +
374 756 c[5] - 2 452 050 c[6] + 9 788 206 c[7] - 21 673 242 c[8] + 20 201 643 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 380 c[5] - 2 445 058 c[6] +
9 723 902 c[7] - 21 380 722 c[8] + 19 674 963 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3430 c[2] + 103 586 c[3] - 1 761 238 c[4] + 18 421 388 c[5] -
121 224 674 c[6] + 489 418 238 c[7] - 1 106 223 842 c[8] + 1 069 001 891 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3430 c[2] + 103 586 c[3] - 1 761 238 c[4] + 18 421 388 c[5] -
121 224 674 c[6] + 489 418 238 c[7] - 1 106 223 842 c[8] + 1 069 001 891 c[9] < 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 244 c[5] - 2 479 442 c[6] +
10 037 646 c[7] - 22 796 666 c[8] + 22 203 643 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 950 c[4] + 376 244 c[5] - 2 479 442 c[6] +
10 037 710 c[7] - 22 797 818 c[8] + 22 208 571 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 852 c[5] - 2 471 906 c[6] +
9 966 622 c[7] - 22 468 466 c[8] + 21 608 307 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 868 c[5] - 2 472 514 c[6] +
9 975 198 c[7] - 22 521 618 c[8] + 21 730 275 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 868 c[5] - 2 472 482 c[6] +
9 974 206 c[7] - 22 511 794 c[8] + 21 699 139 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 942 c[4] + 375 868 c[5] - 2 472 482 c[6] +
9 974 270 c[7] - 22 512 946 c[8] + 21 704 067 c[9] ≥ 0 &&

```


$$\begin{aligned}
& c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] + 375868 c[5] - 2472482 c[6] + \\
& \quad 9974334 c[7] - 22514098 c[8] + 21709251 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] + 375868 c[5] - 2472450 c[6] + \\
& \quad 9973406 c[7] - 22505298 c[8] + 21681891 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] + 375884 c[5] - 2473058 c[6] + \\
& \quad 9981918 c[7] - 22557298 c[8] + 21798931 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35942 c[4] + 375884 c[5] - 2473058 c[6] + \\
& \quad 9981982 c[7] - 22558450 c[8] + 21803859 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375476 c[5] - 2464914 c[6] + \\
& \quad 9902318 c[7] - 22175946 c[8] + 21081627 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375476 c[5] - 2464882 c[6] + \\
& \quad 9901390 c[7] - 22167274 c[8] + 21055419 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465554 c[6] + \\
& \quad 9911758 c[7] - 22236874 c[8] + 21226923 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465522 c[6] + \\
& \quad 9910830 c[7] - 22228074 c[8] + 21199563 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465522 c[6] + \\
& \quad 9910894 c[7] - 22229226 c[8] + 21204747 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465522 c[6] + \\
& \quad 9910894 c[7] - 22229098 c[8] + 21203595 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465490 c[6] + \\
& \quad 9909966 c[7] - 22220426 c[8] + 21177387 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465490 c[6] + \\
& \quad 9910030 c[7] - 22221578 c[8] + 21182571 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375492 c[5] - 2465458 c[6] + \\
& \quad 9909102 c[7] - 22212778 c[8] + 21155211 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375508 c[5] - 2466130 c[6] + \\
& \quad 9919406 c[7] - 22281226 c[8] + 21321531 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375508 c[5] - 2466098 c[6] + \\
& \quad 9918542 c[7] - 22273578 c[8] + 21299355 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375508 c[5] - 2466098 c[6] + \\
& \quad 9918606 c[7] - 22274730 c[8] + 21304539 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375508 c[5] - 2466066 c[6] + \\
& \quad 9917614 c[7] - 22264778 c[8] + 21272251 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375508 c[5] - 2466066 c[6] + \\
& \quad 9917678 c[7] - 22265930 c[8] + 21277179 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375508 c[5] - 2466034 c[6] + \\
& \quad 9916750 c[7] - 22257130 c[8] + 21250075 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35934 c[4] + 375524 c[5] - 2466674 c[6] + \\
& \quad 9926254 c[7] - 22319082 c[8] + 21399147 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375100 c[5] - 2457922 c[6] + \\
& \quad 9837950 c[7] - 21882402 c[8] + 20550915 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375100 c[5] - 2457890 c[6] + \\
& \quad 9837150 c[7] - 21875778 c[8] + 20532771 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375116 c[5] - 2458530 c[6] + \\
& \quad 9846526 c[7] - 21935554 c[8] + 20672883 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375116 c[5] - 2458498 c[6] +
\end{aligned}$$

```

9 845 662 c[7] - 21 927 906 c[8] + 20 650 707 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 116 c[5] - 2 458 498 c[6] +
9 845 726 c[7] - 21 929 058 c[8] + 20 655 891 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 116 c[5] - 2 458 466 c[6] +
9 844 798 c[7] - 21 920 258 c[8] + 20 628 531 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 132 c[5] - 2 459 138 c[6] +
9 855 166 c[7] - 21 989 986 c[8] + 20 801 187 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 132 c[5] - 2 459 106 c[6] +
9 854 238 c[7] - 21 981 058 c[8] + 20 772 675 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 132 c[5] - 2 459 106 c[6] +
9 854 302 c[7] - 21 982 210 c[8] + 20 777 859 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 132 c[5] - 2 459 074 c[6] +
9 853 374 c[7] - 21 973 410 c[8] + 20 750 499 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 148 c[5] - 2 459 714 c[6] +
9 862 814 c[7] - 22 034 210 c[8] + 20 894 643 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 148 c[5] - 2 459 682 c[6] +
9 861 950 c[7] - 22 026 562 c[8] + 20 872 467 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 148 c[5] - 2 459 682 c[6] +
9 862 014 c[7] - 22 027 842 c[8] + 20 878 803 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 926 c[4] + 375 164 c[5] - 2 460 290 c[6] +
9 870 526 c[7] - 22 079 714 c[8] + 20 994 435 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] + 374 740 c[5] - 2 451 506 c[6] +
9 781 358 c[7] - 21 635 386 c[8] + 20 124 027 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] + 374 740 c[5] - 2 451 474 c[6] +
9 780 494 c[7] - 21 627 738 c[8] + 20 101 851 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] + 374 756 c[5] - 2 452 082 c[6] +
9 789 070 c[7] - 21 680 890 c[8] + 20 223 819 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 918 c[4] + 374 756 c[5] - 2 452 050 c[6] +
9 788 206 c[7] - 21 673 242 c[8] + 20 201 643 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 380 c[5] - 2 445 058 c[6] +
9 723 902 c[7] - 21 380 722 c[8] + 19 674 963 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, -312 204 467 074, -43 839 706 334,
-4 468 167 233, -463 940 452, -49 178 872, -5 332 649, -592 516}

GCD[0, 0, -312 204 467 074, -43 839 706 334,
-4 468 167 233, -463 940 452, -49 178 872, -5 332 649, -592 516]
1

cert.g
-1 561 610 462

{0, 0, -312 204 467 074, -43 839 706 334, -4 468 167 233, -463 940 452,
-49 178 872, -5 332 649, -592 516}.Reverse[gpart[listdim17[[148]]]
-1 561 610 462

```

`cert.Transpose[A]`

```
{25 684 930, 101 529 922, 25 251 826, 25 332 802, 25 313 762, 101 158 754, 25 319 650,
 101 144 962, 25 380 946, 101 225 938, 24 866 866, 100 692 818, 24 962 274, 100 787 586,
 24 948 482, 24 947 842, 100 773 794, 24 934 690, 100 760 002, 100 868 562, 100 854 770,
 25 015 666, 24 995 986, 100 840 978, 24 982 194, 100 921 954, 100 321 650,
 24 468 114, 100 402 626, 100 388 834, 24 549 730, 100 375 042, 24 645 138,
 100 469 810, 24 630 706, 100 456 018, 100 550 786, 100 536 994, 24 698 530,
 100 617 970, 100 003 874, 99 990 082, 100 071 058, 100 057 266, 99 672 306}
```

`chi = listdim17[[149]]`

$$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-63520 + 36873x - 8272x^2 + 902x^3 - 48x^4 + x^5)$$

`CoefficientList[feasibleinterlacingpolylist[chi], x]`

```
A = {{1, -63, 1669, -24 059, 203 379, -1 005 709, 2 686 471, -2 982 969},
      {1, -63, 1669, -24 051, 203 043, -1 000 461, 2 650 327, -2 890 305},
      {1, -63, 1669, -24 051, 203 059, -1 001 021, 2 656 711, -2 914 065},
      {1, -63, 1669, -24 051, 203 059, -1 000 989, 2 656 071, -2 910 897},
      {1, -63, 1669, -24 051, 203 059, -1 000 957, 2 655 431, -2 907 729},
      {1, -63, 1669, -24 051, 203 059, -1 000 925, 2 654 791, -2 904 561},
      {1, -63, 1669, -24 051, 203 075, -1 001 517, 2 661 815, -2 931 489},
      {1, -63, 1669, -24 051, 203 075, -1 001 485, 2 661 175, -2 928 321},
      {1, -63, 1669, -24 051, 203 075, -1 001 453, 2 660 535, -2 925 153},
      {1, -63, 1669, -24 051, 203 091, -1 001 949, 2 665 639, -2 942 577},
      {1, -63, 1669, -24 043, 202 707, -995 245, 2 614 823, -2 800 809},
      {1, -63, 1669, -24 043, 202 723, -995 773, 2 620 567, -2 821 401},
      {1, -63, 1669, -24 043, 202 723, -995 741, 2 619 927, -2 818 233},
      {1, -63, 1669, -24 043, 202 723, -995 709, 2 619 287, -2 815 065},
      {1, -63, 1669, -24 043, 202 723, -995 677, 2 618 647, -2 811 897},
      {1, -63, 1669, -24 043, 202 739, -996 269, 2 625 671, -2 838 825},
      {1, -63, 1669, -24 043, 202 739, -996 237, 2 625 031, -2 835 657},
      {1, -63, 1669, -24 043, 202 739, -996 205, 2 624 391, -2 832 489},
      {1, -63, 1669, -24 043, 202 739, -996 173, 2 623 751, -2 829 321},
      {1, -63, 1669, -24 043, 202 755, -996 733, 2 630 135, -2 853 081},
      {1, -63, 1669, -24 043, 202 755, -996 701, 2 629 495, -2 849 913},
      {1, -63, 1669, -24 043, 202 755, -996 669, 2 628 855, -2 846 745},
      {1, -63, 1669, -24 043, 202 771, -997 197, 2 634 599, -2 867 337},
      {1, -63, 1669, -24 043, 202 771, -997 165, 2 633 959, -2 864 169},
      {1, -63, 1669, -24 043, 202 787, -997 693, 2 639 703, -2 884 761},
      {1, -63, 1669, -24 043, 202 787, -997 661, 2 639 063, -2 881 593},
      {1, -63, 1669, -24 043, 202 803, -998 157, 2 644 167, -2 899 017},
      {1, -63, 1669, -24 035, 202 371, -989 997, 2 578 679, -2 708 145},
```

{1, -63, 1669, -24 035, 202 387, -990 525, 2 584 423, -2 728 737},
 {1, -63, 1669, -24 035, 202 387, -990 493, 2 583 783, -2 725 569},
 {1, -63, 1669, -24 035, 202 387, -990 461, 2 583 143, -2 722 401},
 {1, -63, 1669, -24 035, 202 403, -990 989, 2 588 887, -2 742 993},
 {1, -63, 1669, -24 035, 202 403, -990 957, 2 588 247, -2 739 825},
 {1, -63, 1669, -24 035, 202 403, -990 925, 2 587 607, -2 736 657},
 {1, -63, 1669, -24 035, 202 419, -991 453, 2 593 351, -2 757 249},
 {1, -63, 1669, -24 035, 202 419, -991 421, 2 592 711, -2 754 081},
 {1, -63, 1669, -24 035, 202 419, -991 389, 2 592 071, -2 750 913},
 {1, -63, 1669, -24 035, 202 435, -991 949, 2 598 455, -2 774 673},
 {1, -63, 1669, -24 035, 202 435, -991 917, 2 597 815, -2 771 505},
 {1, -63, 1669, -24 035, 202 435, -991 885, 2 597 175, -2 768 337},
 {1, -63, 1669, -24 035, 202 451, -992 413, 2 602 919, -2 788 929},
 {1, -63, 1669, -24 035, 202 451, -992 381, 2 602 279, -2 785 761},
 {1, -63, 1669, -24 035, 202 467, -992 909, 2 608 023, -2 806 353},
 {1, -63, 1669, -24 035, 202 467, -992 877, 2 607 383, -2 803 185},
 {1, -63, 1669, -24 035, 202 483, -993 373, 2 612 487, -2 820 609},
 {1, -63, 1669, -24 027, 202 035, -984 781, 2 543 175, -2 618 649},
 {1, -63, 1669, -24 027, 202 051, -985 245, 2 547 639, -2 632 905},
 {1, -63, 1669, -24 027, 202 067, -985 741, 2 552 743, -2 650 329},
 {1, -63, 1669, -24 027, 202 067, -985 709, 2 552 103, -2 647 161},
 {1, -63, 1669, -24 027, 202 067, -985 677, 2 551 463, -2 643 993},
 {1, -63, 1669, -24 027, 202 083, -986 205, 2 557 207, -2 664 585},
 {1, -63, 1669, -24 027, 202 083, -986 173, 2 556 567, -2 661 417},
 {1, -63, 1669, -24 027, 202 083, -986 141, 2 555 927, -2 658 249},
 {1, -63, 1669, -24 027, 202 099, -986 669, 2 561 671, -2 678 841},
 {1, -63, 1669, -24 027, 202 099, -986 637, 2 561 031, -2 675 673},
 {1, -63, 1669, -24 027, 202 099, -986 605, 2 560 391, -2 672 505},
 {1, -63, 1669, -24 027, 202 115, -987 165, 2 566 775, -2 696 265},
 {1, -63, 1669, -24 027, 202 115, -987 133, 2 566 135, -2 693 097},
 {1, -63, 1669, -24 027, 202 115, -987 101, 2 565 495, -2 689 929},
 {1, -63, 1669, -24 027, 202 131, -987 629, 2 571 239, -2 710 521},
 {1, -63, 1669, -24 027, 202 131, -987 597, 2 570 599, -2 707 353},
 {1, -63, 1669, -24 019, 201 715, -979 997, 2 511 495, -2 540 241},
 {1, -63, 1669, -24 019, 201 731, -980 461, 2 515 959, -2 554 497},
 {1, -63, 1669, -24 019, 201 747, -980 925, 2 520 423, -2 568 753},
 {1, -63, 1669, -24 019, 201 763, -981 421, 2 525 527, -2 586 177},
 {1, -63, 1669, -24 019, 201 763, -981 389, 2 524 887, -2 583 009},
 {1, -63, 1669, -24 019, 201 779, -981 885, 2 529 991, -2 600 433},
 {1, -63, 1669, -24 019, 201 779, -981 853, 2 529 351, -2 597 265},
 {1, -63, 1669, -24 019, 201 779, -981 821, 2 528 711, -2 594 097},
 {1, -63, 1669, -24 019, 201 795, -982 349, 2 534 455, -2 614 689},
 {1, -63, 1669, -24 019, 201 795, -982 317, 2 533 815, -2 611 521},
 {1, -63, 1669, -24 019, 201 811, -982 845, 2 539 559, -2 632 113},
 {1, -63, 1669, -24 011, 201 411, -975 677, 2 484 279, -2 476 089},
 {1, -63, 1669, -24 011, 201 427, -976 141, 2 488 743, -2 490 345},
 {1, -63, 1669, -24 011, 201 443, -976 605, 2 493 207, -2 504 601},

```
{1, -63, 1669, -24 011, 201 459, -977 101, 2 498 311, -2 522 025},
{1, -63, 1669, -24 011, 201 459, -977 069, 2 497 671, -2 518 857},
{1, -63, 1669, -24 011, 201 475, -977 565, 2 502 775, -2 536 281},
{1, -63, 1669, -24 003, 201 123, -971 821, 2 461 527, -2 426 193},
{1, -63, 1669, -24 003, 201 139, -972 317, 2 466 631, -2 443 617},
{1, -63, 1669, -24 003, 201 139, -972 285, 2 465 991, -2 440 449},
{1, -63, 1669, -24 003, 201 155, -972 781, 2 471 095, -2 457 873},
{1, -63, 1669, -23 995, 200 819, -967 501, 2 434 311, -2 362 041},
{1, -63, 1669, -23 995, 200 835, -967 997, 2 439 415, -2 379 465}};
```

```
A // MatrixForm
```

```
( 1 -63 1669 -24 059 203 379 -1 005 709 2 686 471 -2 982 969
 1 -63 1669 -24 051 203 043 -1 000 461 2 650 327 -2 890 305
 1 -63 1669 -24 051 203 059 -1 001 021 2 656 711 -2 914 065
 1 -63 1669 -24 051 203 059 -1 000 989 2 656 071 -2 910 897
 1 -63 1669 -24 051 203 059 -1 000 957 2 655 431 -2 907 729
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 1 -63 1669 -24 051 203 075 -1 001 517 2 661 815 -2 931 489
 1 -63 1669 -24 051 203 075 -1 001 485 2 661 175 -2 928 321
 1 -63 1669 -24 051 203 075 -1 001 453 2 660 535 -2 925 153
 1 -63 1669 -24 051 203 091 -1 001 949 2 665 639 -2 942 577
 1 -63 1669 -24 043 202 707 -995 245 2 614 823 -2 800 809
 1 -63 1669 -24 043 202 723 -995 773 2 620 567 -2 821 401
 1 -63 1669 -24 043 202 723 -995 741 2 619 927 -2 818 233
 1 -63 1669 -24 043 202 723 -995 709 2 619 287 -2 815 065
 1 -63 1669 -24 043 202 723 -995 677 2 618 647 -2 811 897
 1 -63 1669 -24 043 202 739 -996 269 2 625 671 -2 838 825
 1 -63 1669 -24 043 202 739 -996 237 2 625 031 -2 835 657
 1 -63 1669 -24 043 202 739 -996 205 2 624 391 -2 832 489
 1 -63 1669 -24 043 202 739 -996 173 2 623 751 -2 829 321
 1 -63 1669 -24 043 202 755 -996 733 2 630 135 -2 853 081
 1 -63 1669 -24 043 202 755 -996 701 2 629 495 -2 849 913
 1 -63 1669 -24 043 202 755 -996 669 2 628 855 -2 846 745
 1 -63 1669 -24 043 202 771 -997 197 2 634 599 -2 867 337
 1 -63 1669 -24 043 202 771 -997 165 2 633 959 -2 864 169
 1 -63 1669 -24 043 202 787 -997 693 2 639 703 -2 884 761
 1 -63 1669 -24 043 202 787 -997 661 2 639 063 -2 881 593
 1 -63 1669 -24 043 202 803 -998 157 2 644 167 -2 899 017
 1 -63 1669 -24 035 202 371 -989 997 2 578 679 -2 708 145
 1 -63 1669 -24 035 202 387 -990 525 2 584 423 -2 728 737
 1 -63 1669 -24 035 202 387 -990 493 2 583 783 -2 725 569
 1 -63 1669 -24 035 202 387 -990 461 2 583 143 -2 722 401
 1 -63 1669 -24 035 202 403 -990 989 2 588 887 -2 742 993
 1 -63 1669 -24 035 202 403 -990 957 2 588 247 -2 739 825
 1 -63 1669 -24 035 202 403 -990 925 2 587 607 -2 736 657
 1 -63 1669 -24 035 202 419 -991 453 2 593 351 -2 757 249
 1 -63 1669 -24 035 202 419 -991 421 2 592 711 -2 754 081
 1 -63 1669 -24 035 202 419 -991 389 2 592 071 -2 750 913
 1 -63 1669 -24 035 202 435 -991 949 2 598 455 -2 774 673
 1 -63 1669 -24 035 202 435 -991 917 2 597 815 -2 771 505
 1 -63 1669 -24 035 202 435 -991 885 2 597 175 -2 768 337
 1 -63 1669 -24 035 202 451 -992 413 2 602 919 -2 788 929
 1 -63 1669 -24 035 202 451 -992 381 2 602 279 -2 785 761
 1 -63 1669 -24 035 202 467 -992 999 2 608 072 -2 806 252)
```

```

1 -63 1005 -24035 202407 -992303 2000023 -2800333
1 -63 1669 -24035 202467 -992877 2607383 -2803185
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1 -63 1669 -24027 202067 -985677 2551463 -2643993
1 -63 1669 -24027 202083 -986205 2557207 -2664585
1 -63 1669 -24027 202083 -986173 2556567 -2661417
1 -63 1669 -24027 202083 -986141 2555927 -2658249
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1 -63 1669 -24027 202099 -986637 2561031 -2675673
1 -63 1669 -24027 202099 -986605 2560391 -2672505
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1 -63 1669 -24027 202115 -987133 2566135 -2693097
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1 -63 1669 -24027 202131 -987597 2570599 -2707353
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1 -63 1669 -24019 201731 -980461 2515959 -2554497
1 -63 1669 -24019 201747 -980925 2520423 -2568753
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1 -63 1669 -24019 201763 -981389 2524887 -2583009
1 -63 1669 -24019 201779 -981885 2529991 -2600433
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1 -63 1669 -24019 201779 -981821 2528711 -2594097
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1 -63 1669 -24019 201795 -982317 2533815 -2611521
1 -63 1669 -24019 201811 -982845 2539559 -2632113
1 -63 1669 -24011 201411 -975677 2484279 -2476089
1 -63 1669 -24011 201427 -976141 2488743 -2490345
1 -63 1669 -24011 201443 -976605 2493207 -2504601
1 -63 1669 -24011 201459 -977101 2498311 -2522025
1 -63 1669 -24011 201459 -977069 2497671 -2518857
1 -63 1669 -24011 201475 -977565 2502775 -2536281
1 -63 1669 -24003 201123 -971821 2461527 -2426193
1 -63 1669 -24003 201139 -972317 2466631 -2443617
1 -63 1669 -24003 201139 -972285 2465991 -2440449
1 -63 1669 -24003 201155 -972781 2471095 -2457873
1 -63 1669 -23995 200819 -967501 2434311 -2362041
1 -63 1669 -23995 200835 -967997 2439415 -2379465

```

Dimensions[A]

```
{84, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3087, 81781, -1178395, 9946531, -49009661, 129960951, -142326425}
```

Array[c, 8].Transpose[A]

```

{c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] -
 1005709 c[6] + 2686471 c[7] - 2982969 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24051 c[4] + 203043 c[5] - 1000461 c[6] + 2650327 c[7] - 2890305 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203059 c[5] - 1001021 c[6] +

```

$$\begin{aligned}
& 2\,656\,711\,c[7] - 2\,914\,065\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,989\,c[6] + 2\,656\,071\,c[7] - 2\,910\,897\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,059\,c[5] - 1\,000\,957\,c[6] + \\
& 2\,655\,431\,c[7] - 2\,907\,729\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,059\,c[5] - 1\,000\,925\,c[6] + 2\,654\,791\,c[7] - 2\,904\,561\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,517\,c[6] + \\
& 2\,661\,815\,c[7] - 2\,931\,489\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,075\,c[5] - 1\,001\,485\,c[6] + 2\,661\,175\,c[7] - 2\,928\,321\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,075\,c[5] - 1\,001\,453\,c[6] + \\
& 2\,660\,535\,c[7] - 2\,925\,153\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,949\,c[6] + 2\,665\,639\,c[7] - 2\,942\,577\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,707\,c[5] - 995\,245\,c[6] + \\
& 2\,614\,823\,c[7] - 2\,800\,809\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,773\,c[6] + 2\,620\,567\,c[7] - 2\,821\,401\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,741\,c[6] + \\
& 2\,619\,927\,c[7] - 2\,818\,233\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,723\,c[5] - 995\,709\,c[6] + 2\,619\,287\,c[7] - 2\,815\,065\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,723\,c[5] - 995\,677\,c[6] + \\
& 2\,618\,647\,c[7] - 2\,811\,897\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,269\,c[6] + 2\,625\,671\,c[7] - 2\,838\,825\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,237\,c[6] + \\
& 2\,625\,031\,c[7] - 2\,835\,657\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,739\,c[5] - 996\,205\,c[6] + 2\,624\,391\,c[7] - 2\,832\,489\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,173\,c[6] + \\
& 2\,623\,751\,c[7] - 2\,829\,321\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,733\,c[6] + 2\,630\,135\,c[7] - 2\,853\,081\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,701\,c[6] + \\
& 2\,629\,495\,c[7] - 2\,849\,913\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,669\,c[6] + 2\,628\,855\,c[7] - 2\,846\,745\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,197\,c[6] + \\
& 2\,634\,599\,c[7] - 2\,867\,337\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,165\,c[6] + 2\,633\,959\,c[7] - 2\,864\,169\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,693\,c[6] + \\
& 2\,639\,703\,c[7] - 2\,884\,761\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,661\,c[6] + 2\,639\,063\,c[7] - 2\,881\,593\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,157\,c[6] + \\
& 2\,644\,167\,c[7] - 2\,899\,017\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,371\,c[5] - 989\,997\,c[6] + 2\,578\,679\,c[7] - 2\,708\,145\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,525\,c[6] + \\
& 2\,584\,423\,c[7] - 2\,728\,737\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,387\,c[5] - 990\,493\,c[6] + 2\,583\,783\,c[7] - 2\,725\,569\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,387\,c[5] - 990\,461\,c[6] + \\
& 2\,583\,143\,c[7] - 2\,722\,401\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,989\,c[6] + 2\,588\,887\,c[7] - 2\,742\,993\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,403\,c[5] - 990\,957\,c[6] + \\
& 2\,588\,247\,c[7] - 2\,739\,825\,c[8], \, c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,403\,c[5] - 990\,925\,c[6] + 2\,587\,607\,c[7] - 2\,736\,657\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,453 c[6] + \\
& \quad 2\,593\,351 c[7] - 2\,757\,249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,421 c[6] + 2\,592\,711 c[7] - 2\,754\,081 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,389 c[6] + \\
& \quad 2\,592\,071 c[7] - 2\,750\,913 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,949 c[6] + 2\,598\,455 c[7] - 2\,774\,673 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,917 c[6] + \\
& \quad 2\,597\,815 c[7] - 2\,771\,505 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,885 c[6] + 2\,597\,175 c[7] - 2\,768\,337 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,413 c[6] + \\
& \quad 2\,602\,919 c[7] - 2\,788\,929 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,381 c[6] + 2\,602\,279 c[7] - 2\,785\,761 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,909 c[6] + \\
& \quad 2\,608\,023 c[7] - 2\,806\,353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,877 c[6] + 2\,607\,383 c[7] - 2\,803\,185 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,373 c[6] + \\
& \quad 2\,612\,487 c[7] - 2\,820\,609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,035 c[5] - 984\,781 c[6] + 2\,543\,175 c[7] - 2\,618\,649 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,051 c[5] - 985\,245 c[6] + \\
& \quad 2\,547\,639 c[7] - 2\,632\,905 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,067 c[5] - 985\,741 c[6] + 2\,552\,743 c[7] - 2\,650\,329 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,067 c[5] - 985\,709 c[6] + \\
& \quad 2\,552\,103 c[7] - 2\,647\,161 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,067 c[5] - 985\,677 c[6] + 2\,551\,463 c[7] - 2\,643\,993 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,205 c[6] + \\
& \quad 2\,557\,207 c[7] - 2\,664\,585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,083 c[5] - 986\,173 c[6] + 2\,556\,567 c[7] - 2\,661\,417 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,141 c[6] + \\
& \quad 2\,555\,927 c[7] - 2\,658\,249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,669 c[6] + 2\,561\,671 c[7] - 2\,678\,841 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,637 c[6] + \\
& \quad 2\,561\,031 c[7] - 2\,675\,673 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,605 c[6] + 2\,560\,391 c[7] - 2\,672\,505 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,165 c[6] + \\
& \quad 2\,566\,775 c[7] - 2\,696\,265 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,133 c[6] + 2\,566\,135 c[7] - 2\,693\,097 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,101 c[6] + \\
& \quad 2\,565\,495 c[7] - 2\,689\,929 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,629 c[6] + 2\,571\,239 c[7] - 2\,710\,521 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,597 c[6] + \\
& \quad 2\,570\,599 c[7] - 2\,707\,353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,715 c[5] - 979\,997 c[6] + 2\,511\,495 c[7] - 2\,540\,241 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,731 c[5] - 980\,461 c[6] + \\
& \quad 2\,515\,959 c[7] - 2\,554\,497 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,747 c[5] - 980\,925 c[6] + 2\,520\,423 c[7] - 2\,568\,753 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,763 c[5] - 981\,421 c[6] + \\
& \quad 2\,525\,527 c[7] - 2\,586\,177 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] +
\end{aligned}$$


```

201763 c[5] - 981389 c[6] + 2524887 c[7] - 2583009 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24019 c[4] + 201779 c[5] - 981885 c[6] +
2529991 c[7] - 2600433 c[8], c[1] - 63 c[2] + 1669 c[3] - 24019 c[4] +
201779 c[5] - 981853 c[6] + 2529351 c[7] - 2597265 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24019 c[4] + 201779 c[5] - 981821 c[6] +
2528711 c[7] - 2594097 c[8], c[1] - 63 c[2] + 1669 c[3] - 24019 c[4] +
201795 c[5] - 982349 c[6] + 2534455 c[7] - 2614689 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24019 c[4] + 201795 c[5] - 982317 c[6] +
2533815 c[7] - 2611521 c[8], c[1] - 63 c[2] + 1669 c[3] - 24019 c[4] +
201811 c[5] - 982845 c[6] + 2539559 c[7] - 2632113 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201411 c[5] - 975677 c[6] +
2484279 c[7] - 2476089 c[8], c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] +
201427 c[5] - 976141 c[6] + 2488743 c[7] - 2490345 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201443 c[5] - 976605 c[6] +
2493207 c[7] - 2504601 c[8], c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] +
201459 c[5] - 977101 c[6] + 2498311 c[7] - 2522025 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201459 c[5] - 977069 c[6] +
2497671 c[7] - 2518857 c[8], c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] +
201475 c[5] - 977565 c[6] + 2502775 c[7] - 2536281 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] + 201123 c[5] - 971821 c[6] +
2461527 c[7] - 2426193 c[8], c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] +
201139 c[5] - 972317 c[6] + 2466631 c[7] - 2443617 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] + 201139 c[5] - 972285 c[6] +
2465991 c[7] - 2440449 c[8], c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] +
201155 c[5] - 972781 c[6] + 2471095 c[7] - 2457873 c[8],
c[1] - 63 c[2] + 1669 c[3] - 23995 c[4] + 200819 c[5] - 967501 c[6] +
2434311 c[7] - 2362041 c[8], c[1] - 63 c[2] + 1669 c[3] - 23995 c[4] +
200835 c[5] - 967997 c[6] + 2439415 c[7] - 2379465 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81781 c[3] - 1178395 c[4] +
9946531 c[5] - 49009661 c[6] + 129960951 c[7] - 142326425 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81781 c[3] - 1178395 c[4] +
9946531 c[5] - 49009661 c[6] + 129960951 c[7] - 142326425 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203379 c[5] -
1005709 c[6] + 2686471 c[7] - 2982969 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203043 c[5] - 1000461 c[6] +
2650327 c[7] - 2890305 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203059 c[5] - 1001021 c[6] + 2656711 c[7] - 2914065 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203059 c[5] - 1000989 c[6] +
2656071 c[7] - 2910897 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203059 c[5] - 1000957 c[6] + 2655431 c[7] - 2907729 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203059 c[5] - 1000925 c[6] +
2654791 c[7] - 2904561 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203075 c[5] - 1001517 c[6] + 2661815 c[7] - 2931489 c[8] ≥ 0 &&

```

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,075 c[5] - 1\,001\,485 c[6] + \\
& \quad 2\,661\,175 c[7] - 2\,928\,321 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + \\
& \quad 203\,075 c[5] - 1\,001\,453 c[6] + 2\,660\,535 c[7] - 2\,925\,153 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,051 c[4] + 203\,091 c[5] - 1\,001\,949 c[6] + \\
& \quad 2\,665\,639 c[7] - 2\,942\,577 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,707 c[5] - 995\,245 c[6] + 2\,614\,823 c[7] - 2\,800\,809 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,773 c[6] + \\
& \quad 2\,620\,567 c[7] - 2\,821\,401 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,741 c[6] + 2\,619\,927 c[7] - 2\,818\,233 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,723 c[5] - 995\,709 c[6] + \\
& \quad 2\,619\,287 c[7] - 2\,815\,065 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,723 c[5] - 995\,677 c[6] + 2\,618\,647 c[7] - 2\,811\,897 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,269 c[6] + \\
& \quad 2\,625\,671 c[7] - 2\,838\,825 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,237 c[6] + 2\,625\,031 c[7] - 2\,835\,657 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,739 c[5] - 996\,205 c[6] + \\
& \quad 2\,624\,391 c[7] - 2\,832\,489 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,739 c[5] - 996\,173 c[6] + 2\,623\,751 c[7] - 2\,829\,321 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,733 c[6] + \\
& \quad 2\,630\,135 c[7] - 2\,853\,081 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,755 c[5] - 996\,701 c[6] + 2\,629\,495 c[7] - 2\,849\,913 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,669 c[6] + \\
& \quad 2\,628\,855 c[7] - 2\,846\,745 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,197 c[6] + 2\,634\,599 c[7] - 2\,867\,337 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,165 c[6] + \\
& \quad 2\,633\,959 c[7] - 2\,864\,169 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,693 c[6] + 2\,639\,703 c[7] - 2\,884\,761 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,661 c[6] + \\
& \quad 2\,639\,063 c[7] - 2\,881\,593 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,803 c[5] - 998\,157 c[6] + 2\,644\,167 c[7] - 2\,899\,017 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,371 c[5] - 989\,997 c[6] + \\
& \quad 2\,578\,679 c[7] - 2\,708\,145 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,387 c[5] - 990\,525 c[6] + 2\,584\,423 c[7] - 2\,728\,737 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,387 c[5] - 990\,493 c[6] + \\
& \quad 2\,583\,783 c[7] - 2\,725\,569 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,387 c[5] - 990\,461 c[6] + 2\,583\,143 c[7] - 2\,722\,401 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,989 c[6] + \\
& \quad 2\,588\,887 c[7] - 2\,742\,993 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,957 c[6] + 2\,588\,247 c[7] - 2\,739\,825 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,925 c[6] + \\
& \quad 2\,587\,607 c[7] - 2\,736\,657 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,453 c[6] + 2\,593\,351 c[7] - 2\,757\,249 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,421 c[6] + \\
& \quad 2\,592\,711 c[7] - 2\,754\,081 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,389 c[6] + 2\,592\,071 c[7] - 2\,750\,913 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,949 c[6] + \\
& \quad 2\,598\,455 c[7] - 2\,774\,673 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,815\,c[7] - 2\,771\,505\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& \quad 2\,597\,175\,c[7] - 2\,768\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,451\,c[5] - 992\,413\,c[6] + 2\,602\,919\,c[7] - 2\,788\,929\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,381\,c[6] + \\
& \quad 2\,602\,279\,c[7] - 2\,785\,761\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,467\,c[5] - 992\,909\,c[6] + 2\,608\,023\,c[7] - 2\,806\,353\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,877\,c[6] + \\
& \quad 2\,607\,383\,c[7] - 2\,803\,185\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,483\,c[5] - 993\,373\,c[6] + 2\,612\,487\,c[7] - 2\,820\,609\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,035\,c[5] - 984\,781\,c[6] + \\
& \quad 2\,543\,175\,c[7] - 2\,618\,649\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,051\,c[5] - 985\,245\,c[6] + 2\,547\,639\,c[7] - 2\,632\,905\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,067\,c[5] - 985\,741\,c[6] + \\
& \quad 2\,552\,743\,c[7] - 2\,650\,329\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,067\,c[5] - 985\,709\,c[6] + 2\,552\,103\,c[7] - 2\,647\,161\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,067\,c[5] - 985\,677\,c[6] + \\
& \quad 2\,551\,463\,c[7] - 2\,643\,993\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,083\,c[5] - 986\,205\,c[6] + 2\,557\,207\,c[7] - 2\,664\,585\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,083\,c[5] - 986\,173\,c[6] + \\
& \quad 2\,556\,567\,c[7] - 2\,661\,417\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,083\,c[5] - 986\,141\,c[6] + 2\,555\,927\,c[7] - 2\,658\,249\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,669\,c[6] + \\
& \quad 2\,561\,671\,c[7] - 2\,678\,841\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,099\,c[5] - 986\,637\,c[6] + 2\,561\,031\,c[7] - 2\,675\,673\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,605\,c[6] + \\
& \quad 2\,560\,391\,c[7] - 2\,672\,505\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,165\,c[6] + 2\,566\,775\,c[7] - 2\,696\,265\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,133\,c[6] + \\
& \quad 2\,566\,135\,c[7] - 2\,693\,097\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,495\,c[7] - 2\,689\,929\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,629\,c[6] + \\
& \quad 2\,571\,239\,c[7] - 2\,710\,521\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,599\,c[7] - 2\,707\,353\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,715\,c[5] - 979\,997\,c[6] + \\
& \quad 2\,511\,495\,c[7] - 2\,540\,241\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,731\,c[5] - 980\,461\,c[6] + 2\,515\,959\,c[7] - 2\,554\,497\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,747\,c[5] - 980\,925\,c[6] + \\
& \quad 2\,520\,423\,c[7] - 2\,568\,753\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,763\,c[5] - 981\,421\,c[6] + 2\,525\,527\,c[7] - 2\,586\,177\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,763\,c[5] - 981\,389\,c[6] + \\
& \quad 2\,524\,887\,c[7] - 2\,583\,009\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,779\,c[5] - 981\,885\,c[6] + 2\,529\,991\,c[7] - 2\,600\,433\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,779\,c[5] - 981\,853\,c[6] + \\
& \quad 2\,529\,351\,c[7] - 2\,597\,265\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,779\,c[5] - 981\,821\,c[6] + 2\,528\,711\,c[7] - 2\,594\,097\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,349\,c[6] +
\end{aligned}$$

```

2 534 455 c[7] - 2 614 689 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 795 c[5] - 982 317 c[6] + 2 533 815 c[7] - 2 611 521 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 845 c[6] +
2 539 559 c[7] - 2 632 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 411 c[5] - 975 677 c[6] + 2 484 279 c[7] - 2 476 089 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 427 c[5] - 976 141 c[6] +
2 488 743 c[7] - 2 490 345 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 443 c[5] - 976 605 c[6] + 2 493 207 c[7] - 2 504 601 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 101 c[6] +
2 498 311 c[7] - 2 522 025 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 459 c[5] - 977 069 c[6] + 2 497 671 c[7] - 2 518 857 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 565 c[6] +
2 502 775 c[7] - 2 536 281 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 123 c[5] - 971 821 c[6] + 2 461 527 c[7] - 2 426 193 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 139 c[5] - 972 317 c[6] +
2 466 631 c[7] - 2 443 617 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 139 c[5] - 972 285 c[6] + 2 465 991 c[7] - 2 440 449 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 781 c[6] +
2 471 095 c[7] - 2 457 873 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
200 819 c[5] - 967 501 c[6] + 2 434 311 c[7] - 2 362 041 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] + 200 835 c[5] - 967 997 c[6] +
2 439 415 c[7] - 2 379 465 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -62 996 931, -16 541 959, -2 705 478, -379 470, -49 333}

GCD[0, 0, 0, -62 996 931, -16 541 959, -2 705 478, -379 470, -49 333]
1

cert.g
-172 416 971

{0, 0, 0, -62 996 931, -16 541 959, -2 705 478, -379 470, -49 333}.
Reverse[gpart[listdim17[[149]]]]
-172 416 971

cert.Transpose[A]
{3 316 677, 3 261 477, 3 273 413, 3 271 973, 3 270 533, 3 269 093, 3 282 469, 3 281 029,
3 279 589, 3 288 645, 3 207 717, 3 218 213, 3 216 773, 3 215 333, 3 213 893, 3 227 269,
3 225 829, 3 224 389, 3 222 949, 3 234 885, 3 233 445, 3 232 005, 3 242 501, 3 241 061,
3 251 557, 3 250 117, 3 259 173, 3 152 517, 3 163 013, 3 161 573, 3 160 133, 3 170 629,
3 169 189, 3 167 749, 3 178 245, 3 176 805, 3 175 365, 3 187 301, 3 185 861, 3 184 421,
3 194 917, 3 193 477, 3 203 973, 3 202 533, 3 211 589, 3 098 757, 3 106 373, 3 115 429,
3 113 989, 3 112 549, 3 123 045, 3 121 605, 3 120 165, 3 130 661, 3 129 221, 3 127 781,
3 139 717, 3 138 277, 3 136 837, 3 147 333, 3 145 893, 3 051 173, 3 058 789,
3 066 405, 3 075 461, 3 074 021, 3 083 077, 3 081 637, 3 080 197, 3 090 693,
3 089 253, 3 099 749, 3 011 205, 3 018 821, 3 026 437, 3 035 493, 3 034 053,
3 043 109, 2 978 853, 2 987 909, 2 986 469, 2 995 525, 2 938 885, 2 947 941}

```

```
chi = listdim17[[150]]
```

$$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-63872 + 36905x - 8272x^2 + 902x^3 - 48x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -63, 1669, -24051, 203091, -1001885, 2664359, -2936241},
      {1, -63, 1669, -24051, 203091, -1001853, 2663591, -2931665},
      {1, -63, 1669, -24051, 203091, -1001853, 2663655, -2932369},
      {1, -63, 1669, -24051, 203091, -1001821, 2662887, -2927793},
      {1, -63, 1669, -24051, 203107, -1002349, 2668631, -2948385},
      {1, -63, 1669, -24051, 203107, -1002349, 2668695, -2949089},
      {1, -63, 1669, -24051, 203107, -1002317, 2667927, -2944513},
      {1, -63, 1669, -24051, 203107, -1002317, 2667991, -2945217},
      {1, -63, 1669, -24043, 202739, -996109, 2622471, -2822985},
      {1, -63, 1669, -24043, 202755, -996637, 2628151, -2842873},
      {1, -63, 1669, -24043, 202755, -996637, 2628215, -2843577},
      {1, -63, 1669, -24043, 202755, -996605, 2627447, -2839001},
      {1, -63, 1669, -24043, 202755, -996605, 2627511, -2839705},
      {1, -63, 1669, -24043, 202755, -996605, 2627575, -2840409},
      {1, -63, 1669, -24043, 202755, -996573, 2626871, -2836537},
      {1, -63, 1669, -24043, 202771, -997165, 2633895, -2863465},
      {1, -63, 1669, -24043, 202771, -997165, 2633959, -2864169},
      {1, -63, 1669, -24043, 202771, -997133, 2633191, -2859593},
      {1, -63, 1669, -24043, 202771, -997133, 2633255, -2860297},
      {1, -63, 1669, -24043, 202771, -997133, 2633319, -2861001},
      {1, -63, 1669, -24043, 202771, -997101, 2632487, -2855721},
      {1, -63, 1669, -24043, 202771, -997101, 2632551, -2856425},
      {1, -63, 1669, -24043, 202771, -997101, 2632615, -2857129},
      {1, -63, 1669, -24043, 202771, -997101, 2632679, -2857833},
      {1, -63, 1669, -24043, 202771, -997069, 2631847, -2852553},
      {1, -63, 1669, -24043, 202771, -997069, 2631911, -2853257},
      {1, -63, 1669, -24043, 202787, -997693, 2639703, -2884761},
      {1, -63, 1669, -24043, 202787, -997661, 2638999, -2880889},
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1	-63	1669	-24 019	201 827	-983 341	2 544 663	-2 649 537
1	-63	1669	-24 019	201 827	-983 309	2 543 959	-2 645 665
1	-63	1669	-24 019	201 827	-983 309	2 544 023	-2 646 369
1	-63	1669	-24 019	201 827	-983 277	2 543 319	-2 642 497
1	-63	1669	-24 019	201 843	-983 837	2 549 767	-2 666 961
1	-63	1669	-24 019	201 843	-983 805	2 549 127	-2 663 793
1	-63	1669	-24 011	201 459	-977 101	2 498 311	-2 522 025
1	-63	1669	-24 011	201 475	-977 597	2 503 415	-2 539 449
1	-63	1669	-24 011	201 475	-977 565	2 502 775	-2 536 281
1	-63	1669	-24 011	201 475	-977 533	2 502 135	-2 533 113
1	-63	1669	-24 011	201 491	-978 061	2 507 879	-2 553 705
1	-63	1669	-24 011	201 491	-978 029	2 507 175	-2 549 833
1	-63	1669	-24 011	201 491	-978 029	2 507 239	-2 550 537
1	-63	1669	-24 011	201 507	-978 557	2 512 983	-2 571 129
1	-63	1669	-24 011	201 507	-978 525	2 512 343	-2 567 961
1	-63	1669	-24 011	201 523	-979 053	2 518 087	-2 588 553

$$\begin{pmatrix} 1 & -63 & 1669 & -24\,003 & 201\,171 & -973\,277 & 2\,476\,199 & -2\,475\,297 \\ 1 & -63 & 1669 & -24\,003 & 201\,187 & -973\,773 & 2\,481\,303 & -2\,492\,721 \\ 1 & -63 & 1669 & -23\,995 & 200\,851 & -968\,493 & 2\,444\,519 & -2\,396\,889 \end{pmatrix}$$

Dimensions[A]

{147, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81 781, -1 178 395, 9 947 971, -49 048 285, 130 291 031, -143 200 441}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 091 c[5] -
 1 001 885 c[6] + 2 664 359 c[7] - 2 936 241 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24 051 c[4] + 203 091 c[5] - 1 001 853 c[6] + 2 663 591 c[7] - 2 931 665 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 091 c[5] - 1 001 853 c[6] +
 2 663 655 c[7] - 2 932 369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
 203 091 c[5] - 1 001 821 c[6] + 2 662 887 c[7] - 2 927 793 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 107 c[5] - 1 002 349 c[6] +
 2 668 631 c[7] - 2 948 385 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
 203 107 c[5] - 1 002 349 c[6] + 2 668 695 c[7] - 2 949 089 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 107 c[5] - 1 002 317 c[6] +
 2 667 927 c[7] - 2 944 513 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
 203 107 c[5] - 1 002 317 c[6] + 2 667 991 c[7] - 2 945 217 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 109 c[6] +
 2 622 471 c[7] - 2 822 985 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
 202 755 c[5] - 996 637 c[6] + 2 628 151 c[7] - 2 842 873 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 755 c[5] - 996 637 c[6] +
 2 628 215 c[7] - 2 843 577 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
 202 755 c[5] - 996 605 c[6] + 2 627 447 c[7] - 2 839 001 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 755 c[5] - 996 605 c[6] +
 2 627 511 c[7] - 2 839 705 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
 202 755 c[5] - 996 605 c[6] + 2 627 575 c[7] - 2 840 409 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 755 c[5] - 996 573 c[6] +
 2 626 871 c[7] - 2 836 537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
 202 771 c[5] - 997 165 c[6] + 2 633 895 c[7] - 2 863 465 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 771 c[5] - 997 165 c[6] +
 2 633 959 c[7] - 2 864 169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
 202 771 c[5] - 997 133 c[6] + 2 633 191 c[7] - 2 859 593 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 771 c[5] - 997 133 c[6] +
 2 633 255 c[7] - 2 860 297 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
 202 771 c[5] - 997 133 c[6] + 2 633 319 c[7] - 2 861 001 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 771 c[5] - 997 101 c[6] +
 2 632 487 c[7] - 2 855 721 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
 202 771 c[5] - 997 101 c[6] + 2 632 551 c[7] - 2 856 425 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 771 c[5] - 997 101 c[6] +
 2 632 615 c[7] - 2 857 129 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
 202 771 c[5] - 997 101 c[6] + 2 632 679 c[7] - 2 857 833 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 771 c[5] - 997 069 c[6] + 2 631 847 c[7] -

$$\begin{aligned}
& 2\,852\,553\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - \\
& 997\,069\,c[6] + 2\,631\,911\,c[7] - 2\,853\,257\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - \\
& 24\,043\,c[4] + 202\,787\,c[5] - 997\,693\,c[6] + 2\,639\,703\,c[7] - 2\,884\,761\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,661\,c[6] + \\
& 2\,638\,999\,c[7] - 2\,880\,889\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,661\,c[6] + 2\,639\,063\,c[7] - 2\,881\,593\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,629\,c[6] + \\
& 2\,638\,295\,c[7] - 2\,877\,017\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,629\,c[6] + 2\,638\,359\,c[7] - 2\,877\,721\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,629\,c[6] + \\
& 2\,638\,423\,c[7] - 2\,878\,425\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,597\,c[6] + 2\,637\,655\,c[7] - 2\,873\,849\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,597\,c[6] + \\
& 2\,637\,719\,c[7] - 2\,874\,553\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,565\,c[6] + 2\,636\,951\,c[7] - 2\,869\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,565\,c[6] + \\
& 2\,637\,015\,c[7] - 2\,870\,681\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,803\,c[5] - 998\,125\,c[6] + 2\,643\,399\,c[7] - 2\,894\,441\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,093\,c[6] + \\
& 2\,642\,759\,c[7] - 2\,891\,273\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,803\,c[5] - 998\,093\,c[6] + 2\,642\,823\,c[7] - 2\,891\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,061\,c[6] + \\
& 2\,642\,055\,c[7] - 2\,887\,401\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,803\,c[5] - 998\,029\,c[6] + 2\,641\,351\,c[7] - 2\,883\,529\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,819\,c[5] - 998\,557\,c[6] + \\
& 2\,647\,159\,c[7] - 2\,904\,825\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,007\,c[7] - 2\,750\,209\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,071\,c[7] - 2\,750\,913\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,367\,c[7] - 2\,747\,041\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,431\,c[7] - 2\,747\,745\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,325\,c[6] + 2\,590\,791\,c[7] - 2\,744\,577\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,917\,c[6] + \\
& 2\,597\,751\,c[7] - 2\,770\,801\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,815\,c[7] - 2\,771\,505\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,111\,c[7] - 2\,767\,633\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,175\,c[7] - 2\,768\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,407\,c[7] - 2\,763\,761\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,471\,c[7] - 2\,764\,465\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,535\,c[7] - 2\,765\,169\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,831\,c[7] - 2\,761\,297\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,445\,c[6] + \\
& 2\,603\,559\,c[7] - 2\,792\,097\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,451\,c[5] - 992\,413\,c[6] + 2\,602\,919\,c[7] - 2\,788\,929\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,381\,c[6] + \\
& 2\,602\,215\,c[7] - 2\,785\,057\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,279\,c[7] - 2\,785\,761\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,511\,c[7] - 2\,781\,185\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,349\,c[6] + 2\,601\,575\,c[7] - 2\,781\,889\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,639\,c[7] - 2\,782\,593\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,871\,c[7] - 2\,778\,017\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,317\,c[6] + \\
& 2\,600\,935\,c[7] - 2\,778\,721\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,285\,c[6] + 2\,600\,231\,c[7] - 2\,774\,849\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,941\,c[6] + \\
& 2\,608\,663\,c[7] - 2\,809\,521\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,909\,c[6] + 2\,608\,023\,c[7] - 2\,806\,353\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,877\,c[6] + \\
& 2\,607\,319\,c[7] - 2\,802\,481\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,877\,c[6] + 2\,607\,383\,c[7] - 2\,803\,185\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] + \\
& 2\,606\,615\,c[7] - 2\,798\,609\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,845\,c[6] + 2\,606\,679\,c[7] - 2\,799\,313\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] + \\
& 2\,606\,743\,c[7] - 2\,800\,017\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,813\,c[6] + 2\,605\,975\,c[7] - 2\,795\,441\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& 2\,606\,039\,c[7] - 2\,796\,145\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,781\,c[6] + 2\,605\,271\,c[7] - 2\,791\,569\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,405\,c[6] + \\
& 2\,613\,127\,c[7] - 2\,823\,777\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,373\,c[6] + 2\,612\,423\,c[7] - 2\,819\,905\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,373\,c[6] + \\
& 2\,612\,487\,c[7] - 2\,820\,609\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,341\,c[6] + 2\,611\,783\,c[7] - 2\,816\,737\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,309\,c[6] + \\
& 2\,611\,079\,c[7] - 2\,812\,865\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,277\,c[6] + 2\,610\,375\,c[7] - 2\,808\,993\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,869\,c[6] + \\
& 2\,617\,591\,c[7] - 2\,838\,033\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,837\,c[6] + 2\,616\,887\,c[7] - 2\,834\,161\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,805\,c[6] + \\
& 2\,616\,183\,c[7] - 2\,830\,289\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,083\,c[5] - 986\,141\,c[6] + 2\,555\,927\,c[7] - 2\,658\,249\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,669\,c[6] + \\
& 2\,561\,671\,c[7] - 2\,678\,841\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,637\,c[6] + 2\,560\,967\,c[7] - 2\,674\,969\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,637\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,561\,031\,c[7] - 2\,675\,673\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,605\,c[6] + 2\,560\,391\,c[7] - 2\,672\,505\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,573\,c[6] + \\
& 2\,559\,751\,c[7] - 2\,669\,337\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,165\,c[6] + 2\,566\,775\,c[7] - 2\,696\,265\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,133\,c[6] + \\
& 2\,566\,135\,c[7] - 2\,693\,097\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,431\,c[7] - 2\,689\,225\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& 2\,565\,495\,c[7] - 2\,689\,929\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,791\,c[7] - 2\,686\,057\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& 2\,564\,855\,c[7] - 2\,686\,761\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,661\,c[6] + 2\,571\,879\,c[7] - 2\,713\,689\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,629\,c[6] + \\
& 2\,571\,239\,c[7] - 2\,710\,521\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,535\,c[7] - 2\,706\,649\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,597\,c[6] + \\
& 2\,570\,599\,c[7] - 2\,707\,353\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,565\,c[6] + 2\,569\,831\,c[7] - 2\,702\,777\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,565\,c[6] + \\
& 2\,569\,895\,c[7] - 2\,703\,481\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,565\,c[6] + 2\,569\,959\,c[7] - 2\,704\,185\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,125\,c[6] + \\
& 2\,576\,343\,c[7] - 2\,727\,945\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,093\,c[6] + 2\,575\,639\,c[7] - 2\,724\,073\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,093\,c[6] + \\
& 2\,575\,703\,c[7] - 2\,724\,777\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,061\,c[6] + 2\,574\,999\,c[7] - 2\,720\,905\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,029\,c[6] + \\
& 2\,574\,295\,c[7] - 2\,717\,033\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,621\,c[6] + 2\,581\,447\,c[7] - 2\,745\,369\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,589\,c[6] + \\
& 2\,580\,743\,c[7] - 2\,741\,497\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,589\,c[6] + 2\,580\,807\,c[7] - 2\,742\,201\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,557\,c[6] + \\
& 2\,580\,103\,c[7] - 2\,738\,329\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,525\,c[6] + 2\,579\,399\,c[7] - 2\,734\,457\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,179\,c[5] - 989\,117\,c[6] + \\
& 2\,586\,551\,c[7] - 2\,762\,793\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,179\,c[5] - 989\,085\,c[6] + 2\,585\,911\,c[7] - 2\,759\,625\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,179\,c[5] - 989\,053\,c[6] + \\
& 2\,585\,207\,c[7] - 2\,755\,753\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,763\,c[5] - 981\,389\,c[6] + 2\,524\,887\,c[7] - 2\,583\,009\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,779\,c[5] - 981\,885\,c[6] + \\
& 2\,529\,991\,c[7] - 2\,600\,433\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,779\,c[5] - 981\,853\,c[6] + 2\,529\,351\,c[7] - 2\,597\,265\,c[8],
\end{aligned}$$

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c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 381 c[6] +
  2 535 095 c[7] - 2 617 857 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 795 c[5] - 982 349 c[6] + 2 534 455 c[7] - 2 614 689 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 317 c[6] +
  2 533 751 c[7] - 2 610 817 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 795 c[5] - 982 317 c[6] + 2 533 815 c[7] - 2 611 521 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 285 c[6] +
  2 533 175 c[7] - 2 608 353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 811 c[5] - 982 845 c[6] + 2 539 559 c[7] - 2 632 113 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 813 c[6] +
  2 538 855 c[7] - 2 628 241 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 811 c[5] - 982 813 c[6] + 2 538 919 c[7] - 2 628 945 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 781 c[6] +
  2 538 215 c[7] - 2 625 073 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 827 c[5] - 983 341 c[6] + 2 544 663 c[7] - 2 649 537 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 309 c[6] +
  2 543 959 c[7] - 2 645 665 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 827 c[5] - 983 309 c[6] + 2 544 023 c[7] - 2 646 369 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 277 c[6] +
  2 543 319 c[7] - 2 642 497 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 843 c[5] - 983 837 c[6] + 2 549 767 c[7] - 2 666 961 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 805 c[6] +
  2 549 127 c[7] - 2 663 793 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 459 c[5] - 977 101 c[6] + 2 498 311 c[7] - 2 522 025 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 597 c[6] +
  2 503 415 c[7] - 2 539 449 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 475 c[5] - 977 565 c[6] + 2 502 775 c[7] - 2 536 281 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 533 c[6] +
  2 502 135 c[7] - 2 533 113 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 491 c[5] - 978 061 c[6] + 2 507 879 c[7] - 2 553 705 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 029 c[6] +
  2 507 175 c[7] - 2 549 833 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 491 c[5] - 978 029 c[6] + 2 507 239 c[7] - 2 550 537 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 507 c[5] - 978 557 c[6] +
  2 512 983 c[7] - 2 571 129 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 507 c[5] - 978 525 c[6] + 2 512 343 c[7] - 2 567 961 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 523 c[5] - 979 053 c[6] +
  2 518 087 c[7] - 2 588 553 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 171 c[5] - 973 277 c[6] + 2 476 199 c[7] - 2 475 297 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 187 c[5] - 973 773 c[6] +
  2 481 303 c[7] - 2 492 721 c[8], c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
  200 851 c[5] - 968 493 c[6] + 2 444 519 c[7] - 2 396 889 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 395 c[4] +
  9 947 971 c[5] - 49 048 285 c[6] + 130 291 031 c[7] - 143 200 441 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 395 c[4] +

```

$$\begin{aligned}
& 9\,947\,971\,c[5] - 49\,048\,285\,c[6] + 130\,291\,031\,c[7] - 143\,200\,441\,c[8] < 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,885\,c[6] + \\
& 2\,664\,359\,c[7] - 2\,936\,241\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,853\,c[6] + 2\,663\,591\,c[7] - 2\,931\,665\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,091\,c[5] - 1\,001\,853\,c[6] + \\
& 2\,663\,655\,c[7] - 2\,932\,369\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,091\,c[5] - 1\,001\,821\,c[6] + 2\,662\,887\,c[7] - 2\,927\,793\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,107\,c[5] - 1\,002\,349\,c[6] + \\
& 2\,668\,631\,c[7] - 2\,948\,385\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,107\,c[5] - 1\,002\,349\,c[6] + 2\,668\,695\,c[7] - 2\,949\,089\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + 203\,107\,c[5] - 1\,002\,317\,c[6] + \\
& 2\,667\,927\,c[7] - 2\,944\,513\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,051\,c[4] + \\
& 203\,107\,c[5] - 1\,002\,317\,c[6] + 2\,667\,991\,c[7] - 2\,945\,217\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,739\,c[5] - 996\,109\,c[6] + \\
& 2\,622\,471\,c[7] - 2\,822\,985\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,637\,c[6] + 2\,628\,151\,c[7] - 2\,842\,873\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,637\,c[6] + \\
& 2\,628\,215\,c[7] - 2\,843\,577\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,447\,c[7] - 2\,839\,001\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,605\,c[6] + \\
& 2\,627\,511\,c[7] - 2\,839\,705\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,755\,c[5] - 996\,605\,c[6] + 2\,627\,575\,c[7] - 2\,840\,409\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,573\,c[6] + \\
& 2\,626\,871\,c[7] - 2\,836\,537\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,165\,c[6] + 2\,633\,895\,c[7] - 2\,863\,465\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,165\,c[6] + \\
& 2\,633\,959\,c[7] - 2\,864\,169\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,133\,c[6] + 2\,633\,191\,c[7] - 2\,859\,593\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,133\,c[6] + \\
& 2\,633\,255\,c[7] - 2\,860\,297\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,133\,c[6] + 2\,633\,319\,c[7] - 2\,861\,001\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,101\,c[6] + \\
& 2\,632\,487\,c[7] - 2\,855\,721\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,101\,c[6] + 2\,632\,551\,c[7] - 2\,856\,425\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,101\,c[6] + \\
& 2\,632\,615\,c[7] - 2\,857\,129\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,101\,c[6] + 2\,632\,679\,c[7] - 2\,857\,833\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& 2\,631\,847\,c[7] - 2\,852\,553\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,771\,c[5] - 997\,069\,c[6] + 2\,631\,911\,c[7] - 2\,853\,257\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,693\,c[6] + \\
& 2\,639\,703\,c[7] - 2\,884\,761\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,661\,c[6] + 2\,638\,999\,c[7] - 2\,880\,889\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,661\,c[6] + \\
& 2\,639\,063\,c[7] - 2\,881\,593\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,629\,c[6] + 2\,638\,295\,c[7] - 2\,877\,017\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,629\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,638\,359\,c[7] - 2\,877\,721\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,629\,c[6] + 2\,638\,423\,c[7] - 2\,878\,425\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,597\,c[6] + \\
& 2\,637\,655\,c[7] - 2\,873\,849\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,597\,c[6] + 2\,637\,719\,c[7] - 2\,874\,553\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,565\,c[6] + \\
& 2\,636\,951\,c[7] - 2\,869\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,787\,c[5] - 997\,565\,c[6] + 2\,637\,015\,c[7] - 2\,870\,681\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,125\,c[6] + \\
& 2\,643\,399\,c[7] - 2\,894\,441\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,803\,c[5] - 998\,093\,c[6] + 2\,642\,759\,c[7] - 2\,891\,273\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,093\,c[6] + \\
& 2\,642\,823\,c[7] - 2\,891\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,803\,c[5] - 998\,061\,c[6] + 2\,642\,055\,c[7] - 2\,887\,401\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,029\,c[6] + \\
& 2\,641\,351\,c[7] - 2\,883\,529\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& 202\,819\,c[5] - 998\,557\,c[6] + 2\,647\,159\,c[7] - 2\,904\,825\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,389\,c[6] + \\
& 2\,592\,007\,c[7] - 2\,750\,209\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,389\,c[6] + 2\,592\,071\,c[7] - 2\,750\,913\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& 2\,591\,367\,c[7] - 2\,747\,041\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,419\,c[5] - 991\,357\,c[6] + 2\,591\,431\,c[7] - 2\,747\,745\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,325\,c[6] + \\
& 2\,590\,791\,c[7] - 2\,744\,577\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,917\,c[6] + 2\,597\,751\,c[7] - 2\,770\,801\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,917\,c[6] + \\
& 2\,597\,815\,c[7] - 2\,771\,505\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,885\,c[6] + 2\,597\,111\,c[7] - 2\,767\,633\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,885\,c[6] + \\
& 2\,597\,175\,c[7] - 2\,768\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,407\,c[7] - 2\,763\,761\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,853\,c[6] + \\
& 2\,596\,471\,c[7] - 2\,764\,465\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,535\,c[7] - 2\,765\,169\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,821\,c[6] + \\
& 2\,595\,831\,c[7] - 2\,761\,297\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,445\,c[6] + 2\,603\,559\,c[7] - 2\,792\,097\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,413\,c[6] + \\
& 2\,602\,919\,c[7] - 2\,788\,929\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,215\,c[7] - 2\,785\,057\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,381\,c[6] + \\
& 2\,602\,279\,c[7] - 2\,785\,761\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,349\,c[6] + 2\,601\,511\,c[7] - 2\,781\,185\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,575\,c[7] - 2\,781\,889\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,349\,c[6] + 2\,601\,639\,c[7] - 2\,782\,593\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,317 c[6] + \\
& \quad 2\,600\,871 c[7] - 2\,778\,017 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,317 c[6] + 2\,600\,935 c[7] - 2\,778\,721 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,285 c[6] + \\
& \quad 2\,600\,231 c[7] - 2\,774\,849 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,941 c[6] + 2\,608\,663 c[7] - 2\,809\,521 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,909 c[6] + \\
& \quad 2\,608\,023 c[7] - 2\,806\,353 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,877 c[6] + 2\,607\,319 c[7] - 2\,802\,481 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,877 c[6] + \\
& \quad 2\,607\,383 c[7] - 2\,803\,185 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,845 c[6] + 2\,606\,615 c[7] - 2\,798\,609 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,845 c[6] + \\
& \quad 2\,606\,679 c[7] - 2\,799\,313 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,845 c[6] + 2\,606\,743 c[7] - 2\,800\,017 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,813 c[6] + \\
& \quad 2\,605\,975 c[7] - 2\,795\,441 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,813 c[6] + 2\,606\,039 c[7] - 2\,796\,145 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,781 c[6] + \\
& \quad 2\,605\,271 c[7] - 2\,791\,569 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,483 c[5] - 993\,405 c[6] + 2\,613\,127 c[7] - 2\,823\,777 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,373 c[6] + \\
& \quad 2\,612\,423 c[7] - 2\,819\,905 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,483 c[5] - 993\,373 c[6] + 2\,612\,487 c[7] - 2\,820\,609 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,341 c[6] + \\
& \quad 2\,611\,783 c[7] - 2\,816\,737 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,483 c[5] - 993\,309 c[6] + 2\,611\,079 c[7] - 2\,812\,865 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,277 c[6] + \\
& \quad 2\,610\,375 c[7] - 2\,808\,993 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,499 c[5] - 993\,869 c[6] + 2\,617\,591 c[7] - 2\,838\,033 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,499 c[5] - 993\,837 c[6] + \\
& \quad 2\,616\,887 c[7] - 2\,834\,161 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,499 c[5] - 993\,805 c[6] + 2\,616\,183 c[7] - 2\,830\,289 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,141 c[6] + \\
& \quad 2\,555\,927 c[7] - 2\,658\,249 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,669 c[6] + 2\,561\,671 c[7] - 2\,678\,841 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,637 c[6] + \\
& \quad 2\,560\,967 c[7] - 2\,674\,969 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,637 c[6] + 2\,561\,031 c[7] - 2\,675\,673 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,605 c[6] + \\
& \quad 2\,560\,391 c[7] - 2\,672\,505 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,099 c[5] - 986\,573 c[6] + 2\,559\,751 c[7] - 2\,669\,337 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,165 c[6] + \\
& \quad 2\,566\,775 c[7] - 2\,696\,265 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,133 c[6] + 2\,566\,135 c[7] - 2\,693\,097 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,101 c[6] + \\
& \quad 2\,565\,431 c[7] - 2\,689\,225 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,495\,c[7] - 2\,689\,929\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& \quad 2\,564\,791\,c[7] - 2\,686\,057\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,855\,c[7] - 2\,686\,761\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,661\,c[6] + \\
& \quad 2\,571\,879\,c[7] - 2\,713\,689\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,629\,c[6] + 2\,571\,239\,c[7] - 2\,710\,521\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,597\,c[6] + \\
& \quad 2\,570\,535\,c[7] - 2\,706\,649\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,599\,c[7] - 2\,707\,353\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,565\,c[6] + \\
& \quad 2\,569\,831\,c[7] - 2\,702\,777\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,565\,c[6] + 2\,569\,895\,c[7] - 2\,703\,481\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,565\,c[6] + \\
& \quad 2\,569\,959\,c[7] - 2\,704\,185\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,147\,c[5] - 988\,125\,c[6] + 2\,576\,343\,c[7] - 2\,727\,945\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,093\,c[6] + \\
& \quad 2\,575\,639\,c[7] - 2\,724\,073\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,147\,c[5] - 988\,093\,c[6] + 2\,575\,703\,c[7] - 2\,724\,777\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,061\,c[6] + \\
& \quad 2\,574\,999\,c[7] - 2\,720\,905\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,147\,c[5] - 988\,029\,c[6] + 2\,574\,295\,c[7] - 2\,717\,033\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,621\,c[6] + \\
& \quad 2\,581\,447\,c[7] - 2\,745\,369\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,163\,c[5] - 988\,589\,c[6] + 2\,580\,743\,c[7] - 2\,741\,497\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,589\,c[6] + \\
& \quad 2\,580\,807\,c[7] - 2\,742\,201\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,163\,c[5] - 988\,557\,c[6] + 2\,580\,103\,c[7] - 2\,738\,329\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,525\,c[6] + \\
& \quad 2\,579\,399\,c[7] - 2\,734\,457\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,179\,c[5] - 989\,117\,c[6] + 2\,586\,551\,c[7] - 2\,762\,793\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,179\,c[5] - 989\,085\,c[6] + \\
& \quad 2\,585\,911\,c[7] - 2\,759\,625\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,179\,c[5] - 989\,053\,c[6] + 2\,585\,207\,c[7] - 2\,755\,753\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,763\,c[5] - 981\,389\,c[6] + \\
& \quad 2\,524\,887\,c[7] - 2\,583\,009\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,779\,c[5] - 981\,885\,c[6] + 2\,529\,991\,c[7] - 2\,600\,433\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,779\,c[5] - 981\,853\,c[6] + \\
& \quad 2\,529\,351\,c[7] - 2\,597\,265\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,795\,c[5] - 982\,381\,c[6] + 2\,535\,095\,c[7] - 2\,617\,857\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,349\,c[6] + \\
& \quad 2\,534\,455\,c[7] - 2\,614\,689\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,795\,c[5] - 982\,317\,c[6] + 2\,533\,751\,c[7] - 2\,610\,817\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,317\,c[6] + \\
& \quad 2\,533\,815\,c[7] - 2\,611\,521\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,795\,c[5] - 982\,285\,c[6] + 2\,533\,175\,c[7] - 2\,608\,353\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,811\,c[5] - 982\,845\,c[6] +
\end{aligned}$$

```

2 539 559 c[7] - 2 632 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 813 c[6] + 2 538 855 c[7] - 2 628 241 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 813 c[6] +
2 538 919 c[7] - 2 628 945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 781 c[6] + 2 538 215 c[7] - 2 625 073 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 341 c[6] +
2 544 663 c[7] - 2 649 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 827 c[5] - 983 309 c[6] + 2 543 959 c[7] - 2 645 665 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 309 c[6] +
2 544 023 c[7] - 2 646 369 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 827 c[5] - 983 277 c[6] + 2 543 319 c[7] - 2 642 497 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 837 c[6] +
2 549 767 c[7] - 2 666 961 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 843 c[5] - 983 805 c[6] + 2 549 127 c[7] - 2 663 793 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 101 c[6] +
2 498 311 c[7] - 2 522 025 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 475 c[5] - 977 597 c[6] + 2 503 415 c[7] - 2 539 449 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 565 c[6] +
2 502 775 c[7] - 2 536 281 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 475 c[5] - 977 533 c[6] + 2 502 135 c[7] - 2 533 113 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 061 c[6] +
2 507 879 c[7] - 2 553 705 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 491 c[5] - 978 029 c[6] + 2 507 175 c[7] - 2 549 833 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 029 c[6] +
2 507 239 c[7] - 2 550 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 507 c[5] - 978 557 c[6] + 2 512 983 c[7] - 2 571 129 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 507 c[5] - 978 525 c[6] +
2 512 343 c[7] - 2 567 961 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 523 c[5] - 979 053 c[6] + 2 518 087 c[7] - 2 588 553 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 171 c[5] - 973 277 c[6] +
2 476 199 c[7] - 2 475 297 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 187 c[5] - 973 773 c[6] + 2 481 303 c[7] - 2 492 721 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] + 200 851 c[5] - 968 493 c[6] +
2 444 519 c[7] - 2 396 889 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, -34 501 373 844, -4 771 922 844, -433 811 167, -39 437 379, -3 585 216, -325 929}

GCD[0, 0, -34 501 373 844, -4 771 922 844,
-433 811 167, -39 437 379, -3 585 216, -325 929]
1

cert.g
-250 990 933

{0, 0, -34 501 373 844, -4 771 922 844, -433 811 167, -39 437 379, -3 585 216, -325 929}.
Reverse[gpart[listdim17[[150]]]]
-250 990 933

```

cert.Transpose[A]

```
{1693971, 1692627, 1692819, 1691475, 1698179, 1698371, 1697027, 1697219,
 1653883, 1660395, 1660587, 1659243, 1659435, 1659627, 1658475, 1667099,
 1667291, 1665947, 1666139, 1666331, 1664795, 1664987, 1665179, 1665371,
 1663835, 1664027, 1673995, 1672843, 1673035, 1671691, 1671883, 1672075,
 1670731, 1670923, 1669579, 1669771, 1677435, 1676475, 1676667, 1675323,
 1674171, 1681067, 1627011, 1627203, 1626051, 1626243, 1625283, 1633715,
 1633907, 1632755, 1632947, 1631603, 1631795, 1631987, 1630835, 1640611,
 1639651, 1638499, 1638691, 1637347, 1637539, 1637731, 1636387, 1636579,
 1635427, 1646355, 1645395, 1644243, 1644435, 1643091, 1643283, 1643475,
 1642131, 1642323, 1640979, 1651139, 1649987, 1650179, 1649027, 1647875,
 1646723, 1655923, 1654771, 1653619, 1593819, 1600523, 1599371, 1599563,
 1598603, 1597643, 1606267, 1605307, 1604155, 1604347, 1603195, 1603387,
 1612011, 1611051, 1609899, 1610091, 1608747, 1608939, 1609131, 1616795,
 1615643, 1615835, 1614683, 1613531, 1622539, 1621387, 1621579, 1620427,
 1619275, 1628283, 1627323, 1626171, 1566179, 1571923, 1570963,
 1577667, 1576707, 1575555, 1575747, 1574787, 1582451, 1581299,
 1581491, 1580339, 1588195, 1587043, 1587235, 1586083, 1593939,
 1592979, 1543323, 1549067, 1548107, 1547147, 1553851, 1552699,
 1552891, 1559595, 1558635, 1565339, 1525251, 1530995, 1496651}
```

chi = listdim17[[151]]

$$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (95 - 20x + x^2) (-672 + 247x - 28x^2 + x^3)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
A = {{1, -63, 1669, -24059, 203411, -1006509, 2692775, -2998105},
      {1, -63, 1669, -24051, 203075, -1001293, 2657335, -2909185},
      {1, -63, 1669, -24051, 203075, -1001261, 2656695, -2906145},
      {1, -63, 1669, -24051, 203091, -1001821, 2663079, -2929777},
      {1, -63, 1669, -24051, 203091, -1001789, 2662375, -2925905},
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 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203107 c[5] - 1002285 c[6] +
 2667415 c[7] - 2942753 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203107 c[5] - 1002285 c[6] + 2667479 c[7] - 2943457 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203107 c[5] - 1002253 c[6] +
 2666775 c[7] - 2939585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203123 c[5] - 1002749 c[6] + 2671815 c[7] - 2956305 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202739 c[5] - 996077 c[6] +
 2621895 c[7] - 2820265 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202739 c[5] - 996045 c[6] + 2621255 c[7] - 2817225 c[8],

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,573 c[6] + \\
& 2\,626\,999 c[7] - 2\,837\,817 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,755 c[5] - 996\,541 c[6] + 2\,626\,295 c[7] - 2\,834\,073 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,755 c[5] - 996\,541 c[6] + \\
& 2\,626\,295 c[7] - 2\,833\,945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,755 c[5] - 996\,509 c[6] + 2\,625\,655 c[7] - 2\,830\,905 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,101 c[6] + \\
& 2\,632\,743 c[7] - 2\,858\,409 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,771 c[5] - 997\,069 c[6] + 2\,632\,039 c[7] - 2\,854\,665 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,069 c[6] + \\
& 2\,632\,039 c[7] - 2\,854\,537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,771 c[5] - 997\,037 c[6] + 2\,631\,335 c[7] - 2\,850\,793 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,037 c[6] + 2\,631\,399 c[7] - \\
& 2\,851\,497 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - \\
& 997\,005 c[6] + 2\,630\,695 c[7] - 2\,847\,625 c[8], c[1] - 63 c[2] + 1669 c[3] - \\
& 24\,043 c[4] + 202\,787 c[5] - 997\,629 c[6] + 2\,638\,487 c[7] - 2\,879\,001 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,597 c[6] + \\
& 2\,637\,783 c[7] - 2\,875\,257 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,787 c[5] - 997\,597 c[6] + 2\,637\,847 c[7] - 2\,875\,833 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,565 c[6] + \\
& 2\,637\,079 c[7] - 2\,871\,385 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,787 c[5] - 997\,565 c[6] + 2\,637\,143 c[7] - 2\,872\,089 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,533 c[6] + \\
& 2\,636\,375 c[7] - 2\,867\,513 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,787 c[5] - 997\,533 c[6] + 2\,636\,439 c[7] - 2\,868\,217 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,501 c[6] + \\
& 2\,635\,735 c[7] - 2\,864\,345 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,803 c[5] - 998\,093 c[6] + 2\,642\,823 c[7] - 2\,891\,977 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,803 c[5] - 998\,093 c[6] + \\
& 2\,642\,887 c[7] - 2\,892\,681 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,803 c[5] - 998\,061 c[6] + 2\,642\,183 c[7] - 2\,888\,809 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,803 c[5] - 998\,061 c[6] + \\
& 2\,642\,247 c[7] - 2\,889\,513 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& 202\,803 c[5] - 998\,029 c[6] + 2\,641\,479 c[7] - 2\,884\,937 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,829 c[6] + \\
& 2\,585\,815 c[7] - 2\,728\,305 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,419 c[5] - 991\,357 c[6] + 2\,591\,559 c[7] - 2\,748\,897 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,325 c[6] + \\
& 2\,590\,855 c[7] - 2\,745\,153 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,419 c[5] - 991\,293 c[6] + 2\,590\,215 c[7] - 2\,741\,985 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,853 c[6] + \\
& 2\,596\,599 c[7] - 2\,765\,745 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,435 c[5] - 991\,821 c[6] + 2\,595\,895 c[7] - 2\,762\,001 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,821 c[6] + \\
& 2\,595\,895 c[7] - 2\,761\,873 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,435 c[5] - 991\,821 c[6] + 2\,595\,959 c[7] - 2\,762\,577 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,789 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,595\,255\,c[7] - 2\,758\,833\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,789\,c[6] + 2\,595\,255\,c[7] - 2\,758\,705\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,757\,c[6] + \\
& 2\,594\,615\,c[7] - 2\,755\,665\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,381\,c[6] + 2\,602\,343\,c[7] - 2\,786\,337\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,349\,c[6] + \\
& 2\,601\,703\,c[7] - 2\,783\,169\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,935\,c[7] - 2\,778\,721\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,317\,c[6] + \\
& 2\,600\,999\,c[7] - 2\,779\,425\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,285\,c[6] + 2\,600\,295\,c[7] - 2\,775\,553\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,285\,c[6] + \\
& 2\,600\,359\,c[7] - 2\,776\,257\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,253\,c[6] + 2\,599\,655\,c[7] - 2\,772\,385\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] + \\
& 2\,606\,679\,c[7] - 2\,799\,313\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,845\,c[6] + 2\,606\,743\,c[7] - 2\,800\,017\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] + \\
& 2\,606\,807\,c[7] - 2\,800\,593\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,813\,c[6] + 2\,606\,039\,c[7] - 2\,796\,145\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& 2\,606\,103\,c[7] - 2\,796\,849\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,781\,c[6] + 2\,605\,399\,c[7] - 2\,792\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,749\,c[6] + \\
& 2\,604\,695\,c[7] - 2\,789\,105\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,373\,c[6] + 2\,612\,487\,c[7] - 2\,820\,609\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,341\,c[6] + \\
& 2\,611\,847\,c[7] - 2\,817\,441\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,309\,c[6] + 2\,611\,143\,c[7] - 2\,813\,569\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,309\,c[6] + \\
& 2\,611\,207\,c[7] - 2\,814\,273\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,869\,c[6] + 2\,617\,591\,c[7] - 2\,838\,033\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,837\,c[6] + \\
& 2\,616\,951\,c[7] - 2\,834\,865\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,083\,c[5] - 986\,077\,c[6] + 2\,554\,775\,c[7] - 2\,653\,065\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,605\,c[6] + \\
& 2\,560\,455\,c[7] - 2\,673\,081\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,573\,c[6] + 2\,559\,815\,c[7] - 2\,669\,913\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,541\,c[6] + \\
& 2\,559\,175\,c[7] - 2\,666\,745\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,559\,c[7] - 2\,690\,505\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& 2\,564\,791\,c[7] - 2\,686\,057\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,855\,c[7] - 2\,686\,761\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& 2\,564\,919\,c[7] - 2\,687\,337\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,037\,c[6] + 2\,564\,215\,c[7] - 2\,683\,593\,c[8],
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,037 c[6] + \\
& \quad 2\,564\,215 c[7] - 2\,683\,465 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,005 c[6] + 2\,563\,575 c[7] - 2\,680\,425 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,597 c[6] + \\
& \quad 2\,570\,599 c[7] - 2\,707\,353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,565 c[6] + 2\,569\,895 c[7] - 2\,703\,481 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,565 c[6] + \\
& \quad 2\,569\,959 c[7] - 2\,704\,185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,533 c[6] + 2\,569\,255 c[7] - 2\,700\,313 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,533 c[6] + \\
& \quad 2\,569\,319 c[7] - 2\,701\,017 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,501 c[6] + 2\,568\,615 c[7] - 2\,697\,145 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,125 c[6] + \\
& \quad 2\,576\,343 c[7] - 2\,727\,945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,147 c[5] - 988\,093 c[6] + 2\,575\,703 c[7] - 2\,724\,777 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,061 c[6] + \\
& \quad 2\,575\,063 c[7] - 2\,721\,609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,147 c[5] - 988\,029 c[6] + 2\,574\,359 c[7] - 2\,717\,737 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,163 c[5] - 988\,589 c[6] + \\
& \quad 2\,580\,807 c[7] - 2\,742\,201 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,163 c[5] - 988\,557 c[6] + 2\,580\,167 c[7] - 2\,739\,033 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,179 c[5] - 989\,085 c[6] + \\
& \quad 2\,585\,911 c[7] - 2\,759\,625 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,779 c[5] - 981\,821 c[6] + 2\,528\,711 c[7] - 2\,594\,097 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,779 c[5] - 981\,821 c[6] + \\
& \quad 2\,528\,775 c[7] - 2\,594\,673 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,779 c[5] - 981\,789 c[6] + 2\,528\,135 c[7] - 2\,591\,505 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,349 c[6] + \\
& \quad 2\,534\,455 c[7] - 2\,614\,689 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,795 c[5] - 982\,317 c[6] + 2\,533\,815 c[7] - 2\,611\,521 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,317 c[6] + \\
& \quad 2\,533\,879 c[7] - 2\,612\,097 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,795 c[5] - 982\,285 c[6] + 2\,533\,175 c[7] - 2\,608\,353 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,253 c[6] + \\
& \quad 2\,532\,535 c[7] - 2\,605\,185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,811 c[5] - 982\,845 c[6] + 2\,539\,559 c[7] - 2\,632\,113 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,813 c[6] + \\
& \quad 2\,538\,919 c[7] - 2\,628\,945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,811 c[5] - 982\,781 c[6] + 2\,538\,215 c[7] - 2\,625\,073 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,781 c[6] + \\
& \quad 2\,538\,279 c[7] - 2\,625\,777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,811 c[5] - 982\,749 c[6] + 2\,537\,575 c[7] - 2\,621\,905 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,827 c[5] - 983\,309 c[6] + \\
& \quad 2\,544\,023 c[7] - 2\,646\,369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,843 c[5] - 983\,805 c[6] + 2\,549\,127 c[7] - 2\,663\,793 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + 201\,459 c[5] - 977\,101 c[6] + \\
& \quad 2\,498\,311 c[7] - 2\,522\,025 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] +
\end{aligned}$$

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201459 c[5] - 977069 c[6] + 2497671 c[7] - 2518857 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201459 c[5] - 977037 c[6] +
2497095 c[7] - 2516265 c[8], c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] +
201475 c[5] - 977565 c[6] + 2502775 c[7] - 2536281 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201475 c[5] - 977533 c[6] +
2502135 c[7] - 2533113 c[8], c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] +
201475 c[5] - 977501 c[6] + 2501495 c[7] - 2529945 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201491 c[5] - 978061 c[6] +
2507879 c[7] - 2553705 c[8], c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] +
201491 c[5] - 978029 c[6] + 2507239 c[7] - 2550537 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] + 201139 c[5] - 972317 c[6] +
2466631 c[7] - 2443617 c[8], c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] +
201155 c[5] - 972781 c[6] + 2471095 c[7] - 2457873 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] + 201155 c[5] - 972749 c[6] +
2470455 c[7] - 2454705 c[8], c[1] - 63 c[2] + 1669 c[3] - 23995 c[4] +
200835 c[5] - 967997 c[6] + 2439415 c[7] - 2379465 c[8] }

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Array[c, 8].g

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49 c[1] - 3087 c[2] + 81781 c[3] - 1178395 c[4] +
9947971 c[5] - 49046877 c[6] + 130268375 c[7] - 143119545 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81781 c[3] - 1178395 c[4] +
9947971 c[5] - 49046877 c[6] + 130268375 c[7] - 143119545 c[8] < 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24059 c[4] + 203411 c[5] - 1006509 c[6] +
2692775 c[7] - 2998105 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203075 c[5] - 1001293 c[6] + 2657335 c[7] - 2909185 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203075 c[5] - 1001261 c[6] +
2656695 c[7] - 2906145 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203091 c[5] - 1001821 c[6] + 2663079 c[7] - 2929777 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001789 c[6] +
2662375 c[7] - 2925905 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203091 c[5] - 1001789 c[6] + 2662439 c[7] - 2926737 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001757 c[6] +
2661735 c[7] - 2922865 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203107 c[5] - 1002317 c[6] + 2668183 c[7] - 2947329 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203107 c[5] - 1002285 c[6] +
2667415 c[7] - 2942753 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203107 c[5] - 1002285 c[6] + 2667479 c[7] - 2943457 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203107 c[5] - 1002253 c[6] +
2666775 c[7] - 2939585 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
203123 c[5] - 1002749 c[6] + 2671815 c[7] - 2956305 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202739 c[5] - 996077 c[6] +
2621895 c[7] - 2820265 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
202739 c[5] - 996045 c[6] + 2621255 c[7] - 2817225 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202755 c[5] - 996573 c[6] +
2626999 c[7] - 2837817 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +

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$$\begin{aligned}
& 202\,755\,c[5] - 996\,541\,c[6] + 2\,626\,295\,c[7] - 2\,834\,073\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,755\,c[5] - 996\,541\,c[6] + \\
& \quad 2\,626\,295\,c[7] - 2\,833\,945\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,755\,c[5] - 996\,509\,c[6] + 2\,625\,655\,c[7] - 2\,830\,905\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,101\,c[6] + \\
& \quad 2\,632\,743\,c[7] - 2\,858\,409\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,069\,c[6] + 2\,632\,039\,c[7] - 2\,854\,665\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,069\,c[6] + \\
& \quad 2\,632\,039\,c[7] - 2\,854\,537\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,037\,c[6] + 2\,631\,335\,c[7] - 2\,850\,793\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,771\,c[5] - 997\,037\,c[6] + \\
& \quad 2\,631\,399\,c[7] - 2\,851\,497\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,771\,c[5] - 997\,005\,c[6] + 2\,630\,695\,c[7] - 2\,847\,625\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,629\,c[6] + \\
& \quad 2\,638\,487\,c[7] - 2\,879\,001\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,787\,c[5] - 997\,597\,c[6] + 2\,637\,783\,c[7] - 2\,875\,257\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,597\,c[6] + \\
& \quad 2\,637\,847\,c[7] - 2\,875\,833\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,787\,c[5] - 997\,565\,c[6] + 2\,637\,079\,c[7] - 2\,871\,385\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,565\,c[6] + \\
& \quad 2\,637\,143\,c[7] - 2\,872\,089\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,787\,c[5] - 997\,533\,c[6] + 2\,636\,375\,c[7] - 2\,867\,513\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,787\,c[5] - 997\,533\,c[6] + \\
& \quad 2\,636\,439\,c[7] - 2\,868\,217\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,787\,c[5] - 997\,501\,c[6] + 2\,635\,735\,c[7] - 2\,864\,345\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,093\,c[6] + \\
& \quad 2\,642\,823\,c[7] - 2\,891\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,803\,c[5] - 998\,093\,c[6] + 2\,642\,887\,c[7] - 2\,892\,681\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,061\,c[6] + \\
& \quad 2\,642\,183\,c[7] - 2\,888\,809\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + \\
& \quad 202\,803\,c[5] - 998\,061\,c[6] + 2\,642\,247\,c[7] - 2\,889\,513\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,043\,c[4] + 202\,803\,c[5] - 998\,029\,c[6] + \\
& \quad 2\,641\,479\,c[7] - 2\,884\,937\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,403\,c[5] - 990\,829\,c[6] + 2\,585\,815\,c[7] - 2\,728\,305\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,357\,c[6] + \\
& \quad 2\,591\,559\,c[7] - 2\,748\,897\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,419\,c[5] - 991\,325\,c[6] + 2\,590\,855\,c[7] - 2\,745\,153\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,419\,c[5] - 991\,293\,c[6] + \\
& \quad 2\,590\,215\,c[7] - 2\,741\,985\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,435\,c[5] - 991\,853\,c[6] + 2\,596\,599\,c[7] - 2\,765\,745\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,821\,c[6] + \\
& \quad 2\,595\,895\,c[7] - 2\,762\,001\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,435\,c[5] - 991\,821\,c[6] + 2\,595\,895\,c[7] - 2\,761\,873\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,821\,c[6] + \\
& \quad 2\,595\,959\,c[7] - 2\,762\,577\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& \quad 202\,435\,c[5] - 991\,789\,c[6] + 2\,595\,255\,c[7] - 2\,758\,833\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,435\,c[5] - 991\,789\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,595\,255\,c[7] - 2\,758\,705\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,435\,c[5] - 991\,757\,c[6] + 2\,594\,615\,c[7] - 2\,755\,665\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,381\,c[6] + \\
& 2\,602\,343\,c[7] - 2\,786\,337\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,349\,c[6] + 2\,601\,703\,c[7] - 2\,783\,169\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,317\,c[6] + \\
& 2\,600\,935\,c[7] - 2\,778\,721\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,317\,c[6] + 2\,600\,999\,c[7] - 2\,779\,425\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,285\,c[6] + \\
& 2\,600\,295\,c[7] - 2\,775\,553\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,451\,c[5] - 992\,285\,c[6] + 2\,600\,359\,c[7] - 2\,776\,257\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,451\,c[5] - 992\,253\,c[6] + \\
& 2\,599\,655\,c[7] - 2\,772\,385\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,845\,c[6] + 2\,606\,679\,c[7] - 2\,799\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,845\,c[6] + \\
& 2\,606\,743\,c[7] - 2\,800\,017\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,845\,c[6] + 2\,606\,807\,c[7] - 2\,800\,593\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,813\,c[6] + \\
& 2\,606\,039\,c[7] - 2\,796\,145\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,813\,c[6] + 2\,606\,103\,c[7] - 2\,796\,849\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,467\,c[5] - 992\,781\,c[6] + \\
& 2\,605\,399\,c[7] - 2\,792\,977\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,467\,c[5] - 992\,749\,c[6] + 2\,604\,695\,c[7] - 2\,789\,105\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,373\,c[6] + \\
& 2\,612\,487\,c[7] - 2\,820\,609\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,341\,c[6] + 2\,611\,847\,c[7] - 2\,817\,441\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,309\,c[6] + \\
& 2\,611\,143\,c[7] - 2\,813\,569\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,309\,c[6] + 2\,611\,207\,c[7] - 2\,814\,273\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,869\,c[6] + \\
& 2\,617\,591\,c[7] - 2\,838\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,837\,c[6] + 2\,616\,951\,c[7] - 2\,834\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,083\,c[5] - 986\,077\,c[6] + \\
& 2\,554\,775\,c[7] - 2\,653\,065\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,605\,c[6] + 2\,560\,455\,c[7] - 2\,673\,081\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,573\,c[6] + \\
& 2\,559\,815\,c[7] - 2\,669\,913\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,099\,c[5] - 986\,541\,c[6] + 2\,559\,175\,c[7] - 2\,666\,745\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& 2\,565\,559\,c[7] - 2\,690\,505\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,791\,c[7] - 2\,686\,057\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,069\,c[6] + \\
& 2\,564\,855\,c[7] - 2\,686\,761\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,069\,c[6] + 2\,564\,919\,c[7] - 2\,687\,337\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,037\,c[6] + \\
& 2\,564\,215\,c[7] - 2\,683\,593\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,037\,c[6] + 2\,564\,215\,c[7] - 2\,683\,465\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,005 c[6] + \\
& \quad 2\,563\,575 c[7] - 2\,680\,425 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,597 c[6] + 2\,570\,599 c[7] - 2\,707\,353 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,565 c[6] + \\
& \quad 2\,569\,895 c[7] - 2\,703\,481 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,565 c[6] + 2\,569\,959 c[7] - 2\,704\,185 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,533 c[6] + \\
& \quad 2\,569\,255 c[7] - 2\,700\,313 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,533 c[6] + 2\,569\,319 c[7] - 2\,701\,017 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,501 c[6] + \\
& \quad 2\,568\,615 c[7] - 2\,697\,145 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,147 c[5] - 988\,125 c[6] + 2\,576\,343 c[7] - 2\,727\,945 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,093 c[6] + \\
& \quad 2\,575\,703 c[7] - 2\,724\,777 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,147 c[5] - 988\,061 c[6] + 2\,575\,063 c[7] - 2\,721\,609 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,029 c[6] + \\
& \quad 2\,574\,359 c[7] - 2\,717\,737 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,163 c[5] - 988\,589 c[6] + 2\,580\,807 c[7] - 2\,742\,201 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,163 c[5] - 988\,557 c[6] + \\
& \quad 2\,580\,167 c[7] - 2\,739\,033 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,179 c[5] - 989\,085 c[6] + 2\,585\,911 c[7] - 2\,759\,625 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,779 c[5] - 981\,821 c[6] + \\
& \quad 2\,528\,711 c[7] - 2\,594\,097 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,779 c[5] - 981\,821 c[6] + 2\,528\,775 c[7] - 2\,594\,673 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,779 c[5] - 981\,789 c[6] + \\
& \quad 2\,528\,135 c[7] - 2\,591\,505 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,795 c[5] - 982\,349 c[6] + 2\,534\,455 c[7] - 2\,614\,689 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,317 c[6] + \\
& \quad 2\,533\,815 c[7] - 2\,611\,521 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,795 c[5] - 982\,317 c[6] + 2\,533\,879 c[7] - 2\,612\,097 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,285 c[6] + \\
& \quad 2\,533\,175 c[7] - 2\,608\,353 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,795 c[5] - 982\,253 c[6] + 2\,532\,535 c[7] - 2\,605\,185 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,845 c[6] + \\
& \quad 2\,539\,559 c[7] - 2\,632\,113 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,811 c[5] - 982\,813 c[6] + 2\,538\,919 c[7] - 2\,628\,945 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,781 c[6] + \\
& \quad 2\,538\,215 c[7] - 2\,625\,073 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,811 c[5] - 982\,781 c[6] + 2\,538\,279 c[7] - 2\,625\,777 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,749 c[6] + \\
& \quad 2\,537\,575 c[7] - 2\,621\,905 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,827 c[5] - 983\,309 c[6] + 2\,544\,023 c[7] - 2\,646\,369 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,843 c[5] - 983\,805 c[6] + \\
& \quad 2\,549\,127 c[7] - 2\,663\,793 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + \\
& \quad 201\,459 c[5] - 977\,101 c[6] + 2\,498\,311 c[7] - 2\,522\,025 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + 201\,459 c[5] - 977\,069 c[6] + \\
& \quad 2\,497\,671 c[7] - 2\,518\,857 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] +
\end{aligned}$$

```

201459 c[5] - 977037 c[6] + 2497095 c[7] - 2516265 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201475 c[5] - 977565 c[6] +
2502775 c[7] - 2536281 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] +
201475 c[5] - 977533 c[6] + 2502135 c[7] - 2533113 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201475 c[5] - 977501 c[6] +
2501495 c[7] - 2529945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] +
201491 c[5] - 978061 c[6] + 2507879 c[7] - 2553705 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24011 c[4] + 201491 c[5] - 978029 c[6] +
2507239 c[7] - 2550537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] +
201139 c[5] - 972317 c[6] + 2466631 c[7] - 2443617 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] + 201155 c[5] - 972781 c[6] +
2471095 c[7] - 2457873 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24003 c[4] +
201155 c[5] - 972749 c[6] + 2470455 c[7] - 2454705 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 23995 c[4] + 200835 c[5] - 967997 c[6] +
2439415 c[7] - 2379465 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -1169094984, -287376982, -42813875, -5458939, -645630}

```

```
GCD[0, 0, 0, -1169094984, -287376982, -42813875, -5458939, -645630]
```

```
1
```

```
cert.g
```

```
-179230242
```

```
{0, 0, 0, -1169094984, -287376982, -42813875, -5458939, -645630}.
```

```
Reverse[gpart[listdim17[[151]]]]
```

```
-179230242
```

```
cert.Transpose[A]
```

```

{139512254, 83624894, 244586654, 29986526, 3156222, 190948286, 164117982,
137309918, 5328190, 110479614, 83649310, 3180638, 27737534, 188699294,
135060926, 190871262, 108230622, 269192382, 81422558, 137232894,
54592254, 110402590, 215554014, 188723710, 27784190, 83594526, 106105310,
56764222, 161915646, 29933918, 135085342, 108255038, 3125854, 108277278,
81446974, 186598398, 54616670, 132811934, 79173566, 134983902, 213305022,
81345534, 137155870, 54515230, 159666654, 215476990, 132836350,
293798110, 27707166, 106028286, 56687198, 161838622, 135008318,
240159742, 213329438, 3048830, 108200254, 130711038, 81369950,
186521374, 159691070, 132860766, 54561886, 132883006, 106052702,
211204126, 79244638, 157565758, 157417662, 81268510, 159589630,
237910750, 105951262, 56610174, 161761598, 184272382, 240082718,
157442078, 318403838, 108123230, 81292926, 186444350, 159614046,
264765470, 237935166, 54484862, 132805982, 211127102, 184296798,
157488734, 235809854, 182171486, 161684574, 184195358, 262516478,
108046206, 186367326, 208878110, 264688446, 343009566, 132728958,
211050078, 184219774, 289371198, 262540894, 235732830, 260415582,
107969182, 186290302, 287122206, 210973054, 289294174, 367615294,
235655806, 313976926, 210896030, 313899902, 392221022, 416826750}

```

```
chi = listdim17[[152]]
```

$$(-11 + x)^4 (-9 + x)^8 (-7 + x) (5 + x)^{32} (6128 - 2903 x + 499 x^2 - 37 x^3 + x^4)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -59, 1465, -19835, 158043, -740489, 1887211, -2015937},
      {1, -59, 1465, -19827, 157739, -736233, 1861147, -1956969},
      {1, -59, 1465, -19827, 157755, -736697, 1865483, -1970073},
      {1, -59, 1465, -19827, 157755, -736697, 1865547, -1970649},
      {1, -59, 1465, -19827, 157755, -736697, 1865611, -1971225},
      {1, -59, 1465, -19827, 157755, -736665, 1864971, -1968057},
      {1, -59, 1465, -19827, 157755, -736665, 1865035, -1968633},
      {1, -59, 1465, -19827, 157755, -736633, 1864459, -1966041},
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      {1, -59, 1465, -19827, 157771, -737097, 1868795, -1979145},
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      {1, -59, 1465, -19827, 157771, -737065, 1868283, -1977129},
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      {1, -59, 1465, -19819, 157483, -733241, 1846107, -1929825},
      {1, -59, 1465, -19819, 157483, -733209, 1845531, -1927233},
      {1, -59, 1465, -19819, 157499, -733673, 1849867, -1940337},
      {1, -59, 1465, -19819, 157499, -733673, 1849931, -1940913},
      {1, -59, 1465, -19819, 157499, -733673, 1849995, -1941489},
      {1, -59, 1465, -19819, 157499, -733641, 1849355, -1938321},
      {1, -59, 1465, -19819, 157515, -734073, 1853179, -1949409},
      {1, -59, 1465, -19811, 157147, -728153, 1812843, -1850121},
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```

```

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{1, -59, 1465, -19811, 157179, -729017, 1820619, -1873449},
{1, -59, 1465, -19811, 157179, -728985, 1819979, -1870281},
{1, -59, 1465, -19811, 157179, -728985, 1820043, -1870857},
{1, -59, 1465, -19811, 157179, -728953, 1819467, -1868265},
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{1, -59, 1465, -19803, 156923, -725961, 1804427, -1841121},
{1, -59, 1465, -19803, 156923, -725961, 1804491, -1841697},
{1, -59, 1465, -19803, 156923, -725929, 1803851, -1838529},
{1, -59, 1465, -19803, 156939, -726425, 1808891, -1855377},
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{1, -59, 1465, -19803, 156955, -726857, 1812779, -1867041},
{1, -59, 1465, -19803, 156955, -726825, 1812139, -1863873},
{1, -59, 1465, -19795, 156587, -720841, 1770651, -1759401},
{1, -59, 1465, -19795, 156603, -721241, 1773963, -1768473},
{1, -59, 1465, -19795, 156619, -721673, 1777787, -1779561},
{1, -59, 1465, -19795, 156619, -721673, 1777851, -1780137},
{1, -59, 1465, -19795, 156619, -721641, 1777275, -1777545},
{1, -59, 1465, -19795, 156635, -722105, 1781675, -1791225},
{1, -59, 1465, -19795, 156635, -722105, 1781739, -1791801},
{1, -59, 1465, -19795, 156635, -722073, 1781099, -1788633},

```

```
{1, -59, 1465, -19 795, 156 651, -722 569, 1 786 139, -1 805 481},
{1, -59, 1465, -19 795, 156 651, -722 537, 1 785 563, -1 802 889},
{1, -59, 1465, -19 795, 156 667, -723 001, 1 790 027, -1 817 145},
{1, -59, 1465, -19 787, 156 331, -717 785, 1 754 523, -1 727 649},
{1, -59, 1465, -19 787, 156 347, -718 217, 1 758 347, -1 738 737},
{1, -59, 1465, -19 787, 156 363, -718 681, 1 762 811, -1 752 993},
{1, -59, 1465, -19 779, 156 059, -714 361, 1 735 595, -1 688 841}};
```

```
A // MatrixForm
```

```
1 -59 1465 -19 835 158 043 -740 489 1 887 211 -2 015 937
1 -59 1465 -19 827 157 739 -736 233 1 861 147 -1 956 969
1 -59 1465 -19 827 157 755 -736 697 1 865 483 -1 970 073
1 -59 1465 -19 827 157 755 -736 697 1 865 547 -1 970 649
1 -59 1465 -19 827 157 755 -736 697 1 865 611 -1 971 225
1 -59 1465 -19 827 157 755 -736 665 1 864 971 -1 968 057
1 -59 1465 -19 827 157 755 -736 665 1 865 035 -1 968 633
1 -59 1465 -19 827 157 755 -736 633 1 864 459 -1 966 041
1 -59 1465 -19 827 157 771 -737 129 1 869 307 -1 981 161
1 -59 1465 -19 827 157 771 -737 097 1 868 795 -1 979 145
1 -59 1465 -19 827 157 771 -737 097 1 868 859 -1 979 721
1 -59 1465 -19 827 157 771 -737 065 1 868 283 -1 977 129
1 -59 1465 -19 819 157 451 -732 473 1 840 059 -1 914 273
1 -59 1465 -19 819 157 451 -732 441 1 839 483 -1 911 681
1 -59 1465 -19 819 157 451 -732 409 1 838 907 -1 909 089
1 -59 1465 -19 819 157 451 -732 377 1 838 395 -1 907 073
1 -59 1465 -19 819 157 467 -732 905 1 843 947 -1 925 937
1 -59 1465 -19 819 157 467 -732 873 1 843 307 -1 922 769
1 -59 1465 -19 819 157 467 -732 873 1 843 371 -1 923 345
1 -59 1465 -19 819 157 467 -732 841 1 842 731 -1 920 177
1 -59 1465 -19 819 157 467 -732 841 1 842 795 -1 920 753
1 -59 1465 -19 819 157 467 -732 809 1 842 219 -1 918 161
1 -59 1465 -19 819 157 467 -732 809 1 842 283 -1 918 737
1 -59 1465 -19 819 157 467 -732 777 1 841 707 -1 916 145
1 -59 1465 -19 819 157 483 -733 305 1 847 195 -1 934 433
1 -59 1465 -19 819 157 483 -733 273 1 846 619 -1 931 841
1 -59 1465 -19 819 157 483 -733 273 1 846 683 -1 932 417
1 -59 1465 -19 819 157 483 -733 241 1 846 043 -1 929 249
1 -59 1465 -19 819 157 483 -733 241 1 846 107 -1 929 825
1 -59 1465 -19 819 157 483 -733 209 1 845 531 -1 927 233
1 -59 1465 -19 819 157 499 -733 673 1 849 867 -1 940 337
1 -59 1465 -19 819 157 499 -733 673 1 849 931 -1 940 913
1 -59 1465 -19 819 157 499 -733 673 1 849 995 -1 941 489
1 -59 1465 -19 819 157 499 -733 641 1 849 355 -1 938 321
1 -59 1465 -19 819 157 515 -734 073 1 853 179 -1 949 409
1 -59 1465 -19 811 157 147 -728 153 1 812 843 -1 850 121
1 -59 1465 -19 811 157 163 -728 585 1 816 731 -1 861 785
1 -59 1465 -19 811 157 163 -728 553 1 816 155 -1 859 193
1 -59 1465 -19 811 157 179 -729 017 1 820 619 -1 873 449
1 -59 1465 -19 811 157 179 -728 985 1 819 979 -1 870 281
1 -59 1465 -19 811 157 179 -728 985 1 820 043 -1 870 857
1 -59 1465 -19 811 157 179 -728 953 1 819 467 -1 868 265
1 -59 1465 -19 811 157 179 -728 921 1 818 955 -1 866 249
1 -59 1465 -19 811 157 195 -729 449 1 824 507 -1 885 113
1 -59 1465 -19 811 157 195 -729 417 1 823 867 -1 881 945
```

```

1 -59 1465 -19811 157195 -729417 1823931 -1882521
1 -59 1465 -19811 157195 -729385 1823291 -1879353
1 -59 1465 -19811 157195 -729385 1823355 -1879929
1 -59 1465 -19811 157195 -729353 1822779 -1877337
1 -59 1465 -19811 157211 -729881 1828331 -1896201
1 -59 1465 -19811 157211 -729849 1827755 -1893609
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1 -59 1465 -19811 157211 -729817 1827115 -1890441
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1 -59 1465 -19787 156347 -718217 1758347 -1738737
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1 -59 1465 -19779 156059 -714361 1735595 -1688841

```

Dimensions[A]

{91, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -2891, 71785, -971419, 7726859, -36062841, 91232347, -96206753}

Array[c, 8].Transpose[A]

$$\begin{aligned}
& \{c[1] - 59 c[2] + 1465 c[3] - 19835 c[4] + 158043 c[5] - \\
& \quad 740489 c[6] + 1887211 c[7] - 2015937 c[8], c[1] - 59 c[2] + 1465 c[3] - \\
& \quad 19827 c[4] + 157739 c[5] - 736233 c[6] + 1861147 c[7] - 1956969 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + 157755 c[5] - 736697 c[6] + 1865483 c[7] - \\
& \quad 1970073 c[8], c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + 157755 c[5] - \\
& \quad 736697 c[6] + 1865547 c[7] - 1970649 c[8], c[1] - 59 c[2] + 1465 c[3] - \\
& \quad 19827 c[4] + 157755 c[5] - 736697 c[6] + 1865611 c[7] - 1971225 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + 157755 c[5] - 736665 c[6] + \\
& \quad 1864971 c[7] - 1968057 c[8], c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + \\
& \quad 157755 c[5] - 736665 c[6] + 1865035 c[7] - 1968633 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + 157755 c[5] - 736633 c[6] + \\
& \quad 1864459 c[7] - 1966041 c[8], c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + \\
& \quad 157771 c[5] - 737129 c[6] + 1869307 c[7] - 1981161 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + 157771 c[5] - 737097 c[6] + \\
& \quad 1868795 c[7] - 1979145 c[8], c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + \\
& \quad 157771 c[5] - 737097 c[6] + 1868859 c[7] - 1979721 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + 157771 c[5] - 737065 c[6] + \\
& \quad 1868283 c[7] - 1977129 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157451 c[5] - 732473 c[6] + 1840059 c[7] - 1914273 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157451 c[5] - 732441 c[6] + \\
& \quad 1839483 c[7] - 1911681 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157451 c[5] - 732409 c[6] + 1838907 c[7] - 1909089 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157451 c[5] - 732377 c[6] + \\
& \quad 1838395 c[7] - 1907073 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157467 c[5] - 732905 c[6] + 1843947 c[7] - 1925937 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157467 c[5] - 732873 c[6] + \\
& \quad 1843307 c[7] - 1922769 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157467 c[5] - 732873 c[6] + 1843371 c[7] - 1923345 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157467 c[5] - 732841 c[6] + \\
& \quad 1842731 c[7] - 1920177 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157467 c[5] - 732841 c[6] + 1842795 c[7] - 1920753 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157467 c[5] - 732809 c[6] + \\
& \quad 1842219 c[7] - 1918161 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157467 c[5] - 732809 c[6] + 1842283 c[7] - 1918737 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157467 c[5] - 732777 c[6] + \\
& \quad 1841707 c[7] - 1916145 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157483 c[5] - 733305 c[6] + 1847195 c[7] - 1934433 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157483 c[5] - 733273 c[6] + \\
& \quad 1846619 c[7] - 1931841 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157483 c[5] - 733273 c[6] + 1846683 c[7] - 1932417 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157483 c[5] - 733241 c[6] + \\
& \quad 1846043 c[7] - 1929249 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157483 c[5] - 733241 c[6] + 1846107 c[7] - 1929825 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157483 c[5] - 733209 c[6] + \\
& \quad 1845531 c[7] - 1927233 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + \\
& \quad 157499 c[5] - 733673 c[6] + 1849867 c[7] - 1940337 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157499 c[5] - 733673 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 1849931c[7] - 1940913c[8], c[1] - 59c[2] + 1465c[3] - 19819c[4] + \\
& 157499c[5] - 733673c[6] + 1849995c[7] - 1941489c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19819c[4] + 157499c[5] - 733641c[6] + \\
& 1849355c[7] - 1938321c[8], c[1] - 59c[2] + 1465c[3] - 19819c[4] + \\
& 157515c[5] - 734073c[6] + 1853179c[7] - 1949409c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157147c[5] - 728153c[6] + \\
& 1812843c[7] - 1850121c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157163c[5] - 728585c[6] + 1816731c[7] - 1861785c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157163c[5] - 728553c[6] + \\
& 1816155c[7] - 1859193c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157179c[5] - 729017c[6] + 1820619c[7] - 1873449c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157179c[5] - 728985c[6] + \\
& 1819979c[7] - 1870281c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157179c[5] - 728985c[6] + 1820043c[7] - 1870857c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157179c[5] - 728953c[6] + \\
& 1819467c[7] - 1868265c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157179c[5] - 728921c[6] + 1818955c[7] - 1866249c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157195c[5] - 729449c[6] + \\
& 1824507c[7] - 1885113c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157195c[5] - 729417c[6] + 1823867c[7] - 1881945c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157195c[5] - 729417c[6] + \\
& 1823931c[7] - 1882521c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157195c[5] - 729385c[6] + 1823291c[7] - 1879353c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157195c[5] - 729385c[6] + \\
& 1823355c[7] - 1879929c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157195c[5] - 729353c[6] + 1822779c[7] - 1877337c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157211c[5] - 729881c[6] + \\
& 1828331c[7] - 1896201c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157211c[5] - 729849c[6] + 1827755c[7] - 1893609c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157211c[5] - 729849c[6] + \\
& 1827819c[7] - 1894185c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157211c[5] - 729817c[6] + 1827115c[7] - 1890441c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157211c[5] - 729817c[6] + \\
& 1827179c[7] - 1891017c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157211c[5] - 729817c[6] + 1827243c[7] - 1891593c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157211c[5] - 729785c[6] + \\
& 1826603c[7] - 1888425c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157227c[5] - 730249c[6] + 1831003c[7] - 1902105c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157227c[5] - 730249c[6] + \\
& 1831067c[7] - 1902681c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157227c[5] - 730217c[6] + 1830427c[7] - 1899513c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156875c[5] - 724697c[6] + \\
& 1793403c[7] - 1809297c[8], c[1] - 59c[2] + 1465c[3] - 19803c[4] + \\
& 156891c[5] - 725129c[6] + 1797291c[7] - 1820961c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156891c[5] - 725097c[6] + \\
& 1796715c[7] - 1818369c[8], c[1] - 59c[2] + 1465c[3] - 19803c[4] + \\
& 156907c[5] - 725561c[6] + 1801115c[7] - 1832049c[8],
\end{aligned}$$


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c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 907 c[5] - 725 561 c[6] +
  1 801 179 c[7] - 1 832 625 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 907 c[5] - 725 529 c[6] + 1 800 539 c[7] - 1 829 457 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 907 c[5] - 725 529 c[6] +
  1 800 603 c[7] - 1 830 033 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 907 c[5] - 725 497 c[6] + 1 800 027 c[7] - 1 827 441 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 923 c[5] - 725 993 c[6] +
  1 805 003 c[7] - 1 843 713 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 923 c[5] - 725 961 c[6] + 1 804 427 c[7] - 1 841 121 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 923 c[5] - 725 961 c[6] +
  1 804 491 c[7] - 1 841 697 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 923 c[5] - 725 929 c[6] + 1 803 851 c[7] - 1 838 529 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 939 c[5] - 726 425 c[6] +
  1 808 891 c[7] - 1 855 377 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 939 c[5] - 726 393 c[6] + 1 808 315 c[7] - 1 852 785 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 939 c[5] - 726 361 c[6] +
  1 807 675 c[7] - 1 849 617 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 955 c[5] - 726 857 c[6] + 1 812 779 c[7] - 1 867 041 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 825 c[6] +
  1 812 139 c[7] - 1 863 873 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 587 c[5] - 720 841 c[6] + 1 770 651 c[7] - 1 759 401 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 603 c[5] - 721 241 c[6] +
  1 773 963 c[7] - 1 768 473 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 619 c[5] - 721 673 c[6] + 1 777 787 c[7] - 1 779 561 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 619 c[5] - 721 673 c[6] +
  1 777 851 c[7] - 1 780 137 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 619 c[5] - 721 641 c[6] + 1 777 275 c[7] - 1 777 545 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 635 c[5] - 722 105 c[6] +
  1 781 675 c[7] - 1 791 225 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 635 c[5] - 722 105 c[6] + 1 781 739 c[7] - 1 791 801 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 635 c[5] - 722 073 c[6] +
  1 781 099 c[7] - 1 788 633 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 651 c[5] - 722 569 c[6] + 1 786 139 c[7] - 1 805 481 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 651 c[5] - 722 537 c[6] +
  1 785 563 c[7] - 1 802 889 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 667 c[5] - 723 001 c[6] + 1 790 027 c[7] - 1 817 145 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 331 c[5] - 717 785 c[6] +
  1 754 523 c[7] - 1 727 649 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
  156 347 c[5] - 718 217 c[6] + 1 758 347 c[7] - 1 738 737 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 363 c[5] - 718 681 c[6] +
  1 762 811 c[7] - 1 752 993 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] +
  156 059 c[5] - 714 361 c[6] + 1 735 595 c[7] - 1 688 841 c[8] }

```

Array[c, 8].g

```

49 c[1] - 2891 c[2] + 71 785 c[3] - 971 419 c[4] +
  7 726 859 c[5] - 36 062 841 c[6] + 91 232 347 c[7] - 96 206 753 c[8]

```

cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2891 c[2] + 71 785 c[3] - 971 419 c[4] +

```

$$\begin{aligned}
& 7\,726\,859\,c[5] - 36\,062\,841\,c[6] + 91\,232\,347\,c[7] - 96\,206\,753\,c[8] < 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,835\,c[4] + 158\,043\,c[5] - 740\,489\,c[6] + \\
& 1\,887\,211\,c[7] - 2\,015\,937\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + \\
& 157\,739\,c[5] - 736\,233\,c[6] + 1\,861\,147\,c[7] - 1\,956\,969\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + 157\,755\,c[5] - 736\,697\,c[6] + \\
& 1\,865\,483\,c[7] - 1\,970\,073\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + \\
& 157\,755\,c[5] - 736\,697\,c[6] + 1\,865\,547\,c[7] - 1\,970\,649\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + 157\,755\,c[5] - 736\,697\,c[6] + \\
& 1\,865\,611\,c[7] - 1\,971\,225\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + \\
& 157\,755\,c[5] - 736\,665\,c[6] + 1\,864\,971\,c[7] - 1\,968\,057\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + 157\,755\,c[5] - 736\,665\,c[6] + \\
& 1\,865\,035\,c[7] - 1\,968\,633\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + \\
& 157\,755\,c[5] - 736\,633\,c[6] + 1\,864\,459\,c[7] - 1\,966\,041\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + 157\,771\,c[5] - 737\,129\,c[6] + \\
& 1\,869\,307\,c[7] - 1\,981\,161\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + \\
& 157\,771\,c[5] - 737\,097\,c[6] + 1\,868\,795\,c[7] - 1\,979\,145\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + 157\,771\,c[5] - 737\,097\,c[6] + \\
& 1\,868\,859\,c[7] - 1\,979\,721\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,827\,c[4] + \\
& 157\,771\,c[5] - 737\,065\,c[6] + 1\,868\,283\,c[7] - 1\,977\,129\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,451\,c[5] - 732\,473\,c[6] + \\
& 1\,840\,059\,c[7] - 1\,914\,273\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,451\,c[5] - 732\,441\,c[6] + 1\,839\,483\,c[7] - 1\,911\,681\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,451\,c[5] - 732\,409\,c[6] + \\
& 1\,838\,907\,c[7] - 1\,909\,089\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,451\,c[5] - 732\,377\,c[6] + 1\,838\,395\,c[7] - 1\,907\,073\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,467\,c[5] - 732\,905\,c[6] + \\
& 1\,843\,947\,c[7] - 1\,925\,937\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,467\,c[5] - 732\,873\,c[6] + 1\,843\,307\,c[7] - 1\,922\,769\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,467\,c[5] - 732\,873\,c[6] + \\
& 1\,843\,371\,c[7] - 1\,923\,345\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,467\,c[5] - 732\,841\,c[6] + 1\,842\,731\,c[7] - 1\,920\,177\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,467\,c[5] - 732\,841\,c[6] + \\
& 1\,842\,795\,c[7] - 1\,920\,753\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,467\,c[5] - 732\,809\,c[6] + 1\,842\,219\,c[7] - 1\,918\,161\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,467\,c[5] - 732\,809\,c[6] + \\
& 1\,842\,283\,c[7] - 1\,918\,737\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,467\,c[5] - 732\,777\,c[6] + 1\,841\,707\,c[7] - 1\,916\,145\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,483\,c[5] - 733\,305\,c[6] + \\
& 1\,847\,195\,c[7] - 1\,934\,433\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,483\,c[5] - 733\,273\,c[6] + 1\,846\,619\,c[7] - 1\,931\,841\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,483\,c[5] - 733\,273\,c[6] + \\
& 1\,846\,683\,c[7] - 1\,932\,417\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,483\,c[5] - 733\,241\,c[6] + 1\,846\,043\,c[7] - 1\,929\,249\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,483\,c[5] - 733\,241\,c[6] + \\
& 1\,846\,107\,c[7] - 1\,929\,825\,c[8] \geq 0 \&\& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,483\,c[5] - 733\,209\,c[6] + 1\,845\,531\,c[7] - 1\,927\,233\,c[8] \geq 0 \&\& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,499\,c[5] - 733\,673\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 1\,849\,867\,c[7] - 1\,940\,337\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,499\,c[5] - 733\,673\,c[6] + 1\,849\,931\,c[7] - 1\,940\,913\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,499\,c[5] - 733\,673\,c[6] + \\
& 1\,849\,995\,c[7] - 1\,941\,489\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + \\
& 157\,499\,c[5] - 733\,641\,c[6] + 1\,849\,355\,c[7] - 1\,938\,321\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,819\,c[4] + 157\,515\,c[5] - 734\,073\,c[6] + \\
& 1\,853\,179\,c[7] - 1\,949\,409\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,147\,c[5] - 728\,153\,c[6] + 1\,812\,843\,c[7] - 1\,850\,121\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,163\,c[5] - 728\,585\,c[6] + \\
& 1\,816\,731\,c[7] - 1\,861\,785\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,163\,c[5] - 728\,553\,c[6] + 1\,816\,155\,c[7] - 1\,859\,193\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,179\,c[5] - 729\,017\,c[6] + \\
& 1\,820\,619\,c[7] - 1\,873\,449\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,179\,c[5] - 728\,985\,c[6] + 1\,819\,979\,c[7] - 1\,870\,281\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,179\,c[5] - 728\,985\,c[6] + \\
& 1\,820\,043\,c[7] - 1\,870\,857\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,179\,c[5] - 728\,953\,c[6] + 1\,819\,467\,c[7] - 1\,868\,265\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,179\,c[5] - 728\,921\,c[6] + \\
& 1\,818\,955\,c[7] - 1\,866\,249\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,195\,c[5] - 729\,449\,c[6] + 1\,824\,507\,c[7] - 1\,885\,113\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,195\,c[5] - 729\,417\,c[6] + \\
& 1\,823\,867\,c[7] - 1\,881\,945\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,195\,c[5] - 729\,417\,c[6] + 1\,823\,931\,c[7] - 1\,882\,521\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,195\,c[5] - 729\,385\,c[6] + \\
& 1\,823\,291\,c[7] - 1\,879\,353\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,195\,c[5] - 729\,385\,c[6] + 1\,823\,355\,c[7] - 1\,879\,929\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,195\,c[5] - 729\,353\,c[6] + \\
& 1\,822\,779\,c[7] - 1\,877\,337\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,211\,c[5] - 729\,881\,c[6] + 1\,828\,331\,c[7] - 1\,896\,201\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,211\,c[5] - 729\,849\,c[6] + \\
& 1\,827\,755\,c[7] - 1\,893\,609\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,211\,c[5] - 729\,849\,c[6] + 1\,827\,819\,c[7] - 1\,894\,185\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,211\,c[5] - 729\,817\,c[6] + \\
& 1\,827\,115\,c[7] - 1\,890\,441\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,211\,c[5] - 729\,817\,c[6] + 1\,827\,179\,c[7] - 1\,891\,017\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,211\,c[5] - 729\,817\,c[6] + \\
& 1\,827\,243\,c[7] - 1\,891\,593\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,211\,c[5] - 729\,785\,c[6] + 1\,826\,603\,c[7] - 1\,888\,425\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,227\,c[5] - 730\,249\,c[6] + \\
& 1\,831\,003\,c[7] - 1\,902\,105\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + \\
& 157\,227\,c[5] - 730\,249\,c[6] + 1\,831\,067\,c[7] - 1\,902\,681\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,811\,c[4] + 157\,227\,c[5] - 730\,217\,c[6] + \\
& 1\,830\,427\,c[7] - 1\,899\,513\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,803\,c[4] + \\
& 156\,875\,c[5] - 724\,697\,c[6] + 1\,793\,403\,c[7] - 1\,809\,297\,c[8] \geq 0 \& \& \\
& c[1] - 59\,c[2] + 1465\,c[3] - 19\,803\,c[4] + 156\,891\,c[5] - 725\,129\,c[6] + \\
& 1\,797\,291\,c[7] - 1\,820\,961\,c[8] \geq 0 \& \& c[1] - 59\,c[2] + 1465\,c[3] - 19\,803\,c[4] + \\
& 156\,891\,c[5] - 725\,097\,c[6] + 1\,796\,715\,c[7] - 1\,818\,369\,c[8] \geq 0 \& \&
\end{aligned}$$

```

c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 907 c[5] - 725 561 c[6] +
  1 801 115 c[7] - 1 832 049 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 907 c[5] - 725 561 c[6] + 1 801 179 c[7] - 1 832 625 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 907 c[5] - 725 529 c[6] +
  1 800 539 c[7] - 1 829 457 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 907 c[5] - 725 529 c[6] + 1 800 603 c[7] - 1 830 033 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 907 c[5] - 725 497 c[6] +
  1 800 027 c[7] - 1 827 441 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 923 c[5] - 725 993 c[6] + 1 805 003 c[7] - 1 843 713 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 923 c[5] - 725 961 c[6] +
  1 804 427 c[7] - 1 841 121 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 923 c[5] - 725 961 c[6] + 1 804 491 c[7] - 1 841 697 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 923 c[5] - 725 929 c[6] +
  1 803 851 c[7] - 1 838 529 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 939 c[5] - 726 425 c[6] + 1 808 891 c[7] - 1 855 377 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 939 c[5] - 726 393 c[6] +
  1 808 315 c[7] - 1 852 785 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 939 c[5] - 726 361 c[6] + 1 807 675 c[7] - 1 849 617 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 857 c[6] +
  1 812 779 c[7] - 1 867 041 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 955 c[5] - 726 825 c[6] + 1 812 139 c[7] - 1 863 873 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 587 c[5] - 720 841 c[6] +
  1 770 651 c[7] - 1 759 401 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 603 c[5] - 721 241 c[6] + 1 773 963 c[7] - 1 768 473 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 619 c[5] - 721 673 c[6] +
  1 777 787 c[7] - 1 779 561 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 619 c[5] - 721 673 c[6] + 1 777 851 c[7] - 1 780 137 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 619 c[5] - 721 641 c[6] +
  1 777 275 c[7] - 1 777 545 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 635 c[5] - 722 105 c[6] + 1 781 675 c[7] - 1 791 225 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 635 c[5] - 722 105 c[6] +
  1 781 739 c[7] - 1 791 801 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 635 c[5] - 722 073 c[6] + 1 781 099 c[7] - 1 788 633 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 651 c[5] - 722 569 c[6] +
  1 786 139 c[7] - 1 805 481 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 651 c[5] - 722 537 c[6] + 1 785 563 c[7] - 1 802 889 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 667 c[5] - 723 001 c[6] +
  1 790 027 c[7] - 1 817 145 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
  156 331 c[5] - 717 785 c[6] + 1 754 523 c[7] - 1 727 649 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 347 c[5] - 718 217 c[6] +
  1 758 347 c[7] - 1 738 737 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
  156 363 c[5] - 718 681 c[6] + 1 762 811 c[7] - 1 752 993 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] + 156 059 c[5] - 714 361 c[6] +
  1 735 595 c[7] - 1 688 841 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 12 829 413 037, 1 887 211 369, 175 111 560, 14 517 041, 907 320, 0}

```

```
GCD[0, 0, 12 829 413 037, 1 887 211 369, 175 111 560, 14 517 041, 907 320, 0]
```

```
1
```

```
cert.g
```

```
-40 904 967
```

```
{0, 0, 12 829 413 037, 1 887 211 369, 175 111 560, 14 517 041, 907 320, 0}.
```

```
Reverse[gpart[listdim17[[152]]]
```

```
-40 904 967
```

```
cert.Transpose[A]
```

```
{3 983 641, 3 898 369, 3 915 825, 61 984 305, 120 052 785, 3 913 297, 61 981 777,
 3 910 769, 3 930 753, 3 928 225, 61 996 705, 3 925 697, 119 970 041, 61 899 033,
 3 828 025, 3 825 497, 178 053 449, 61 913 961, 119 982 441, 3 842 953, 61 911 433,
 3 840 425, 61 908 905, 3 837 897, 119 997 369, 61 926 361, 119 994 841, 3 855 353,
 61 923 833, 3 852 825, 3 870 281, 61 938 761, 120 007 241, 3 867 753, 3 882 681,
 3 742 753, 61 826 161, 3 755 153, 119 909 569, 3 770 081, 61 838 561, 3 767 553,
 3 765 025, 177 992 977, 61 853 489, 119 921 969, 3 782 481, 61 850 961, 3 779 953,
 178 007 905, 119 936 897, 178 005 377, 3 797 409, 61 865 889, 119 934 369, 3 794 881,
 61 880 817, 119 949 297, 3 809 809, 3 682 281, 61 765 689, 3 694 681, 61 780 617,
 119 849 097, 3 709 609, 61 778 089, 3 707 081, 119 864 025, 61 793 017, 119 861 497,
 3 722 009, 177 947 433, 119 876 425, 3 736 937, 236 030 841, 119 891 353, 3 609 409,
 3 621 809, 3 636 737, 61 705 217, 3 634 209, 61 720 145, 119 788 625, 3 649 137,
 177 874 561, 119 803 553, 235 957 969, 3 561 337, 3 576 265, 119 730 681, 3 503 393}
```

```
chi = listdim17[[153]]
```

```
 $(-11 + x)^2 (-9 + x)^8 (5 + x)^{32} (95 - 20 x + x^2) (59 - 16 x + x^2) (-928 + 293 x - 30 x^2 + x^3)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -81, 2884, -59 196, 771 230, -6 607 062, 37 172 980,
      -132 252 636, 269 506 345, -239 159 745}, {1, -81, 2884, -59 196,
      771 246, -6 607 814, 37 186 900, -132 379 260, 270 071 225, -240 146 225},
      {1, -81, 2884, -59 188, 770 782, -6 596 718, 37 047 028, -131 400 388,
      266 471 145, -234 720 585}, {1, -81, 2884, -59 188, 770 798, -6 597 470,
      37 060 948, -131 527 012, 267 036 025, -235 707 065}, {1, -81, 2884, -59 180,
      770 334, -6 586 374, 36 921 076, -130 548 140, 263 435 945, -230 281 425}};
```

A // MatrixForm

$$\begin{pmatrix} 1 & -81 & 2884 & -59196 & 771230 & -6607062 & 37172980 & -132252636 & 269506345 & -23915974 \\ 1 & -81 & 2884 & -59196 & 771246 & -6607814 & 37186900 & -132379260 & 270071225 & -24014622 \\ 1 & -81 & 2884 & -59188 & 770782 & -6596718 & 37047028 & -131400388 & 266471145 & -23472058 \\ 1 & -81 & 2884 & -59188 & 770798 & -6597470 & 37060948 & -131527012 & 267036025 & -23570706 \\ 1 & -81 & 2884 & -59180 & 770334 & -6586374 & 36921076 & -130548140 & 263435945 & -23028142 \end{pmatrix}$$

Dimensions[A]

{5, 10}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3969, 141316, -2900500, 37784782, -323626302,
1820085012, -6471219012, 13172991465, -11668205545}

Array[c, 10].Transpose[A]

{c[1] - 81 c[2] + 2884 c[3] - 59196 c[4] + 771230 c[5] - 6607062 c[6] +
37172980 c[7] - 132252636 c[8] + 269506345 c[9] - 239159745 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59196 c[4] + 771246 c[5] - 6607814 c[6] +
37186900 c[7] - 132379260 c[8] + 270071225 c[9] - 240146225 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770782 c[5] - 6596718 c[6] +
37047028 c[7] - 131400388 c[8] + 266471145 c[9] - 234720585 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770798 c[5] - 6597470 c[6] +
37060948 c[7] - 131527012 c[8] + 267036025 c[9] - 235707065 c[10],
c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770334 c[5] - 6586374 c[6] +
36921076 c[7] - 130548140 c[8] + 263435945 c[9] - 230281425 c[10]}

Array[c, 10].g

49 c[1] - 3969 c[2] + 141316 c[3] - 2900500 c[4] + 37784782 c[5] - 323626302 c[6] +
1820085012 c[7] - 6471219012 c[8] + 13172991465 c[9] - 11668205545 c[10]

cert = Flatten[Array[c, 10] /. FindInstance[

49 c[1] - 3969 c[2] + 141316 c[3] - 2900500 c[4] + 37784782 c[5] - 323626302 c[6] +
1820085012 c[7] - 6471219012 c[8] + 13172991465 c[9] - 11668205545 c[10] <
0 && c[1] - 81 c[2] + 2884 c[3] - 59196 c[4] + 771230 c[5] - 6607062 c[6] +
37172980 c[7] - 132252636 c[8] + 269506345 c[9] - 239159745 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59196 c[4] + 771246 c[5] - 6607814 c[6] +
37186900 c[7] - 132379260 c[8] + 270071225 c[9] - 240146225 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770782 c[5] - 6596718 c[6] +
37047028 c[7] - 131400388 c[8] + 266471145 c[9] - 234720585 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59188 c[4] + 770798 c[5] - 6597470 c[6] +
37060948 c[7] - 131527012 c[8] + 267036025 c[9] - 235707065 c[10] ≥ 0 &&
c[1] - 81 c[2] + 2884 c[3] - 59180 c[4] + 770334 c[5] - 6586374 c[6] +
36921076 c[7] - 130548140 c[8] + 263435945 c[9] -
230281425 c[10] ≥ 0, Array[c, 10], Integers]]

{0, 0, 0, 0, 0, 0, 0, -37148, -30261, -13559}

GCD[0, 0, 0, 0, 0, 0, 0, -37148, -30261, -13559]

1

cert.g

-25 851 879 934

{0, 0, 0, 0, 0, 0, 0, -37 148, -30 261, -13 559}.Reverse[gpart[listdim17[[153]]]

-25 851 879 934

cert.Transpose[A]

{156 398 538, 1 142 075 530, 154 706 594, 1 140 383 586, 153 014 650}

chi = listdim17[[154]]

$(-11 + x)^2 (-9 + x)^9 (5 + x)^{32} (95 - 20 x + x^2)^2 (64 - 17 x + x^2)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

{ {279 015, -225 180, 72 747, -12 112, 1101, -52, 1},
 {280 599, -225 500, 72 763, -12 112, 1101, -52, 1},
 {270 655, -222 660, 72 499, -12 104, 1101, -52, 1},
 {272 591, -223 012, 72 515, -12 104, 1101, -52, 1},
 {272 239, -222 980, 72 515, -12 104, 1101, -52, 1},
 {274 527, -223 364, 72 531, -12 104, 1101, -52, 1},
 {274 175, -223 332, 72 531, -12 104, 1101, -52, 1},
 {273 823, -223 300, 72 531, -12 104, 1101, -52, 1},
 {275 759, -223 652, 72 547, -12 104, 1101, -52, 1},
 {262 295, -220 140, 72 251, -12 096, 1101, -52, 1},
 {264 231, -220 492, 72 267, -12 096, 1101, -52, 1},
 {263 879, -220 460, 72 267, -12 096, 1101, -52, 1},
 {265 815, -220 812, 72 283, -12 096, 1101, -52, 1},
 {265 463, -220 780, 72 283, -12 096, 1101, -52, 1},
 {265 111, -220 748, 72 283, -12 096, 1101, -52, 1},
 {267 399, -221 132, 72 299, -12 096, 1101, -52, 1},
 {267 047, -221 100, 72 299, -12 096, 1101, -52, 1},
 {268 983, -221 452, 72 315, -12 096, 1101, -52, 1},
 {253 935, -217 620, 72 003, -12 088, 1101, -52, 1},
 {255 519, -217 940, 72 019, -12 088, 1101, -52, 1},
 {257 103, -218 260, 72 035, -12 088, 1101, -52, 1},
 {256 751, -218 228, 72 035, -12 088, 1101, -52, 1},
 {258 687, -218 580, 72 051, -12 088, 1101, -52, 1},
 {258 335, -218 548, 72 051, -12 088, 1101, -52, 1},
 {248 391, -215 708, 71 787, -12 080, 1101, -52, 1},
 {249 975, -216 028, 71 803, -12 080, 1101, -52, 1} }

```

A = {{279 015, -225 180, 72 747, -12 112, 1101, -52, 1},
      {280 599, -225 500, 72 763, -12 112, 1101, -52, 1},
      {270 655, -222 660, 72 499, -12 104, 1101, -52, 1},
      {272 591, -223 012, 72 515, -12 104, 1101, -52, 1},
      {272 239, -222 980, 72 515, -12 104, 1101, -52, 1},
      {274 527, -223 364, 72 531, -12 104, 1101, -52, 1},
      {274 175, -223 332, 72 531, -12 104, 1101, -52, 1},
      {273 823, -223 300, 72 531, -12 104, 1101, -52, 1},
      {275 759, -223 652, 72 547, -12 104, 1101, -52, 1},
      {262 295, -220 140, 72 251, -12 096, 1101, -52, 1},
      {264 231, -220 492, 72 267, -12 096, 1101, -52, 1},
      {263 879, -220 460, 72 267, -12 096, 1101, -52, 1},
      {265 815, -220 812, 72 283, -12 096, 1101, -52, 1},
      {265 463, -220 780, 72 283, -12 096, 1101, -52, 1},
      {265 111, -220 748, 72 283, -12 096, 1101, -52, 1},
      {267 399, -221 132, 72 299, -12 096, 1101, -52, 1},
      {267 047, -221 100, 72 299, -12 096, 1101, -52, 1},
      {268 983, -221 452, 72 315, -12 096, 1101, -52, 1},
      {253 935, -217 620, 72 003, -12 088, 1101, -52, 1},
      {255 519, -217 940, 72 019, -12 088, 1101, -52, 1},
      {257 103, -218 260, 72 035, -12 088, 1101, -52, 1},
      {256 751, -218 228, 72 035, -12 088, 1101, -52, 1},
      {258 687, -218 580, 72 051, -12 088, 1101, -52, 1},
      {258 335, -218 548, 72 051, -12 088, 1101, -52, 1},
      {248 391, -215 708, 71 787, -12 080, 1101, -52, 1},
      {249 975, -216 028, 71 803, -12 080, 1101, -52, 1}};

```


A // MatrixForm

$$\begin{pmatrix} 279015 & -225180 & 72747 & -12112 & 1101 & -52 & 1 \\ 280599 & -225500 & 72763 & -12112 & 1101 & -52 & 1 \\ 270655 & -222660 & 72499 & -12104 & 1101 & -52 & 1 \\ 272591 & -223012 & 72515 & -12104 & 1101 & -52 & 1 \\ 272239 & -222980 & 72515 & -12104 & 1101 & -52 & 1 \\ 274527 & -223364 & 72531 & -12104 & 1101 & -52 & 1 \\ 274175 & -223332 & 72531 & -12104 & 1101 & -52 & 1 \\ 273823 & -223300 & 72531 & -12104 & 1101 & -52 & 1 \\ 275759 & -223652 & 72547 & -12104 & 1101 & -52 & 1 \\ 262295 & -220140 & 72251 & -12096 & 1101 & -52 & 1 \\ 264231 & -220492 & 72267 & -12096 & 1101 & -52 & 1 \\ 263879 & -220460 & 72267 & -12096 & 1101 & -52 & 1 \\ 265815 & -220812 & 72283 & -12096 & 1101 & -52 & 1 \\ 265463 & -220780 & 72283 & -12096 & 1101 & -52 & 1 \\ 265111 & -220748 & 72283 & -12096 & 1101 & -52 & 1 \\ 267399 & -221132 & 72299 & -12096 & 1101 & -52 & 1 \\ 267047 & -221100 & 72299 & -12096 & 1101 & -52 & 1 \\ 268983 & -221452 & 72315 & -12096 & 1101 & -52 & 1 \\ 253935 & -217620 & 72003 & -12088 & 1101 & -52 & 1 \\ 255519 & -217940 & 72019 & -12088 & 1101 & -52 & 1 \\ 257103 & -218260 & 72035 & -12088 & 1101 & -52 & 1 \\ 256751 & -218228 & 72035 & -12088 & 1101 & -52 & 1 \\ 258687 & -218580 & 72051 & -12088 & 1101 & -52 & 1 \\ 258335 & -218548 & 72051 & -12088 & 1101 & -52 & 1 \\ 248391 & -215708 & 71787 & -12080 & 1101 & -52 & 1 \\ 249975 & -216028 & 71803 & -12080 & 1101 & -52 & 1 \end{pmatrix}$$

Dimensions[A]

{26, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{13638015, -11016100, 3562131, -593384, 53949, -2548, 49}

Array[c, 7].Transpose[A]

```
{ 279 015 c[1] - 225 180 c[2] + 72 747 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7],
 280 599 c[1] - 225 500 c[2] + 72 763 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7],
 270 655 c[1] - 222 660 c[2] + 72 499 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 272 591 c[1] - 223 012 c[2] + 72 515 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 272 239 c[1] - 222 980 c[2] + 72 515 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 274 527 c[1] - 223 364 c[2] + 72 531 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 274 175 c[1] - 223 332 c[2] + 72 531 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 273 823 c[1] - 223 300 c[2] + 72 531 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 275 759 c[1] - 223 652 c[2] + 72 547 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7],
 262 295 c[1] - 220 140 c[2] + 72 251 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 264 231 c[1] - 220 492 c[2] + 72 267 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 263 879 c[1] - 220 460 c[2] + 72 267 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 265 815 c[1] - 220 812 c[2] + 72 283 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 265 463 c[1] - 220 780 c[2] + 72 283 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 265 111 c[1] - 220 748 c[2] + 72 283 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 267 399 c[1] - 221 132 c[2] + 72 299 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 267 047 c[1] - 221 100 c[2] + 72 299 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 268 983 c[1] - 221 452 c[2] + 72 315 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7],
 253 935 c[1] - 217 620 c[2] + 72 003 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7],
 255 519 c[1] - 217 940 c[2] + 72 019 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7],
 257 103 c[1] - 218 260 c[2] + 72 035 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7],
 256 751 c[1] - 218 228 c[2] + 72 035 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7],
 258 687 c[1] - 218 580 c[2] + 72 051 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7],
 258 335 c[1] - 218 548 c[2] + 72 051 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7],
 248 391 c[1] - 215 708 c[2] + 71 787 c[3] - 12 080 c[4] + 1101 c[5] - 52 c[6] + c[7],
 249 975 c[1] - 216 028 c[2] + 71 803 c[3] - 12 080 c[4] + 1101 c[5] - 52 c[6] + c[7]}
```

Array[c, 7].g

```
13 638 015 c[1] - 11 016 100 c[2] + 3 562 131 c[3] -
 593 384 c[4] + 53 949 c[5] - 2548 c[6] + 49 c[7]
```

cert =

```
Flatten[Array[c, 7] /. FindInstance[13 638 015 c[1] - 11 016 100 c[2] + 3 562 131 c[3] -
593 384 c[4] + 53 949 c[5] - 2548 c[6] + 49 c[7] < 0 &&
279 015 c[1] - 225 180 c[2] + 72 747 c[3] - 12 112 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
0 && 280 599 c[1] - 225 500 c[2] + 72 763 c[3] - 12 112 c[4] +
1101 c[5] - 52 c[6] + c[7] ≥ 0 && 270 655 c[1] - 222 660 c[2] +
72 499 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
272 591 c[1] - 223 012 c[2] + 72 515 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
0 && 272 239 c[1] - 222 980 c[2] + 72 515 c[3] - 12 104 c[4] +
1101 c[5] - 52 c[6] + c[7] ≥ 0 && 274 527 c[1] - 223 364 c[2] +
72 531 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
274 175 c[1] - 223 332 c[2] + 72 531 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
0 && 273 823 c[1] - 223 300 c[2] + 72 531 c[3] - 12 104 c[4] +
1101 c[5] - 52 c[6] + c[7] ≥ 0 && 275 759 c[1] - 223 652 c[2] +
72 547 c[3] - 12 104 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
262 295 c[1] - 220 140 c[2] + 72 251 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
0 && 264 231 c[1] - 220 492 c[2] + 72 267 c[3] - 12 096 c[4] +
1101 c[5] - 52 c[6] + c[7] ≥ 0 && 263 879 c[1] - 220 460 c[2] +
72 267 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
265 815 c[1] - 220 812 c[2] + 72 283 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
0 && 265 463 c[1] - 220 780 c[2] + 72 283 c[3] - 12 096 c[4] +
1101 c[5] - 52 c[6] + c[7] ≥ 0 && 265 111 c[1] - 220 748 c[2] +
72 283 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
267 399 c[1] - 221 132 c[2] + 72 299 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
0 && 267 047 c[1] - 221 100 c[2] + 72 299 c[3] - 12 096 c[4] +
1101 c[5] - 52 c[6] + c[7] ≥ 0 && 268 983 c[1] - 221 452 c[2] +
72 315 c[3] - 12 096 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
253 935 c[1] - 217 620 c[2] + 72 003 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
0 && 255 519 c[1] - 217 940 c[2] + 72 019 c[3] - 12 088 c[4] +
1101 c[5] - 52 c[6] + c[7] ≥ 0 && 257 103 c[1] - 218 260 c[2] +
72 035 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
256 751 c[1] - 218 228 c[2] + 72 035 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
0 && 258 687 c[1] - 218 580 c[2] + 72 051 c[3] - 12 088 c[4] +
1101 c[5] - 52 c[6] + c[7] ≥ 0 && 258 335 c[1] - 218 548 c[2] +
72 051 c[3] - 12 088 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥ 0 &&
248 391 c[1] - 215 708 c[2] + 71 787 c[3] - 12 080 c[4] + 1101 c[5] - 52 c[6] + c[7] ≥
0 && 249 975 c[1] - 216 028 c[2] + 71 803 c[3] - 12 080 c[4] +
1101 c[5] - 52 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{-56 379, -620 172, -6 821 889, -75 040 785, 0, 0, -536 541 607 878}
```

GCD[-56 379, -620 172, -6 821 889, -75 040 785, 0, 0, -536 541 607 878]

3

cert = cert / 3

{-18 793, -206 724, -2 273 963, -25 013 595, 0, 0, -178 847 202 626}

Reverse[cert]

{-178 847 202 626, 0, 0, -25 013 595, -2 273 963, -206 724, -18 793}

cert.g

-6 927 842

{-18 793, -206 724, -2 273 963, -25 013 595, 0, 0, -178 847 202 626}.

gpart[listdim17[[154]]]

-6 927 842

cert.Transpose[A]

{55 078, 55 238, 54 142, 54 334, 54 302, 54 526, 54 494, 54 462,
54 654, 53 206, 53 398, 53 366, 53 558, 53 526, 53 494, 53 718, 53 686,
53 878, 52 270, 52 430, 52 590, 52 558, 52 750, 52 718, 51 622, 51 782}

chi = listdim17[[155]]

$(-11 + x)^5 (-9 + x)^8 (-7 + x)^2 (5 + x)^{32} (80 - 19 x + x^2)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

{{-25 725, 18 277, -4970, 650, -41, 1}, {-25 837, 18 293, -4970, 650, -41, 1},
{-25 949, 18 309, -4970, 650, -41, 1}, {-24 997, 18 117, -4962, 650, -41, 1},
{-25 141, 18 133, -4962, 650, -41, 1}, {-25 109, 18 133, -4962, 650, -41, 1},
{-25 253, 18 149, -4962, 650, -41, 1}, {-25 221, 18 149, -4962, 650, -41, 1},
{-25 365, 18 165, -4962, 650, -41, 1}, {-25 333, 18 165, -4962, 650, -41, 1},
{-24 381, 17 973, -4954, 650, -41, 1}, {-24 525, 17 989, -4954, 650, -41, 1},
{-24 493, 17 989, -4954, 650, -41, 1}, {-24 669, 18 005, -4954, 650, -41, 1},
{-24 637, 18 005, -4954, 650, -41, 1}, {-24 605, 18 005, -4954, 650, -41, 1},
{-24 749, 18 021, -4954, 650, -41, 1}, {-24 717, 18 021, -4954, 650, -41, 1},
{-23 877, 17 845, -4946, 650, -41, 1}, {-24 021, 17 861, -4946, 650, -41, 1},
{-23 989, 17 861, -4946, 650, -41, 1}, {-24 165, 17 877, -4946, 650, -41, 1},
{-24 133, 17 877, -4946, 650, -41, 1}, {-24 101, 17 877, -4946, 650, -41, 1},
{-24 277, 17 893, -4946, 650, -41, 1}, {-23 373, 17 717, -4938, 650, -41, 1},
{-23 517, 17 733, -4938, 650, -41, 1}, {-23 485, 17 733, -4938, 650, -41, 1},
{-23 661, 17 749, -4938, 650, -41, 1}, {-22 869, 17 589, -4930, 650, -41, 1}}

```
A = {{-25 725, 18 277, -4970, 650, -41, 1}, {-25 837, 18 293, -4970, 650, -41, 1},
      {-25 949, 18 309, -4970, 650, -41, 1}, {-24 997, 18 117, -4962, 650, -41, 1},
      {-25 141, 18 133, -4962, 650, -41, 1}, {-25 109, 18 133, -4962, 650, -41, 1},
      {-25 253, 18 149, -4962, 650, -41, 1}, {-25 221, 18 149, -4962, 650, -41, 1},
      {-25 365, 18 165, -4962, 650, -41, 1}, {-25 333, 18 165, -4962, 650, -41, 1},
      {-24 381, 17 973, -4954, 650, -41, 1}, {-24 525, 17 989, -4954, 650, -41, 1},
      {-24 493, 17 989, -4954, 650, -41, 1}, {-24 669, 18 005, -4954, 650, -41, 1},
      {-24 637, 18 005, -4954, 650, -41, 1}, {-24 605, 18 005, -4954, 650, -41, 1},
      {-24 749, 18 021, -4954, 650, -41, 1}, {-24 717, 18 021, -4954, 650, -41, 1},
      {-23 877, 17 845, -4946, 650, -41, 1}, {-24 021, 17 861, -4946, 650, -41, 1},
      {-23 989, 17 861, -4946, 650, -41, 1}, {-24 165, 17 877, -4946, 650, -41, 1},
      {-24 133, 17 877, -4946, 650, -41, 1}, {-24 101, 17 877, -4946, 650, -41, 1},
      {-24 277, 17 893, -4946, 650, -41, 1}, {-23 373, 17 717, -4938, 650, -41, 1},
      {-23 517, 17 733, -4938, 650, -41, 1}, {-23 485, 17 733, -4938, 650, -41, 1},
      {-23 661, 17 749, -4938, 650, -41, 1}, {-22 869, 17 589, -4930, 650, -41, 1}};
```

```
A // MatrixForm
```

```
(-25 725 18 277 -4970 650 -41 1)
(-25 837 18 293 -4970 650 -41 1)
(-25 949 18 309 -4970 650 -41 1)
(-24 997 18 117 -4962 650 -41 1)
(-25 141 18 133 -4962 650 -41 1)
(-25 109 18 133 -4962 650 -41 1)
(-25 253 18 149 -4962 650 -41 1)
(-25 221 18 149 -4962 650 -41 1)
(-25 365 18 165 -4962 650 -41 1)
(-25 333 18 165 -4962 650 -41 1)
(-24 381 17 973 -4954 650 -41 1)
(-24 525 17 989 -4954 650 -41 1)
(-24 493 17 989 -4954 650 -41 1)
(-24 669 18 005 -4954 650 -41 1)
(-24 637 18 005 -4954 650 -41 1)
(-24 605 18 005 -4954 650 -41 1)
(-24 749 18 021 -4954 650 -41 1)
(-24 717 18 021 -4954 650 -41 1)
(-23 877 17 845 -4946 650 -41 1)
(-24 021 17 861 -4946 650 -41 1)
(-23 989 17 861 -4946 650 -41 1)
(-24 165 17 877 -4946 650 -41 1)
(-24 133 17 877 -4946 650 -41 1)
(-24 101 17 877 -4946 650 -41 1)
(-24 277 17 893 -4946 650 -41 1)
(-23 373 17 717 -4938 650 -41 1)
(-23 517 17 733 -4938 650 -41 1)
(-23 485 17 733 -4938 650 -41 1)
(-23 661 17 749 -4938 650 -41 1)
(-22 869 17 589 -4930 650 -41 1)
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1 256 645, 894 181, -243 426, 31 850, -2009, 49}
```

Array[c, 6].Transpose[A]

```
{ -25 725 c[1] + 18 277 c[2] - 4970 c[3] + 650 c[4] - 41 c[5] + c[6],
  -25 837 c[1] + 18 293 c[2] - 4970 c[3] + 650 c[4] - 41 c[5] + c[6],
  -25 949 c[1] + 18 309 c[2] - 4970 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 997 c[1] + 18 117 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6],
  -25 141 c[1] + 18 133 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6],
  -25 109 c[1] + 18 133 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6],
  -25 253 c[1] + 18 149 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6],
  -25 221 c[1] + 18 149 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6],
  -25 365 c[1] + 18 165 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6],
  -25 333 c[1] + 18 165 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 381 c[1] + 17 973 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 525 c[1] + 17 989 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 493 c[1] + 17 989 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 669 c[1] + 18 005 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 637 c[1] + 18 005 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 605 c[1] + 18 005 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 749 c[1] + 18 021 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 717 c[1] + 18 021 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6],
  -23 877 c[1] + 17 845 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 021 c[1] + 17 861 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6],
  -23 989 c[1] + 17 861 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 165 c[1] + 17 877 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 133 c[1] + 17 877 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 101 c[1] + 17 877 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6],
  -24 277 c[1] + 17 893 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6],
  -23 373 c[1] + 17 717 c[2] - 4938 c[3] + 650 c[4] - 41 c[5] + c[6],
  -23 517 c[1] + 17 733 c[2] - 4938 c[3] + 650 c[4] - 41 c[5] + c[6],
  -23 485 c[1] + 17 733 c[2] - 4938 c[3] + 650 c[4] - 41 c[5] + c[6],
  -23 661 c[1] + 17 749 c[2] - 4938 c[3] + 650 c[4] - 41 c[5] + c[6],
  -22 869 c[1] + 17 589 c[2] - 4930 c[3] + 650 c[4] - 41 c[5] + c[6] }
```

Array[c, 6].g

```
-1 256 645 c[1] + 894 181 c[2] - 243 426 c[3] + 31 850 c[4] - 2009 c[5] + 49 c[6]
```

```

cert = Flatten[Array[c, 6] /. FindInstance[
  -1256645 c[1] + 894181 c[2] - 243426 c[3] + 31850 c[4] - 2009 c[5] + 49 c[6] < 0 &&
  -25725 c[1] + 18277 c[2] - 4970 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -25837 c[1] + 18293 c[2] - 4970 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -25949 c[1] + 18309 c[2] - 4970 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24997 c[1] + 18117 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -25141 c[1] + 18133 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -25109 c[1] + 18133 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -25253 c[1] + 18149 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -25221 c[1] + 18149 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -25365 c[1] + 18165 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -25333 c[1] + 18165 c[2] - 4962 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24381 c[1] + 17973 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24525 c[1] + 17989 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24493 c[1] + 17989 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24669 c[1] + 18005 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24637 c[1] + 18005 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24605 c[1] + 18005 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24749 c[1] + 18021 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24717 c[1] + 18021 c[2] - 4954 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -23877 c[1] + 17845 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24021 c[1] + 17861 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -23989 c[1] + 17861 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24165 c[1] + 17877 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24133 c[1] + 17877 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24101 c[1] + 17877 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -24277 c[1] + 17893 c[2] - 4946 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -23373 c[1] + 17717 c[2] - 4938 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -23517 c[1] + 17733 c[2] - 4938 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -23485 c[1] + 17733 c[2] - 4938 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -23661 c[1] + 17749 c[2] - 4938 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -22869 c[1] + 17589 c[2] - 4930 c[3] + 650 c[4] - 41 c[5] + c[6] ≥ 0,
  Array[c, 6], Integers]]
{6898, 48288, 365603, 0, 0, 1111960200}

GCD[6898, 48288, 365603, 0, 0, 1111960200]
1

Reverse[cert]
{1111960200, 0, 0, 365603, 48288, 6898}

cert.g
-1351160

{6898, 48288, 365603, 0, 0, 1111960200}.gpart[listdim17[[155]]]
-1351160

```

`cert.Transpose[A]`

```
{22 016, 22 048, 22 080, 242 504, 21 800, 242 536, 21 832,
 242 568, 21 864, 242 600, 463 024, 242 320, 463 056, 21 616, 242 352,
 463 088, 242 384, 463 120, 683 576, 462 872, 683 608, 242 168, 462 904,
 683 640, 242 200, 904 128, 683 424, 904 160, 462 720, 1 124 680}
```

`chi = listdim17[[156]]`

$$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-63 212 + 36 801 x - 8268 x^2 + 902 x^3 - 48 x^4 + x^5)$$

`CoefficientList[feasibleinterlacingpolylist[chi], x]`

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A = {{1, -63, 1669, -24 051, 203 091, -1 001 917, 2 664 935, -2 938 705},
      {1, -63, 1669, -24 051, 203 091, -1 001 917, 2 664 999, -2 939 409},
      {1, -63, 1669, -24 051, 203 091, -1 001 885, 2 664 295, -2 935 537},
      {1, -63, 1669, -24 051, 203 107, -1 002 381, 2 669 399, -2 952 961},
      {1, -63, 1669, -24 043, 202 739, -996 141, 2 623 111, -2 826 153},
      {1, -63, 1669, -24 043, 202 755, -996 669, 2 628 791, -2 846 041},
      {1, -63, 1669, -24 043, 202 755, -996 669, 2 628 855, -2 846 745},
      {1, -63, 1669, -24 043, 202 755, -996 637, 2 628 215, -2 843 577},
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      {1, -63, 1669, -24 043, 202 771, -997 165, 2 633 895, -2 863 465},
      {1, -63, 1669, -24 043, 202 771, -997 165, 2 633 959, -2 864 169},
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      {1, -63, 1669, -24 043, 202 787, -997 725, 2 640 343, -2 887 929},
      {1, -63, 1669, -24 043, 202 787, -997 693, 2 639 703, -2 884 761},
      {1, -63, 1669, -24 043, 202 787, -997 661, 2 638 999, -2 880 889},
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      {1, -63, 1669, -24 043, 202 787, -997 629, 2 638 359, -2 877 721},
      {1, -63, 1669, -24 043, 202 803, -998 157, 2 644 167, -2 899 017},
      {1, -63, 1669, -24 043, 202 803, -998 125, 2 643 463, -2 895 145},
      {1, -63, 1669, -24 035, 202 403, -990 925, 2 587 607, -2 736 657},
      {1, -63, 1669, -24 035, 202 403, -990 893, 2 586 967, -2 733 489},
      {1, -63, 1669, -24 035, 202 419, -991 453, 2 593 351, -2 757 249},
      {1, -63, 1669, -24 035, 202 419, -991 421, 2 592 711, -2 754 081},
      {1, -63, 1669, -24 035, 202 419, -991 389, 2 592 071, -2 750 913},
      {1, -63, 1669, -24 035, 202 419, -991 357, 2 591 431, -2 747 745},
      {1, -63, 1669, -24 035, 202 435, -991 949, 2 598 455, -2 774 673},
      {1, -63, 1669, -24 035, 202 435, -991 917, 2 597 815, -2 771 505},
      {1, -63, 1669, -24 035, 202 435, -991 885, 2 597 111, -2 767 633},
      {1, -63, 1669, -24 035, 202 435, -991 885, 2 597 175, -2 768 337},
```



```

{1, -63, 1669, -24 035, 202 435, -991 853, 2 596 535, -2 765 169},
{1, -63, 1669, -24 035, 202 451, -992 445, 2 603 559, -2 792 097},
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{1, -63, 1669, -24 035, 202 451, -992 349, 2 601 575, -2 781 889},
{1, -63, 1669, -24 035, 202 467, -992 909, 2 608 023, -2 806 353},
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{1, -63, 1669, -24 027, 202 099, -986 637, 2 561 031, -2 675 673},
{1, -63, 1669, -24 027, 202 099, -986 605, 2 560 391, -2 672 505},
{1, -63, 1669, -24 027, 202 115, -987 165, 2 566 775, -2 696 265},
{1, -63, 1669, -24 027, 202 115, -987 133, 2 566 135, -2 693 097},
{1, -63, 1669, -24 027, 202 115, -987 101, 2 565 495, -2 689 929},
{1, -63, 1669, -24 027, 202 131, -987 661, 2 571 879, -2 713 689},
{1, -63, 1669, -24 027, 202 131, -987 629, 2 571 239, -2 710 521},
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{1, -63, 1669, -24 027, 202 163, -988 589, 2 580 807, -2 742 201},
{1, -63, 1669, -24 019, 201 747, -980 925, 2 520 423, -2 568 753},
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{1, -63, 1669, -24 019, 201 795, -982 317, 2 533 815, -2 611 521},
{1, -63, 1669, -24 019, 201 811, -982 845, 2 539 559, -2 632 113},
{1, -63, 1669, -24 019, 201 811, -982 813, 2 538 919, -2 628 945},
{1, -63, 1669, -24 019, 201 827, -983 341, 2 544 663, -2 649 537},
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```

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{1, -63, 1669, -24 011, 201 427, -976 141, 2 488 743, -2 490 345},
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{1, -63, 1669, -24 011, 201 459, -977 069, 2 497 671, -2 518 857},
{1, -63, 1669, -24 011, 201 475, -977 597, 2 503 415, -2 539 449},
{1, -63, 1669, -24 011, 201 475, -977 565, 2 502 775, -2 536 281},
{1, -63, 1669, -24 011, 201 475, -977 533, 2 502 135, -2 533 113},
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{1, -63, 1669, -24 003, 201 123, -971 821, 2 461 527, -2 426 193},
{1, -63, 1669, -24 003, 201 139, -972 317, 2 466 631, -2 443 617},
{1, -63, 1669, -24 003, 201 139, -972 285, 2 465 991, -2 440 449},
{1, -63, 1669, -24 003, 201 155, -972 781, 2 471 095, -2 457 873},
{1, -63, 1669, -24 003, 201 171, -973 277, 2 476 199, -2 475 297},
{1, -63, 1669, -23 995, 200 835, -967 997, 2 439 415, -2 379 465},
{1, -63, 1669, -23 995, 200 851, -968 493, 2 444 519, -2 396 889},
{1, -63, 1669, -23 987, 200 515, -963 213, 2 407 735, -2 301 057},
{1, -63, 1669, -23 979, 200 195, -958 429, 2 376 055, -2 222 649}};
```

A // MatrixForm

```
1 -63 1669 -24 051 203 091 -1 001 917 2 664 935 -2 938 705
1 -63 1669 -24 051 203 091 -1 001 917 2 664 999 -2 939 409
1 -63 1669 -24 051 203 091 -1 001 885 2 664 295 -2 935 537
1 -63 1669 -24 051 203 107 -1 002 381 2 669 399 -2 952 961
1 -63 1669 -24 043 202 739 -996 141 2 623 111 -2 826 153
1 -63 1669 -24 043 202 755 -996 669 2 628 791 -2 846 041
1 -63 1669 -24 043 202 755 -996 669 2 628 855 -2 846 745
1 -63 1669 -24 043 202 755 -996 637 2 628 215 -2 843 577
1 -63 1669 -24 043 202 771 -997 197 2 634 599 -2 867 337
1 -63 1669 -24 043 202 771 -997 165 2 633 895 -2 863 465
1 -63 1669 -24 043 202 771 -997 165 2 633 959 -2 864 169
1 -63 1669 -24 043 202 771 -997 133 2 633 255 -2 860 297
1 -63 1669 -24 043 202 771 -997 133 2 633 319 -2 861 001
1 -63 1669 -24 043 202 771 -997 101 2 632 615 -2 857 129
1 -63 1669 -24 043 202 787 -997 725 2 640 343 -2 887 929
1 -63 1669 -24 043 202 787 -997 693 2 639 703 -2 884 761
1 -63 1669 -24 043 202 787 -997 661 2 638 999 -2 880 889
1 -63 1669 -24 043 202 787 -997 661 2 639 063 -2 881 593
1 -63 1669 -24 043 202 787 -997 629 2 638 359 -2 877 721
1 -63 1669 -24 043 202 803 -998 157 2 644 167 -2 899 017
1 -63 1669 -24 043 202 803 -998 125 2 643 463 -2 895 145
1 -63 1669 -24 035 202 403 -990 925 2 587 607 -2 736 657
1 -63 1669 -24 035 202 403 -990 893 2 586 967 -2 733 489
1 -63 1669 -24 035 202 419 -991 453 2 593 351 -2 757 249
1 -63 1669 -24 035 202 419 -991 421 2 592 711 -2 754 081
1 -63 1669 -24 035 202 419 -991 389 2 592 071 -2 750 913
1 -63 1669 -24 035 202 419 -991 357 2 591 431 -2 747 745
1 -63 1669 -24 035 202 435 -991 949 2 598 455 -2 774 673
1 -63 1669 -24 035 202 435 -991 917 2 597 815 -2 771 505
1 -63 1669 -24 035 202 435 -991 885 2 597 111 -2 767 633
1 -63 1669 -24 035 202 435 -991 885 2 597 175 -2 768 337
```

1	-63	1669	-24 035	202 435	-991 853	2 596 535	-2 765 169
1	-63	1669	-24 035	202 451	-992 445	2 603 559	-2 792 097
1	-63	1669	-24 035	202 451	-992 413	2 602 919	-2 788 929
1	-63	1669	-24 035	202 451	-992 381	2 602 215	-2 785 057
1	-63	1669	-24 035	202 451	-992 381	2 602 279	-2 785 761
1	-63	1669	-24 035	202 451	-992 349	2 601 575	-2 781 889
1	-63	1669	-24 035	202 467	-992 909	2 608 023	-2 806 353
1	-63	1669	-24 035	202 467	-992 877	2 607 383	-2 803 185
1	-63	1669	-24 035	202 467	-992 845	2 606 679	-2 799 313
1	-63	1669	-24 035	202 483	-993 405	2 613 127	-2 823 777
1	-63	1669	-24 035	202 483	-993 373	2 612 487	-2 820 609
1	-63	1669	-24 035	202 483	-993 341	2 611 783	-2 816 737
1	-63	1669	-24 035	202 499	-993 869	2 617 591	-2 838 033
1	-63	1669	-24 027	202 067	-985 677	2 551 463	-2 643 993
1	-63	1669	-24 027	202 083	-986 205	2 557 207	-2 664 585
1	-63	1669	-24 027	202 083	-986 173	2 556 567	-2 661 417
1	-63	1669	-24 027	202 083	-986 141	2 555 927	-2 658 249
1	-63	1669	-24 027	202 099	-986 669	2 561 671	-2 678 841
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1	-63	1669	-24 027	202 115	-987 165	2 566 775	-2 696 265
1	-63	1669	-24 027	202 115	-987 133	2 566 135	-2 693 097
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1	-63	1669	-24 027	202 131	-987 597	2 570 599	-2 707 353
1	-63	1669	-24 027	202 131	-987 565	2 569 895	-2 703 481
1	-63	1669	-24 027	202 147	-988 125	2 576 343	-2 727 945
1	-63	1669	-24 027	202 147	-988 093	2 575 703	-2 724 777
1	-63	1669	-24 027	202 147	-988 061	2 574 999	-2 720 905
1	-63	1669	-24 027	202 163	-988 621	2 581 447	-2 745 369
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1	-63	1669	-24 019	201 747	-980 925	2 520 423	-2 568 753
1	-63	1669	-24 019	201 763	-981 421	2 525 527	-2 586 177
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1	-63	1669	-24 011	201 459	-977 069	2 497 671	-2 518 857
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1	-63	1669	-24 011	201 475	-977 533	2 502 135	-2 533 113
1	-63	1669	-24 011	201 491	-978 061	2 507 879	-2 553 705

1	-63	1669	-24011	201491	-978029	2507239	-2550537
1	-63	1669	-24011	201507	-978557	2512983	-2571129
1	-63	1669	-24003	201123	-971821	2461527	-2426193
1	-63	1669	-24003	201139	-972317	2466631	-2443617
1	-63	1669	-24003	201139	-972285	2465991	-2440449
1	-63	1669	-24003	201155	-972781	2471095	-2457873
1	-63	1669	-24003	201171	-973277	2476199	-2475297
1	-63	1669	-23995	200835	-967997	2439415	-2379465
1	-63	1669	-23995	200851	-968493	2444519	-2396889
1	-63	1669	-23987	200515	-963213	2407735	-2301057
1	-63	1669	-23979	200195	-958429	2376055	-2222649

Dimensions[A]

{97, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1178211, 9940339, -48933949, 129564903, -141583441}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] -
 1001917 c[6] + 2664935 c[7] - 2938705 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24051 c[4] + 203091 c[5] - 1001917 c[6] + 2664999 c[7] - 2939409 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] + 203091 c[5] - 1001885 c[6] +
 2664295 c[7] - 2935537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24051 c[4] +
 203107 c[5] - 1002381 c[6] + 2669399 c[7] - 2952961 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202739 c[5] - 996141 c[6] +
 2623111 c[7] - 2826153 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202755 c[5] - 996669 c[6] + 2628791 c[7] - 2846041 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202755 c[5] - 996669 c[6] +
 2628855 c[7] - 2846745 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202755 c[5] - 996637 c[6] + 2628215 c[7] - 2843577 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202771 c[5] - 997197 c[6] +
 2634599 c[7] - 2867337 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202771 c[5] - 997165 c[6] + 2633895 c[7] - 2863465 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202771 c[5] - 997165 c[6] +
 2633959 c[7] - 2864169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202771 c[5] - 997133 c[6] + 2633255 c[7] - 2860297 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202771 c[5] - 997133 c[6] +
 2633319 c[7] - 2861001 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202771 c[5] - 997101 c[6] + 2632615 c[7] - 2857129 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202787 c[5] - 997725 c[6] +
 2640343 c[7] - 2887929 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202787 c[5] - 997693 c[6] + 2639703 c[7] - 2884761 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202787 c[5] - 997661 c[6] +
 2638999 c[7] - 2880889 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202787 c[5] - 997661 c[6] + 2639063 c[7] - 2881593 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202787 c[5] - 997629 c[6] +
 2638359 c[7] - 2877721 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202803 c[5] - 998157 c[6] + 2644167 c[7] - 2899017 c[8],

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,803 c[5] - 998\,125 c[6] + \\
& 2\,643\,463 c[7] - 2\,895\,145 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,403 c[5] - 990\,925 c[6] + 2\,587\,607 c[7] - 2\,736\,657 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,893 c[6] + \\
& 2\,586\,967 c[7] - 2\,733\,489 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,419 c[5] - 991\,453 c[6] + 2\,593\,351 c[7] - 2\,757\,249 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,421 c[6] + 2\,592\,711 c[7] - \\
& 2\,754\,081 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - \\
& 991\,389 c[6] + 2\,592\,071 c[7] - 2\,750\,913 c[8], c[1] - 63 c[2] + 1669 c[3] - \\
& 24\,035 c[4] + 202\,419 c[5] - 991\,357 c[6] + 2\,591\,431 c[7] - 2\,747\,745 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,949 c[6] + \\
& 2\,598\,455 c[7] - 2\,774\,673 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,435 c[5] - 991\,917 c[6] + 2\,597\,815 c[7] - 2\,771\,505 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,885 c[6] + \\
& 2\,597\,111 c[7] - 2\,767\,633 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,435 c[5] - 991\,885 c[6] + 2\,597\,175 c[7] - 2\,768\,337 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,853 c[6] + \\
& 2\,596\,535 c[7] - 2\,765\,169 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,451 c[5] - 992\,445 c[6] + 2\,603\,559 c[7] - 2\,792\,097 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,413 c[6] + \\
& 2\,602\,919 c[7] - 2\,788\,929 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,451 c[5] - 992\,381 c[6] + 2\,602\,215 c[7] - 2\,785\,057 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,381 c[6] + \\
& 2\,602\,279 c[7] - 2\,785\,761 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,451 c[5] - 992\,349 c[6] + 2\,601\,575 c[7] - 2\,781\,889 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,909 c[6] + \\
& 2\,608\,023 c[7] - 2\,806\,353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,467 c[5] - 992\,877 c[6] + 2\,607\,383 c[7] - 2\,803\,185 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,845 c[6] + \\
& 2\,606\,679 c[7] - 2\,799\,313 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,483 c[5] - 993\,405 c[6] + 2\,613\,127 c[7] - 2\,823\,777 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,373 c[6] + \\
& 2\,612\,487 c[7] - 2\,820\,609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& 202\,483 c[5] - 993\,341 c[6] + 2\,611\,783 c[7] - 2\,816\,737 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,499 c[5] - 993\,869 c[6] + \\
& 2\,617\,591 c[7] - 2\,838\,033 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& 202\,067 c[5] - 985\,677 c[6] + 2\,551\,463 c[7] - 2\,643\,993 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,205 c[6] + \\
& 2\,557\,207 c[7] - 2\,664\,585 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& 202\,083 c[5] - 986\,173 c[6] + 2\,556\,567 c[7] - 2\,661\,417 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,083 c[5] - 986\,141 c[6] + \\
& 2\,555\,927 c[7] - 2\,658\,249 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& 202\,099 c[5] - 986\,669 c[6] + 2\,561\,671 c[7] - 2\,678\,841 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,099 c[5] - 986\,637 c[6] + \\
& 2\,561\,031 c[7] - 2\,675\,673 c[8], c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& 202\,099 c[5] - 986\,605 c[6] + 2\,560\,391 c[7] - 2\,672\,505 c[8], \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,165 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,566\,775\,c[7] - 2\,696\,265\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,133\,c[6] + 2\,566\,135\,c[7] - 2\,693\,097\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,101\,c[6] + \\
& 2\,565\,495\,c[7] - 2\,689\,929\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,661\,c[6] + 2\,571\,879\,c[7] - 2\,713\,689\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,629\,c[6] + \\
& 2\,571\,239\,c[7] - 2\,710\,521\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,535\,c[7] - 2\,706\,649\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,597\,c[6] + \\
& 2\,570\,599\,c[7] - 2\,707\,353\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,565\,c[6] + 2\,569\,895\,c[7] - 2\,703\,481\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,125\,c[6] + \\
& 2\,576\,343\,c[7] - 2\,727\,945\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,093\,c[6] + 2\,575\,703\,c[7] - 2\,724\,777\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,061\,c[6] + \\
& 2\,574\,999\,c[7] - 2\,720\,905\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,621\,c[6] + 2\,581\,447\,c[7] - 2\,745\,369\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,589\,c[6] + \\
& 2\,580\,807\,c[7] - 2\,742\,201\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,747\,c[5] - 980\,925\,c[6] + 2\,520\,423\,c[7] - 2\,568\,753\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,763\,c[5] - 981\,421\,c[6] + \\
& 2\,525\,527\,c[7] - 2\,586\,177\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,763\,c[5] - 981\,389\,c[6] + 2\,524\,887\,c[7] - 2\,583\,009\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,763\,c[5] - 981\,357\,c[6] + \\
& 2\,524\,247\,c[7] - 2\,579\,841\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,779\,c[5] - 981\,885\,c[6] + 2\,529\,991\,c[7] - 2\,600\,433\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,779\,c[5] - 981\,853\,c[6] + \\
& 2\,529\,351\,c[7] - 2\,597\,265\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,779\,c[5] - 981\,821\,c[6] + 2\,528\,711\,c[7] - 2\,594\,097\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,381\,c[6] + \\
& 2\,535\,095\,c[7] - 2\,617\,857\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,795\,c[5] - 982\,349\,c[6] + 2\,534\,455\,c[7] - 2\,614\,689\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,317\,c[6] + \\
& 2\,533\,815\,c[7] - 2\,611\,521\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,811\,c[5] - 982\,845\,c[6] + 2\,539\,559\,c[7] - 2\,632\,113\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,811\,c[5] - 982\,813\,c[6] + \\
& 2\,538\,919\,c[7] - 2\,628\,945\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,827\,c[5] - 983\,341\,c[6] + 2\,544\,663\,c[7] - 2\,649\,537\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,827\,c[5] - 983\,309\,c[6] + \\
& 2\,544\,023\,c[7] - 2\,646\,369\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + \\
& 201\,427\,c[5] - 976\,141\,c[6] + 2\,488\,743\,c[7] - 2\,490\,345\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + 201\,443\,c[5] - 976\,605\,c[6] + \\
& 2\,493\,207\,c[7] - 2\,504\,601\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + \\
& 201\,459\,c[5] - 977\,101\,c[6] + 2\,498\,311\,c[7] - 2\,522\,025\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + 201\,459\,c[5] - 977\,069\,c[6] + \\
& 2\,497\,671\,c[7] - 2\,518\,857\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + \\
& 201\,475\,c[5] - 977\,597\,c[6] + 2\,503\,415\,c[7] - 2\,539\,449\,c[8],
\end{aligned}$$

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c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 565 c[6] +
  2 502 775 c[7] - 2 536 281 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 475 c[5] - 977 533 c[6] + 2 502 135 c[7] - 2 533 113 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 061 c[6] +
  2 507 879 c[7] - 2 553 705 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 491 c[5] - 978 029 c[6] + 2 507 239 c[7] - 2 550 537 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 507 c[5] - 978 557 c[6] +
  2 512 983 c[7] - 2 571 129 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 123 c[5] - 971 821 c[6] + 2 461 527 c[7] - 2 426 193 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 139 c[5] - 972 317 c[6] +
  2 466 631 c[7] - 2 443 617 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 139 c[5] - 972 285 c[6] + 2 465 991 c[7] - 2 440 449 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 781 c[6] +
  2 471 095 c[7] - 2 457 873 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 171 c[5] - 973 277 c[6] + 2 476 199 c[7] - 2 475 297 c[8],
c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] + 200 835 c[5] - 967 997 c[6] +
  2 439 415 c[7] - 2 379 465 c[8], c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
  200 851 c[5] - 968 493 c[6] + 2 444 519 c[7] - 2 396 889 c[8],
c[1] - 63 c[2] + 1669 c[3] - 23 987 c[4] + 200 515 c[5] - 963 213 c[6] +
  2 407 735 c[7] - 2 301 057 c[8], c[1] - 63 c[2] + 1669 c[3] - 23 979 c[4] +
  200 195 c[5] - 958 429 c[6] + 2 376 055 c[7] - 2 222 649 c[8] }

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Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 211 c[4] +
  9 940 339 c[5] - 48 933 949 c[6] + 129 564 903 c[7] - 141 583 441 c[8]

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cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 211 c[4] +
  9 940 339 c[5] - 48 933 949 c[6] + 129 564 903 c[7] - 141 583 441 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 091 c[5] - 1 001 917 c[6] +
  2 664 935 c[7] - 2 938 705 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 091 c[5] - 1 001 917 c[6] + 2 664 999 c[7] - 2 939 409 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 091 c[5] - 1 001 885 c[6] +
  2 664 295 c[7] - 2 935 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] +
  203 107 c[5] - 1 002 381 c[6] + 2 669 399 c[7] - 2 952 961 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 739 c[5] - 996 141 c[6] +
  2 623 111 c[7] - 2 826 153 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
  202 755 c[5] - 996 669 c[6] + 2 628 791 c[7] - 2 846 041 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 755 c[5] - 996 669 c[6] +
  2 628 855 c[7] - 2 846 745 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
  202 755 c[5] - 996 637 c[6] + 2 628 215 c[7] - 2 843 577 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 771 c[5] - 997 197 c[6] +
  2 634 599 c[7] - 2 867 337 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
  202 771 c[5] - 997 165 c[6] + 2 633 895 c[7] - 2 863 465 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 771 c[5] - 997 165 c[6] +
  2 633 959 c[7] - 2 864 169 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
  202 771 c[5] - 997 133 c[6] + 2 633 255 c[7] - 2 860 297 c[8] ≥ 0 &&

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$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,133 c[6] + \\
& \quad 2\,633\,319 c[7] - 2\,861\,001 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,771 c[5] - 997\,101 c[6] + 2\,632\,615 c[7] - 2\,857\,129 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,725 c[6] + \\
& \quad 2\,640\,343 c[7] - 2\,887\,929 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,693 c[6] + 2\,639\,703 c[7] - 2\,884\,761 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,661 c[6] + \\
& \quad 2\,638\,999 c[7] - 2\,880\,889 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,661 c[6] + 2\,639\,063 c[7] - 2\,881\,593 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,787 c[5] - 997\,629 c[6] + \\
& \quad 2\,638\,359 c[7] - 2\,877\,721 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,803 c[5] - 998\,157 c[6] + 2\,644\,167 c[7] - 2\,899\,017 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,803 c[5] - 998\,125 c[6] + \\
& \quad 2\,643\,463 c[7] - 2\,895\,145 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,403 c[5] - 990\,925 c[6] + 2\,587\,607 c[7] - 2\,736\,657 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,403 c[5] - 990\,893 c[6] + \\
& \quad 2\,586\,967 c[7] - 2\,733\,489 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,453 c[6] + 2\,593\,351 c[7] - 2\,757\,249 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,421 c[6] + \\
& \quad 2\,592\,711 c[7] - 2\,754\,081 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,419 c[5] - 991\,389 c[6] + 2\,592\,071 c[7] - 2\,750\,913 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,419 c[5] - 991\,357 c[6] + \\
& \quad 2\,591\,431 c[7] - 2\,747\,745 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,949 c[6] + 2\,598\,455 c[7] - 2\,774\,673 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,917 c[6] + \\
& \quad 2\,597\,815 c[7] - 2\,771\,505 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,885 c[6] + 2\,597\,111 c[7] - 2\,767\,633 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,435 c[5] - 991\,885 c[6] + \\
& \quad 2\,597\,175 c[7] - 2\,768\,337 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,435 c[5] - 991\,853 c[6] + 2\,596\,535 c[7] - 2\,765\,169 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,445 c[6] + \\
& \quad 2\,603\,559 c[7] - 2\,792\,097 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,413 c[6] + 2\,602\,919 c[7] - 2\,788\,929 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,381 c[6] + \\
& \quad 2\,602\,215 c[7] - 2\,785\,057 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,381 c[6] + 2\,602\,279 c[7] - 2\,785\,761 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,349 c[6] + \\
& \quad 2\,601\,575 c[7] - 2\,781\,889 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,909 c[6] + 2\,608\,023 c[7] - 2\,806\,353 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,877 c[6] + \\
& \quad 2\,607\,383 c[7] - 2\,803\,185 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,845 c[6] + 2\,606\,679 c[7] - 2\,799\,313 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,405 c[6] + \\
& \quad 2\,613\,127 c[7] - 2\,823\,777 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,483 c[5] - 993\,373 c[6] + 2\,612\,487 c[7] - 2\,820\,609 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,341 c[6] + \\
& \quad 2\,611\,783 c[7] - 2\,816\,737 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] +
\end{aligned}$$

$$\begin{aligned}
& 202\,499\,c[5] - 993\,869\,c[6] + 2\,617\,591\,c[7] - 2\,838\,033\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,067\,c[5] - 985\,677\,c[6] + \\
& \quad 2\,551\,463\,c[7] - 2\,643\,993\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,083\,c[5] - 986\,205\,c[6] + 2\,557\,207\,c[7] - 2\,664\,585\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,083\,c[5] - 986\,173\,c[6] + \\
& \quad 2\,556\,567\,c[7] - 2\,661\,417\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,083\,c[5] - 986\,141\,c[6] + 2\,555\,927\,c[7] - 2\,658\,249\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,669\,c[6] + \\
& \quad 2\,561\,671\,c[7] - 2\,678\,841\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,099\,c[5] - 986\,637\,c[6] + 2\,561\,031\,c[7] - 2\,675\,673\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,099\,c[5] - 986\,605\,c[6] + \\
& \quad 2\,560\,391\,c[7] - 2\,672\,505\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,165\,c[6] + 2\,566\,775\,c[7] - 2\,696\,265\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,133\,c[6] + \\
& \quad 2\,566\,135\,c[7] - 2\,693\,097\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,115\,c[5] - 987\,101\,c[6] + 2\,565\,495\,c[7] - 2\,689\,929\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,661\,c[6] + \\
& \quad 2\,571\,879\,c[7] - 2\,713\,689\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,629\,c[6] + 2\,571\,239\,c[7] - 2\,710\,521\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,597\,c[6] + \\
& \quad 2\,570\,535\,c[7] - 2\,706\,649\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,131\,c[5] - 987\,597\,c[6] + 2\,570\,599\,c[7] - 2\,707\,353\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,565\,c[6] + \\
& \quad 2\,569\,895\,c[7] - 2\,703\,481\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,147\,c[5] - 988\,125\,c[6] + 2\,576\,343\,c[7] - 2\,727\,945\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,093\,c[6] + \\
& \quad 2\,575\,703\,c[7] - 2\,724\,777\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,147\,c[5] - 988\,061\,c[6] + 2\,574\,999\,c[7] - 2\,720\,905\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,621\,c[6] + \\
& \quad 2\,581\,447\,c[7] - 2\,745\,369\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& \quad 202\,163\,c[5] - 988\,589\,c[6] + 2\,580\,807\,c[7] - 2\,742\,201\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,747\,c[5] - 980\,925\,c[6] + \\
& \quad 2\,520\,423\,c[7] - 2\,568\,753\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,763\,c[5] - 981\,421\,c[6] + 2\,525\,527\,c[7] - 2\,586\,177\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,763\,c[5] - 981\,389\,c[6] + \\
& \quad 2\,524\,887\,c[7] - 2\,583\,009\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,763\,c[5] - 981\,357\,c[6] + 2\,524\,247\,c[7] - 2\,579\,841\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,779\,c[5] - 981\,885\,c[6] + \\
& \quad 2\,529\,991\,c[7] - 2\,600\,433\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,779\,c[5] - 981\,853\,c[6] + 2\,529\,351\,c[7] - 2\,597\,265\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,779\,c[5] - 981\,821\,c[6] + \\
& \quad 2\,528\,711\,c[7] - 2\,594\,097\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,795\,c[5] - 982\,381\,c[6] + 2\,535\,095\,c[7] - 2\,617\,857\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,349\,c[6] + \\
& \quad 2\,534\,455\,c[7] - 2\,614\,689\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& \quad 201\,795\,c[5] - 982\,317\,c[6] + 2\,533\,815\,c[7] - 2\,611\,521\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,811\,c[5] - 982\,845\,c[6] +
\end{aligned}$$

```

2 539 559 c[7] - 2 632 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 813 c[6] + 2 538 919 c[7] - 2 628 945 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 341 c[6] +
2 544 663 c[7] - 2 649 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 827 c[5] - 983 309 c[6] + 2 544 023 c[7] - 2 646 369 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 427 c[5] - 976 141 c[6] +
2 488 743 c[7] - 2 490 345 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 443 c[5] - 976 605 c[6] + 2 493 207 c[7] - 2 504 601 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 459 c[5] - 977 101 c[6] +
2 498 311 c[7] - 2 522 025 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 459 c[5] - 977 069 c[6] + 2 497 671 c[7] - 2 518 857 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 597 c[6] +
2 503 415 c[7] - 2 539 449 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 475 c[5] - 977 565 c[6] + 2 502 775 c[7] - 2 536 281 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 533 c[6] +
2 502 135 c[7] - 2 533 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 491 c[5] - 978 061 c[6] + 2 507 879 c[7] - 2 553 705 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 029 c[6] +
2 507 239 c[7] - 2 550 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 507 c[5] - 978 557 c[6] + 2 512 983 c[7] - 2 571 129 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 123 c[5] - 971 821 c[6] +
2 461 527 c[7] - 2 426 193 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 139 c[5] - 972 317 c[6] + 2 466 631 c[7] - 2 443 617 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 139 c[5] - 972 285 c[6] +
2 465 991 c[7] - 2 440 449 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 155 c[5] - 972 781 c[6] + 2 471 095 c[7] - 2 457 873 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 171 c[5] - 973 277 c[6] +
2 476 199 c[7] - 2 475 297 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
200 835 c[5] - 967 997 c[6] + 2 439 415 c[7] - 2 379 465 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] + 200 851 c[5] - 968 493 c[6] +
2 444 519 c[7] - 2 396 889 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 23 987 c[4] +
200 515 c[5] - 963 213 c[6] + 2 407 735 c[7] - 2 301 057 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 23 979 c[4] + 200 195 c[5] - 958 429 c[6] +
2 376 055 c[7] - 2 222 649 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -112 031 224, -29 417 295, -4 811 260, -674 827, -87 731}

GCD[0, 0, 0, -112 031 224, -29 417 295, -4 811 260, -674 827, -87 731]
1

cert.g
-150 771 411

{0, 0, 0, -112 031 224, -29 417 295, -4 811 260, -674 827, -87 731}.
Reverse[gpart[listdim17[[156]]]
-150 771 411

```

cert.Transpose[A]

```
{ 3 732 109, 22 305 805, 3 729 261, 3 745 437, 22 197 333, 3 642 661, 22 216 357,
  22 213 509, 22 235 381, 3 658 837, 22 232 533, 3 655 989, 22 229 685, 3 653 141,
  22 254 405, 22 251 557, 3 675 013, 22 248 709, 3 672 165, 22 264 885, 3 688 341,
  22 110 733, 22 107 885, 22 129 757, 22 126 909, 22 124 061, 22 121 213, 22 145 933,
  22 143 085, 3 566 541, 22 140 237, 22 137 389, 22 162 109, 22 159 261, 3 582 717,
  22 156 413, 3 579 869, 22 175 437, 22 172 589, 3 596 045, 22 191 613, 22 188 765,
  3 612 221, 22 204 941, 22 021 285, 22 040 309, 22 037 461, 22 034 613, 22 053 637,
  22 050 789, 22 047 941, 22 069 813, 22 066 965, 22 064 117, 22 085 989,
  22 083 141, 3 506 597, 22 080 293, 3 503 749, 22 099 317, 22 096 469, 3 519 925,
  22 115 493, 22 112 645, 21 948 013, 21 964 189, 21 961 341, 21 958 493, 21 977 517,
  21 974 669, 21 971 821, 21 993 693, 21 990 845, 21 987 997, 22 007 021, 22 004 173,
  22 023 197, 22 020 349, 21 871 893, 21 885 221, 21 901 397, 21 898 549, 21 917 573,
  21 914 725, 21 911 877, 21 930 901, 21 928 053, 21 947 077, 21 809 101, 21 825 277,
  21 822 429, 21 838 605, 21 854 781, 21 762 485, 21 778 661, 21 686 365, 21 610 245}
```

chi = listdim17[[157]]

$(-13 + x) (-12 + x) (-11 + x)^2 (-9 + x)^{12} (-5 + x) (5 + x)^{32}$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-36257, 24837, -6402, 778, -45, 1},
  {-36465, 24853, -6402, 778, -45, 1}, {-35113, 24645, -6394, 778, -45, 1},
  {-35321, 24661, -6394, 778, -45, 1}, {-35497, 24677, -6394, 778, -45, 1},
  {-33761, 24437, -6386, 778, -45, 1}, {-33969, 24453, -6386, 778, -45, 1},
  {-34177, 24469, -6386, 778, -45, 1}, {-34145, 24469, -6386, 778, -45, 1},
  {-34353, 24485, -6386, 778, -45, 1}, {-34529, 24501, -6386, 778, -45, 1},
  {-32617, 24245, -6378, 778, -45, 1}, {-32825, 24261, -6378, 778, -45, 1},
  {-33033, 24277, -6378, 778, -45, 1}, {-33001, 24277, -6378, 778, -45, 1},
  {-33209, 24293, -6378, 778, -45, 1}, {-33385, 24309, -6378, 778, -45, 1},
  {-31473, 24053, -6370, 778, -45, 1}, {-31681, 24069, -6370, 778, -45, 1},
  {-31649, 24069, -6370, 778, -45, 1}, {-31889, 24085, -6370, 778, -45, 1},
  {-31857, 24085, -6370, 778, -45, 1}, {-32065, 24101, -6370, 778, -45, 1},
  {-32033, 24101, -6370, 778, -45, 1}, {-32241, 24117, -6370, 778, -45, 1},
  {-32417, 24133, -6370, 778, -45, 1}, {-30537, 23877, -6362, 778, -45, 1},
  {-30745, 23893, -6362, 778, -45, 1}, {-30713, 23893, -6362, 778, -45, 1},
  {-30921, 23909, -6362, 778, -45, 1}, {-30889, 23909, -6362, 778, -45, 1},
  {-31097, 23925, -6362, 778, -45, 1}, {-31273, 23941, -6362, 778, -45, 1},
  {-29601, 23701, -6354, 778, -45, 1}, {-29777, 23717, -6354, 778, -45, 1},
  {-29745, 23717, -6354, 778, -45, 1}, {-29953, 23733, -6354, 778, -45, 1},
  {-29921, 23733, -6354, 778, -45, 1}, {-30129, 23749, -6354, 778, -45, 1},
  {-30305, 23765, -6354, 778, -45, 1}, {-28809, 23541, -6346, 778, -45, 1},
  {-28985, 23557, -6346, 778, -45, 1}, {-29161, 23573, -6346, 778, -45, 1},
  {-28017, 23381, -6338, 778, -45, 1}, {-28193, 23397, -6338, 778, -45, 1}}
```

```

A = {{-36 257, 24 837, -6402, 778, -45, 1},
      {-36 465, 24 853, -6402, 778, -45, 1}, {-35 113, 24 645, -6394, 778, -45, 1},
      {-35 321, 24 661, -6394, 778, -45, 1}, {-35 497, 24 677, -6394, 778, -45, 1},
      {-33 761, 24 437, -6386, 778, -45, 1}, {-33 969, 24 453, -6386, 778, -45, 1},
      {-34 177, 24 469, -6386, 778, -45, 1}, {-34 145, 24 469, -6386, 778, -45, 1},
      {-34 353, 24 485, -6386, 778, -45, 1}, {-34 529, 24 501, -6386, 778, -45, 1},
      {-32 617, 24 245, -6378, 778, -45, 1}, {-32 825, 24 261, -6378, 778, -45, 1},
      {-33 033, 24 277, -6378, 778, -45, 1}, {-33 001, 24 277, -6378, 778, -45, 1},
      {-33 209, 24 293, -6378, 778, -45, 1}, {-33 385, 24 309, -6378, 778, -45, 1},
      {-31 473, 24 053, -6370, 778, -45, 1}, {-31 681, 24 069, -6370, 778, -45, 1},
      {-31 649, 24 069, -6370, 778, -45, 1}, {-31 889, 24 085, -6370, 778, -45, 1},
      {-31 857, 24 085, -6370, 778, -45, 1}, {-32 065, 24 101, -6370, 778, -45, 1},
      {-32 033, 24 101, -6370, 778, -45, 1}, {-32 241, 24 117, -6370, 778, -45, 1},
      {-32 417, 24 133, -6370, 778, -45, 1}, {-30 537, 23 877, -6362, 778, -45, 1},
      {-30 745, 23 893, -6362, 778, -45, 1}, {-30 713, 23 893, -6362, 778, -45, 1},
      {-30 921, 23 909, -6362, 778, -45, 1}, {-30 889, 23 909, -6362, 778, -45, 1},
      {-31 097, 23 925, -6362, 778, -45, 1}, {-31 273, 23 941, -6362, 778, -45, 1},
      {-29 601, 23 701, -6354, 778, -45, 1}, {-29 777, 23 717, -6354, 778, -45, 1},
      {-29 745, 23 717, -6354, 778, -45, 1}, {-29 953, 23 733, -6354, 778, -45, 1},
      {-29 921, 23 733, -6354, 778, -45, 1}, {-30 129, 23 749, -6354, 778, -45, 1},
      {-30 305, 23 765, -6354, 778, -45, 1}, {-28 809, 23 541, -6346, 778, -45, 1},
      {-28 985, 23 557, -6346, 778, -45, 1}, {-29 161, 23 573, -6346, 778, -45, 1},
      {-28 017, 23 381, -6338, 778, -45, 1}, {-28 193, 23 397, -6338, 778, -45, 1}};

```

A // MatrixForm

$$\begin{pmatrix} -36257 & 24837 & -6402 & 778 & -45 & 1 \\ -36465 & 24853 & -6402 & 778 & -45 & 1 \\ -35113 & 24645 & -6394 & 778 & -45 & 1 \\ -35321 & 24661 & -6394 & 778 & -45 & 1 \\ -35497 & 24677 & -6394 & 778 & -45 & 1 \\ -33761 & 24437 & -6386 & 778 & -45 & 1 \\ -33969 & 24453 & -6386 & 778 & -45 & 1 \\ -34177 & 24469 & -6386 & 778 & -45 & 1 \\ -34145 & 24469 & -6386 & 778 & -45 & 1 \\ -34353 & 24485 & -6386 & 778 & -45 & 1 \\ -34529 & 24501 & -6386 & 778 & -45 & 1 \\ -32617 & 24245 & -6378 & 778 & -45 & 1 \\ -32825 & 24261 & -6378 & 778 & -45 & 1 \\ -33033 & 24277 & -6378 & 778 & -45 & 1 \\ -33001 & 24277 & -6378 & 778 & -45 & 1 \\ -33209 & 24293 & -6378 & 778 & -45 & 1 \\ -33385 & 24309 & -6378 & 778 & -45 & 1 \\ -31473 & 24053 & -6370 & 778 & -45 & 1 \\ -31681 & 24069 & -6370 & 778 & -45 & 1 \\ -31649 & 24069 & -6370 & 778 & -45 & 1 \\ -31889 & 24085 & -6370 & 778 & -45 & 1 \\ -31857 & 24085 & -6370 & 778 & -45 & 1 \\ -32065 & 24101 & -6370 & 778 & -45 & 1 \\ -32033 & 24101 & -6370 & 778 & -45 & 1 \\ -32241 & 24117 & -6370 & 778 & -45 & 1 \\ -32417 & 24133 & -6370 & 778 & -45 & 1 \\ -30537 & 23877 & -6362 & 778 & -45 & 1 \\ -30745 & 23893 & -6362 & 778 & -45 & 1 \\ -30713 & 23893 & -6362 & 778 & -45 & 1 \\ -30921 & 23909 & -6362 & 778 & -45 & 1 \\ -30889 & 23909 & -6362 & 778 & -45 & 1 \\ -31097 & 23925 & -6362 & 778 & -45 & 1 \\ -31273 & 23941 & -6362 & 778 & -45 & 1 \\ -29601 & 23701 & -6354 & 778 & -45 & 1 \\ -29777 & 23717 & -6354 & 778 & -45 & 1 \\ -29745 & 23717 & -6354 & 778 & -45 & 1 \\ -29953 & 23733 & -6354 & 778 & -45 & 1 \\ -29921 & 23733 & -6354 & 778 & -45 & 1 \\ -30129 & 23749 & -6354 & 778 & -45 & 1 \\ -30305 & 23765 & -6354 & 778 & -45 & 1 \\ -28809 & 23541 & -6346 & 778 & -45 & 1 \\ -28985 & 23557 & -6346 & 778 & -45 & 1 \\ -29161 & 23573 & -6346 & 778 & -45 & 1 \\ -28017 & 23381 & -6338 & 778 & -45 & 1 \\ -28193 & 23397 & -6338 & 778 & -45 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1746945, 1211077, -313410, 38122, -2205, 49}

Array[c, 6].Transpose[A]

```
{ -36 257 c[1] + 24 837 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -36 465 c[1] + 24 853 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -35 113 c[1] + 24 645 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -35 321 c[1] + 24 661 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -35 497 c[1] + 24 677 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -33 761 c[1] + 24 437 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -33 969 c[1] + 24 453 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -34 177 c[1] + 24 469 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -34 145 c[1] + 24 469 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -34 353 c[1] + 24 485 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -34 529 c[1] + 24 501 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -32 617 c[1] + 24 245 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -32 825 c[1] + 24 261 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -33 033 c[1] + 24 277 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -33 001 c[1] + 24 277 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -33 209 c[1] + 24 293 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -33 385 c[1] + 24 309 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -31 473 c[1] + 24 053 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -31 681 c[1] + 24 069 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -31 649 c[1] + 24 069 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -31 889 c[1] + 24 085 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -31 857 c[1] + 24 085 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -32 065 c[1] + 24 101 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -32 033 c[1] + 24 101 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -32 241 c[1] + 24 117 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -32 417 c[1] + 24 133 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -30 537 c[1] + 23 877 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -30 745 c[1] + 23 893 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -30 713 c[1] + 23 893 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -30 921 c[1] + 23 909 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -30 889 c[1] + 23 909 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -31 097 c[1] + 23 925 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -31 273 c[1] + 23 941 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -29 601 c[1] + 23 701 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -29 777 c[1] + 23 717 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -29 745 c[1] + 23 717 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -29 953 c[1] + 23 733 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -29 921 c[1] + 23 733 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -30 129 c[1] + 23 749 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -30 305 c[1] + 23 765 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -28 809 c[1] + 23 541 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -28 985 c[1] + 23 557 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -29 161 c[1] + 23 573 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -28 017 c[1] + 23 381 c[2] - 6338 c[3] + 778 c[4] - 45 c[5] + c[6] ,
  -28 193 c[1] + 23 397 c[2] - 6338 c[3] + 778 c[4] - 45 c[5] + c[6] }
```

Array[c, 6].g

-1746945 c[1] + 1211077 c[2] - 313410 c[3] + 38122 c[4] - 2205 c[5] + 49 c[6]

cert = Flatten[Array[c, 6] /. FindInstance[

-1746945 c[1] + 1211077 c[2] - 313410 c[3] + 38122 c[4] - 2205 c[5] + 49 c[6] < 0 &&
 -36257 c[1] + 24837 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -36465 c[1] + 24853 c[2] - 6402 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -35113 c[1] + 24645 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -35321 c[1] + 24661 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -35497 c[1] + 24677 c[2] - 6394 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -33761 c[1] + 24437 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -33969 c[1] + 24453 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -34177 c[1] + 24469 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -34145 c[1] + 24469 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -34353 c[1] + 24485 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -34529 c[1] + 24501 c[2] - 6386 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -32617 c[1] + 24245 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -32825 c[1] + 24261 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -33033 c[1] + 24277 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -33001 c[1] + 24277 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -33209 c[1] + 24293 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -33385 c[1] + 24309 c[2] - 6378 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -31473 c[1] + 24053 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -31681 c[1] + 24069 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -31649 c[1] + 24069 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -31889 c[1] + 24085 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -31857 c[1] + 24085 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -32065 c[1] + 24101 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -32033 c[1] + 24101 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -32241 c[1] + 24117 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -32417 c[1] + 24133 c[2] - 6370 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -30537 c[1] + 23877 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -30745 c[1] + 23893 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -30713 c[1] + 23893 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -30921 c[1] + 23909 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -30889 c[1] + 23909 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -31097 c[1] + 23925 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -31273 c[1] + 23941 c[2] - 6362 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -29601 c[1] + 23701 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -29777 c[1] + 23717 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -29745 c[1] + 23717 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -29953 c[1] + 23733 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -29921 c[1] + 23733 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -30129 c[1] + 23749 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -30305 c[1] + 23765 c[2] - 6354 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -28809 c[1] + 23541 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
 -28985 c[1] + 23557 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&


```

-29 161 c[1] + 23 573 c[2] - 6346 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-28 017 c[1] + 23 381 c[2] - 6338 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0 &&
-28 193 c[1] + 23 397 c[2] - 6338 c[3] + 778 c[4] - 45 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

```

chi = listdim17[[158]]
(-11 + x)2 (-9 + x)9 (5 + x)32
(572 428 - 395 093 x + 111 245 x2 - 16 386 x3 + 1334 x4 - 57 x5 + x6)

CoefficientList[feasibleinterlacingpolylist[chi], x]

```

```

A = {{1, -72, 2236, -39072, 419582, -2830888, 11697356, -27008880, 26621177},
      {1, -72, 2236, -39064, 419158, -2821976, 11604540, -26530248, 25644465},
      {1, -72, 2236, -39064, 419174, -2822648, 11615100, -26603816, 25836129},
      {1, -72, 2236, -39064, 419174, -2822616, 11614108, -26593608, 25801281},
      {1, -72, 2236, -39064, 419190, -2823320, 11625596, -26676104, 26021457},
      {1, -72, 2236, -39064, 419190, -2823288, 11624668, -26667176, 25992945},
      {1, -72, 2236, -39064, 419190, -2823256, 11623548, -26654280, 25944017},
      {1, -72, 2236, -39064, 419190, -2823256, 11623676, -26656968, 25958097},
      {1, -72, 2236, -39064, 419206, -2823928, 11634108, -26727848, 26135681},
      {1, -72, 2236, -39056, 418766, -2814376, 11531724, -26185856, 25002153},
      {1, -72, 2236, -39056, 418766, -2814344, 11530796, -26176928, 24973641},
      {1, -72, 2236, -39056, 418782, -2815048, 11542284, -26259424, 25193817},
      {1, -72, 2236, -39056, 418782, -2815016, 11541292, -26249216, 25158969},
      {1, -72, 2236, -39056, 418782, -2814984, 11540364, -26240288, 25130457},
      {1, -72, 2236, -39056, 418798, -2815752, 11553772, -26341920, 25413993},
      {1, -72, 2236, -39056, 418798, -2815688, 11551852, -26322784, 25350633},
      {1, -72, 2236, -39056, 418798, -2815656, 11550924, -26313856, 25322121},
      {1, -72, 2236, -39056, 418798, -2815624, 11549804, -26300960, 25273193},
      {1, -72, 2236, -39056, 418814, -2816360, 11562412, -26396352, 25542297},
      {1, -72, 2236, -39056, 418814, -2816328, 11561420, -26386144, 25507449},
      {1, -72, 2236, -39056, 418814, -2816264, 11559372, -26364320, 25430009},
      {1, -72, 2236, -39048, 418374, -2806776, 11458908, -25841464, 24359841},
      {1, -72, 2236, -39048, 418374, -2806744, 11457980, -25832536, 24331329},
      {1, -72, 2236, -39048, 418390, -2807448, 11469468, -25915032, 24551505},
      {1, -72, 2236, -39048, 418390, -2807384, 11467548, -25895896, 24488145},
      {1, -72, 2236, -39048, 418390, -2807352, 11466556, -25885688, 24453297},
      {1, -72, 2236, -39048, 418406, -2808088, 11479036, -25978392, 24708321},
      {1, -72, 2236, -39048, 418406, -2808024, 11477116, -25959256, 24644961},
      {1, -72, 2236, -39048, 418422, -2808696, 11487676, -26032824, 24836625},
      {1, -72, 2236, -39048, 418422, -2808664, 11486684, -26022616, 24801777},
      {1, -72, 2236, -39048, 418438, -2809400, 11499164, -26115320, 25056801},
      {1, -72, 2236, -39048, 418438, -2809336, 11497244, -26096184, 24993441},
      {1, -72, 2236, -39040, 417966, -2798536, 11376524, -25433712, 23560713},
      {1, -72, 2236, -39040, 417982, -2799112, 11384172, -25477936, 23654169},
      {1, -72, 2236, -39040, 417998, -2799784, 11394732, -25551504, 23845833},
      {1, -72, 2236, -39040, 417998, -2799720, 11392812, -25532368, 23782473},
      {1, -72, 2236, -39040, 418014, -2800360, 11402380, -25595728, 23939289},
      {1, -72, 2236, -39032, 417606, -2792120, 11319996, -25187976, 23140161},
      {1, -72, 2236, -39032, 417638, -2793432, 11340124, -25324904, 23488641},
      {1, -72, 2236, -39016, 416838, -2777464, 11181084, -24534488, 21920481}};

```

A // MatrixForm

```
( 1 -72 2236 -39072 419582 -2830888 11697356 -27008880 26621177
 1 -72 2236 -39064 419158 -2821976 11604540 -26530248 25644465
 1 -72 2236 -39064 419174 -2822648 11615100 -26603816 25836129
 1 -72 2236 -39064 419174 -2822616 11614108 -26593608 25801281
 1 -72 2236 -39064 419190 -2823320 11625596 -26676104 26021457
 1 -72 2236 -39064 419190 -2823288 11624668 -26667176 25992945
 1 -72 2236 -39064 419190 -2823256 11623548 -26654280 25944017
 1 -72 2236 -39064 419190 -2823256 11623676 -26656968 25958097
 1 -72 2236 -39064 419206 -2823928 11634108 -26727848 26135681
 1 -72 2236 -39056 418766 -2814376 11531724 -26185856 25002153
 1 -72 2236 -39056 418766 -2814344 11530796 -26176928 24973641
 1 -72 2236 -39056 418782 -2815048 11542284 -26259424 25193817
 1 -72 2236 -39056 418782 -2815016 11541292 -26249216 25158969
 1 -72 2236 -39056 418782 -2814984 11540364 -26240288 25130457
 1 -72 2236 -39056 418798 -2815752 11553772 -26341920 25413993
 1 -72 2236 -39056 418798 -2815688 11551852 -26322784 25350633
 1 -72 2236 -39056 418798 -2815656 11550924 -26313856 25322121
 1 -72 2236 -39056 418798 -2815624 11549804 -26300960 25273193
 1 -72 2236 -39056 418814 -2816360 11562412 -26396352 25542297
 1 -72 2236 -39056 418814 -2816328 11561420 -26386144 25507449
 1 -72 2236 -39056 418814 -2816264 11559372 -26364320 25430009
 1 -72 2236 -39048 418374 -2806776 11458908 -25841464 24359841
 1 -72 2236 -39048 418374 -2806744 11457980 -25832536 24331329
 1 -72 2236 -39048 418390 -2807448 11469468 -25915032 24551505
 1 -72 2236 -39048 418390 -2807384 11467548 -25895896 24488145
 1 -72 2236 -39048 418390 -2807352 11466556 -25885688 24453297
 1 -72 2236 -39048 418406 -2808088 11479036 -25978392 24708321
 1 -72 2236 -39048 418406 -2808024 11477116 -25959256 24644961
 1 -72 2236 -39048 418422 -2808696 11487676 -26032824 24836625
 1 -72 2236 -39048 418422 -2808664 11486684 -26022616 24801777
 1 -72 2236 -39048 418438 -2809400 11499164 -26115320 25056801
 1 -72 2236 -39048 418438 -2809336 11497244 -26096184 24993441
 1 -72 2236 -39040 417966 -2798536 11376524 -25433712 23560713
 1 -72 2236 -39040 417982 -2799112 11384172 -25477936 23654169
 1 -72 2236 -39040 417998 -2799784 11394732 -25551504 23845833
 1 -72 2236 -39040 417998 -2799720 11392812 -25532368 23782473
 1 -72 2236 -39040 418014 -2800360 11402380 -25595728 23939289
 1 -72 2236 -39032 417606 -2792120 11319996 -25187976 23140161
 1 -72 2236 -39032 417638 -2793432 11340124 -25324904 23488641
 1 -72 2236 -39016 416838 -2777464 11181084 -24534488 21920481)
```

Dimensions[A]

{40, 9}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3528, 109564, -1914240, 20545678,
-138449992, 570686220, -1311842032, 1283010489}

Array[c, 9].Transpose[A]

{c[1] - 72 c[2] + 2236 c[3] - 39072 c[4] + 419582 c[5] -
2830888 c[6] + 11697356 c[7] - 27008880 c[8] + 26621177 c[9],

$$\begin{aligned}
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,158 c[5] - 2\,821\,976 c[6] + \\
& 11\,604\,540 c[7] - 26\,530\,248 c[8] + 25\,644\,465 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,174 c[5] - 2\,822\,648 c[6] + \\
& 11\,615\,100 c[7] - 26\,603\,816 c[8] + 25\,836\,129 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,174 c[5] - 2\,822\,616 c[6] + \\
& 11\,614\,108 c[7] - 26\,593\,608 c[8] + 25\,801\,281 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,190 c[5] - 2\,823\,320 c[6] + \\
& 11\,625\,596 c[7] - 26\,676\,104 c[8] + 26\,021\,457 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,190 c[5] - 2\,823\,288 c[6] + \\
& 11\,624\,668 c[7] - 26\,667\,176 c[8] + 25\,992\,945 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,190 c[5] - 2\,823\,256 c[6] + 11\,623\,548 c[7] - \\
& 26\,654\,280 c[8] + 25\,944\,017 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + \\
& 419\,190 c[5] - 2\,823\,256 c[6] + 11\,623\,676 c[7] - 26\,656\,968 c[8] + 25\,958\,097 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,064 c[4] + 419\,206 c[5] - 2\,823\,928 c[6] + 11\,634\,108 c[7] - \\
& 26\,727\,848 c[8] + 26\,135\,681 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,766 c[5] - 2\,814\,376 c[6] + 11\,531\,724 c[7] - 26\,185\,856 c[8] + 25\,002\,153 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,766 c[5] - 2\,814\,344 c[6] + 11\,530\,796 c[7] - \\
& 26\,176\,928 c[8] + 24\,973\,641 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,782 c[5] - 2\,815\,048 c[6] + 11\,542\,284 c[7] - 26\,259\,424 c[8] + 25\,193\,817 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,782 c[5] - 2\,815\,016 c[6] + 11\,541\,292 c[7] - \\
& 26\,249\,216 c[8] + 25\,158\,969 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,782 c[5] - 2\,814\,984 c[6] + 11\,540\,364 c[7] - 26\,240\,288 c[8] + 25\,130\,457 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,798 c[5] - 2\,815\,752 c[6] + 11\,553\,772 c[7] - \\
& 26\,341\,920 c[8] + 25\,413\,993 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,798 c[5] - 2\,815\,688 c[6] + 11\,551\,852 c[7] - 26\,322\,784 c[8] + 25\,350\,633 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,798 c[5] - 2\,815\,656 c[6] + 11\,550\,924 c[7] - \\
& 26\,313\,856 c[8] + 25\,322\,121 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,798 c[5] - 2\,815\,624 c[6] + 11\,549\,804 c[7] - 26\,300\,960 c[8] + 25\,273\,193 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,814 c[5] - 2\,816\,360 c[6] + 11\,562\,412 c[7] - \\
& 26\,396\,352 c[8] + 25\,542\,297 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + \\
& 418\,814 c[5] - 2\,816\,328 c[6] + 11\,561\,420 c[7] - 26\,386\,144 c[8] + 25\,507\,449 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,056 c[4] + 418\,814 c[5] - 2\,816\,264 c[6] + 11\,559\,372 c[7] - \\
& 26\,364\,320 c[8] + 25\,430\,009 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + \\
& 418\,374 c[5] - 2\,806\,776 c[6] + 11\,458\,908 c[7] - 25\,841\,464 c[8] + 24\,359\,841 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + 418\,374 c[5] - 2\,806\,744 c[6] + 11\,457\,980 c[7] - \\
& 25\,832\,536 c[8] + 24\,331\,329 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + \\
& 418\,390 c[5] - 2\,807\,448 c[6] + 11\,469\,468 c[7] - 25\,915\,032 c[8] + 24\,551\,505 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + 418\,390 c[5] - 2\,807\,384 c[6] + 11\,467\,548 c[7] - \\
& 25\,895\,896 c[8] + 24\,488\,145 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + \\
& 418\,390 c[5] - 2\,807\,352 c[6] + 11\,466\,556 c[7] - 25\,885\,688 c[8] + 24\,453\,297 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + 418\,406 c[5] - 2\,808\,088 c[6] + 11\,479\,036 c[7] - \\
& 25\,978\,392 c[8] + 24\,708\,321 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + \\
& 418\,406 c[5] - 2\,808\,024 c[6] + 11\,477\,116 c[7] - 25\,959\,256 c[8] + 24\,644\,961 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + 418\,422 c[5] - 2\,808\,696 c[6] + 11\,487\,676 c[7] - \\
& 26\,032\,824 c[8] + 24\,836\,625 c[9], c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + \\
& 418\,422 c[5] - 2\,808\,664 c[6] + 11\,486\,684 c[7] - 26\,022\,616 c[8] + 24\,801\,777 c[9], \\
& c[1] - 72 c[2] + 2236 c[3] - 39\,048 c[4] + 418\,438 c[5] - 2\,809\,400 c[6] + 11\,499\,164 c[7] -
\end{aligned}$$

```

26 115 320 c[8] + 25 056 801 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 048 c[4] +
418 438 c[5] - 2 809 336 c[6] + 11 497 244 c[7] - 26 096 184 c[8] + 24 993 441 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] + 417 966 c[5] - 2 798 536 c[6] + 11 376 524 c[7] -
25 433 712 c[8] + 23 560 713 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] +
417 982 c[5] - 2 799 112 c[6] + 11 384 172 c[7] - 25 477 936 c[8] + 23 654 169 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] + 417 998 c[5] - 2 799 784 c[6] + 11 394 732 c[7] -
25 551 504 c[8] + 23 845 833 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] +
417 998 c[5] - 2 799 720 c[6] + 11 392 812 c[7] - 25 532 368 c[8] + 23 782 473 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] + 418 014 c[5] - 2 800 360 c[6] + 11 402 380 c[7] -
25 595 728 c[8] + 23 939 289 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 032 c[4] +
417 606 c[5] - 2 792 120 c[6] + 11 319 996 c[7] - 25 187 976 c[8] + 23 140 161 c[9],
c[1] - 72 c[2] + 2236 c[3] - 39 032 c[4] + 417 638 c[5] - 2 793 432 c[6] + 11 340 124 c[7] -
25 324 904 c[8] + 23 488 641 c[9], c[1] - 72 c[2] + 2236 c[3] - 39 016 c[4] +
416 838 c[5] - 2 777 464 c[6] + 11 181 084 c[7] - 24 534 488 c[8] + 21 920 481 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3528 c[2] + 109 564 c[3] - 1 914 240 c[4] + 20 545 678 c[5] -
138 449 992 c[6] + 570 686 220 c[7] - 1 311 842 032 c[8] + 1 283 010 489 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3528 c[2] + 109 564 c[3] - 1 914 240 c[4] + 20 545 678 c[5] -
138 449 992 c[6] + 570 686 220 c[7] - 1 311 842 032 c[8] + 1 283 010 489 c[9] < 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 072 c[4] + 419 582 c[5] - 2 830 888 c[6] +
11 697 356 c[7] - 27 008 880 c[8] + 26 621 177 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 158 c[5] - 2 821 976 c[6] +
11 604 540 c[7] - 26 530 248 c[8] + 25 644 465 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 174 c[5] - 2 822 648 c[6] +
11 615 100 c[7] - 26 603 816 c[8] + 25 836 129 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 174 c[5] - 2 822 616 c[6] +
11 614 108 c[7] - 26 593 608 c[8] + 25 801 281 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 190 c[5] - 2 823 320 c[6] +
11 625 596 c[7] - 26 676 104 c[8] + 26 021 457 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 190 c[5] - 2 823 288 c[6] +
11 624 668 c[7] - 26 667 176 c[8] + 25 992 945 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 190 c[5] - 2 823 256 c[6] +
11 623 548 c[7] - 26 654 280 c[8] + 25 944 017 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 190 c[5] - 2 823 256 c[6] +
11 623 676 c[7] - 26 656 968 c[8] + 25 958 097 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 064 c[4] + 419 206 c[5] - 2 823 928 c[6] +
11 634 108 c[7] - 26 727 848 c[8] + 26 135 681 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 376 c[6] +
11 531 724 c[7] - 26 185 856 c[8] + 25 002 153 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 766 c[5] - 2 814 344 c[6] +
11 530 796 c[7] - 26 176 928 c[8] + 24 973 641 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 782 c[5] - 2 815 048 c[6] +
11 542 284 c[7] - 26 259 424 c[8] + 25 193 817 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 056 c[4] + 418 782 c[5] - 2 815 016 c[6] +

```

$$\begin{aligned}
& 11\,541\,292\,c[7] - 26\,249\,216\,c[8] + 25\,158\,969\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,782\,c[5] - 2\,814\,984\,c[6] + \\
& 11\,540\,364\,c[7] - 26\,240\,288\,c[8] + 25\,130\,457\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,798\,c[5] - 2\,815\,752\,c[6] + \\
& 11\,553\,772\,c[7] - 26\,341\,920\,c[8] + 25\,413\,993\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,798\,c[5] - 2\,815\,688\,c[6] + \\
& 11\,551\,852\,c[7] - 26\,322\,784\,c[8] + 25\,350\,633\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,798\,c[5] - 2\,815\,656\,c[6] + \\
& 11\,550\,924\,c[7] - 26\,313\,856\,c[8] + 25\,322\,121\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,798\,c[5] - 2\,815\,624\,c[6] + \\
& 11\,549\,804\,c[7] - 26\,300\,960\,c[8] + 25\,273\,193\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,814\,c[5] - 2\,816\,360\,c[6] + \\
& 11\,562\,412\,c[7] - 26\,396\,352\,c[8] + 25\,542\,297\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,814\,c[5] - 2\,816\,328\,c[6] + \\
& 11\,561\,420\,c[7] - 26\,386\,144\,c[8] + 25\,507\,449\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,056\,c[4] + 418\,814\,c[5] - 2\,816\,264\,c[6] + \\
& 11\,559\,372\,c[7] - 26\,364\,320\,c[8] + 25\,430\,009\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,374\,c[5] - 2\,806\,776\,c[6] + \\
& 11\,458\,908\,c[7] - 25\,841\,464\,c[8] + 24\,359\,841\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,374\,c[5] - 2\,806\,744\,c[6] + \\
& 11\,457\,980\,c[7] - 25\,832\,536\,c[8] + 24\,331\,329\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,390\,c[5] - 2\,807\,448\,c[6] + \\
& 11\,469\,468\,c[7] - 25\,915\,032\,c[8] + 24\,551\,505\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,390\,c[5] - 2\,807\,384\,c[6] + \\
& 11\,467\,548\,c[7] - 25\,895\,896\,c[8] + 24\,488\,145\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,390\,c[5] - 2\,807\,352\,c[6] + \\
& 11\,466\,556\,c[7] - 25\,885\,688\,c[8] + 24\,453\,297\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,406\,c[5] - 2\,808\,088\,c[6] + \\
& 11\,479\,036\,c[7] - 25\,978\,392\,c[8] + 24\,708\,321\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,406\,c[5] - 2\,808\,024\,c[6] + \\
& 11\,477\,116\,c[7] - 25\,959\,256\,c[8] + 24\,644\,961\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,422\,c[5] - 2\,808\,696\,c[6] + \\
& 11\,487\,676\,c[7] - 26\,032\,824\,c[8] + 24\,836\,625\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,422\,c[5] - 2\,808\,664\,c[6] + \\
& 11\,486\,684\,c[7] - 26\,022\,616\,c[8] + 24\,801\,777\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,438\,c[5] - 2\,809\,400\,c[6] + \\
& 11\,499\,164\,c[7] - 26\,115\,320\,c[8] + 25\,056\,801\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,048\,c[4] + 418\,438\,c[5] - 2\,809\,336\,c[6] + \\
& 11\,497\,244\,c[7] - 26\,096\,184\,c[8] + 24\,993\,441\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,040\,c[4] + 417\,966\,c[5] - 2\,798\,536\,c[6] + \\
& 11\,376\,524\,c[7] - 25\,433\,712\,c[8] + 23\,560\,713\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,040\,c[4] + 417\,982\,c[5] - 2\,799\,112\,c[6] + \\
& 11\,384\,172\,c[7] - 25\,477\,936\,c[8] + 23\,654\,169\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,040\,c[4] + 417\,998\,c[5] - 2\,799\,784\,c[6] + \\
& 11\,394\,732\,c[7] - 25\,551\,504\,c[8] + 23\,845\,833\,c[9] \geq 0 \&\& \\
& c[1] - 72\,c[2] + 2236\,c[3] - 39\,040\,c[4] + 417\,998\,c[5] - 2\,799\,720\,c[6] + \\
& 11\,392\,812\,c[7] - 25\,532\,368\,c[8] + 23\,782\,473\,c[9] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 72 c[2] + 2236 c[3] - 39 040 c[4] + 418 014 c[5] - 2 800 360 c[6] +
  11 402 380 c[7] - 25 595 728 c[8] + 23 939 289 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 032 c[4] + 417 606 c[5] - 2 792 120 c[6] +
  11 319 996 c[7] - 25 187 976 c[8] + 23 140 161 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 032 c[4] + 417 638 c[5] - 2 793 432 c[6] +
  11 340 124 c[7] - 25 324 904 c[8] + 23 488 641 c[9] ≥ 0 &&
c[1] - 72 c[2] + 2236 c[3] - 39 016 c[4] + 416 838 c[5] - 2 777 464 c[6] +
  11 181 084 c[7] - 24 534 488 c[8] + 21 920 481 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, 0, 0, 4 443 929, 2 128 486, 571 736, 117 372}

```

```
GCD[0, 0, 0, 0, 0, 4 443 929, 2 128 486, 571 736, 117 372]
```

```
1
```

```
cert.g
```

```
-2 113 728 292
```

```
{0, 0, 0, 0, 0, 4 443 929, 2 128 486, 571 736, 117 372}.Reverse[gpart[listdim17[[158]]]]
-2 113 728 292
```

```
cert.Transpose[A]
```

```

{24 975 228, 1 084 218 188, 1 009 223 020, 786 072 268, 786 157 836, 711 077 100,
 99 708 748, 487 926 348, 24 713 580, 1 382 102 460, 1 307 021 724, 1 307 107 292,
 1 083 956 540, 1 008 875 804, 1 307 192 860, 1 008 961 372, 933 880 636, 322 512 284,
 933 966 204, 710 815 452, 24 366 364, 1 679 986 732, 1 604 905 996, 1 604 991 564,
 1 306 760 076, 1 083 609 324, 1 306 845 644, 1 008 614 156, 933 618 988,
 710 468 236, 933 704 556, 635 473 068, 2 276 016 924, 1 679 639 516, 1 604 644 348,
 1 306 412 860, 1 008 266 940, 1 604 297 132, 1 231 156 044, 1 528 607 532}

```

```
chi = listdim17[[159]]
```

```
(-12 + x) (-11 + x)2 (-9 + x)10 (5 + x)32 (5297 - 2628 x + 470 x2 - 36 x3 + x4)
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -63, 1669, -24 051, 203 123, -1 002 749, 2 671 751, -2 955 601},
      {1, -63, 1669, -24 051, 203 139, -1 003 245, 2 676 727, -2 971 617},
      {1, -63, 1669, -24 043, 202 787, -997 565, 2 637 143, -2 872 089},
      {1, -63, 1669, -24 043, 202 787, -997 533, 2 636 375, -2 867 513},
      {1, -63, 1669, -24 043, 202 787, -997 501, 2 635 671, -2 863 641},
      {1, -63, 1669, -24 043, 202 803, -998 061, 2 642 183, -2 888 809},
      {1, -63, 1669, -24 043, 202 803, -998 029, 2 641 415, -2 884 233},
      {1, -63, 1669, -24 043, 202 803, -998 029, 2 641 479, -2 884 937},
      {1, -63, 1669, -24 043, 202 803, -997 997, 2 640 711, -2 880 361},
      {1, -63, 1669, -24 043, 202 819, -998 557, 2 647 159, -2 904 825},

```

```

{1, -63, 1669, -24 043, 202 819, -998 557, 2 647 223, -2 905 529},
{1, -63, 1669, -24 043, 202 819, -998 525, 2 646 455, -2 900 953},
{1, -63, 1669, -24 043, 202 819, -998 525, 2 646 519, -2 901 657},
{1, -63, 1669, -24 043, 202 819, -998 493, 2 645 751, -2 897 081},
{1, -63, 1669, -24 035, 202 451, -992 285, 2 600 295, -2 775 553},
{1, -63, 1669, -24 035, 202 467, -992 813, 2 606 039, -2 796 145},
{1, -63, 1669, -24 035, 202 467, -992 813, 2 606 103, -2 796 849},
{1, -63, 1669, -24 035, 202 467, -992 781, 2 605 271, -2 791 569},
{1, -63, 1669, -24 035, 202 467, -992 781, 2 605 335, -2 792 273},
{1, -63, 1669, -24 035, 202 467, -992 781, 2 605 399, -2 792 977},
{1, -63, 1669, -24 035, 202 483, -993 341, 2 611 847, -2 817 441},
{1, -63, 1669, -24 035, 202 483, -993 309, 2 611 079, -2 812 865},
{1, -63, 1669, -24 035, 202 483, -993 309, 2 611 143, -2 813 569},
{1, -63, 1669, -24 035, 202 483, -993 277, 2 610 375, -2 808 993},
{1, -63, 1669, -24 035, 202 483, -993 277, 2 610 439, -2 809 697},
{1, -63, 1669, -24 035, 202 483, -993 245, 2 609 671, -2 805 121},
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A // MatrixForm

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Dimensions[A]

{86, 8}

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$$\begin{aligned}
& 202\,467\,c[5] - 992\,781\,c[6] + 2\,605\,399\,c[7] - 2\,792\,977\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,341\,c[6] + \\
& 2\,611\,847\,c[7] - 2\,817\,441\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,309\,c[6] + 2\,611\,079\,c[7] - 2\,812\,865\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,309\,c[6] + \\
& 2\,611\,143\,c[7] - 2\,813\,569\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,277\,c[6] + 2\,610\,375\,c[7] - 2\,808\,993\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,277\,c[6] + \\
& 2\,610\,439\,c[7] - 2\,809\,697\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,245\,c[6] + 2\,609\,671\,c[7] - 2\,805\,121\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,869\,c[6] + \\
& 2\,617\,591\,c[7] - 2\,838\,033\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,837\,c[6] + 2\,616\,887\,c[7] - 2\,834\,161\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,837\,c[6] + \\
& 2\,616\,951\,c[7] - 2\,834\,865\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,805\,c[6] + 2\,616\,183\,c[7] - 2\,830\,289\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,805\,c[6] + \\
& 2\,616\,247\,c[7] - 2\,830\,993\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,773\,c[6] + 2\,615\,479\,c[7] - 2\,826\,417\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,741\,c[6] + \\
& 2\,614\,775\,c[7] - 2\,822\,545\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,515\,c[5] - 994\,301\,c[6] + 2\,621\,287\,c[7] - 2\,847\,713\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,115\,c[5] - 987\,037\,c[6] + \\
& 2\,564\,215\,c[7] - 2\,683\,593\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,565\,c[6] + 2\,569\,959\,c[7] - 2\,704\,185\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,533\,c[6] + \\
& 2\,569\,255\,c[7] - 2\,700\,313\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,533\,c[6] + 2\,569\,319\,c[7] - 2\,701\,017\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,093\,c[6] + \\
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& 202\,147\,c[5] - 988\,061\,c[6] + 2\,574\,935\,c[7] - 2\,720\,201\,c[8], \\
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& 202\,147\,c[5] - 988\,061\,c[6] + 2\,575\,063\,c[7] - 2\,721\,609\,c[8], \\
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& 2\,574\,295\,c[7] - 2\,717\,033\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,029\,c[6] + 2\,574\,359\,c[7] - 2\,717\,737\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 987\,997\,c[6] + \\
& 2\,573\,655\,c[7] - 2\,713\,865\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,621\,c[6] + 2\,581\,447\,c[7] - 2\,745\,369\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,589\,c[6] + \\
& 2\,580\,743\,c[7] - 2\,741\,497\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,589\,c[6] + 2\,580\,807\,c[7] - 2\,742\,201\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,557\,c[6] + \\
& 2\,580\,103\,c[7] - 2\,738\,329\,c[8], \quad c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,557\,c[6] + 2\,580\,167\,c[7] - 2\,739\,033\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,525\,c[6] +
\end{aligned}$$

$$\begin{aligned}
& 2\,579\,399\,c[7] - 2\,734\,457\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,493\,c[6] + 2\,578\,695\,c[7] - 2\,730\,585\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,179\,c[5] - 989\,117\,c[6] + \\
& 2\,586\,551\,c[7] - 2\,762\,793\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,179\,c[5] - 989\,085\,c[6] + 2\,585\,911\,c[7] - 2\,759\,625\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,179\,c[5] - 989\,053\,c[6] + \\
& 2\,585\,207\,c[7] - 2\,755\,753\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,179\,c[5] - 989\,021\,c[6] + 2\,584\,503\,c[7] - 2\,751\,881\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,195\,c[5] - 989\,613\,c[6] + \\
& 2\,591\,655\,c[7] - 2\,780\,217\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,195\,c[5] - 989\,581\,c[6] + 2\,591\,015\,c[7] - 2\,777\,049\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,795\,c[5] - 982\,317\,c[6] + \\
& 2\,533\,815\,c[7] - 2\,611\,521\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,795\,c[5] - 982\,285\,c[6] + 2\,533\,175\,c[7] - 2\,608\,353\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,811\,c[5] - 982\,813\,c[6] + \\
& 2\,538\,855\,c[7] - 2\,628\,241\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,811\,c[5] - 982\,813\,c[6] + 2\,538\,919\,c[7] - 2\,628\,945\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,811\,c[5] - 982\,781\,c[6] + \\
& 2\,538\,215\,c[7] - 2\,625\,073\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,811\,c[5] - 982\,781\,c[6] + 2\,538\,279\,c[7] - 2\,625\,777\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,827\,c[5] - 983\,341\,c[6] + \\
& 2\,544\,663\,c[7] - 2\,649\,537\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,827\,c[5] - 983\,309\,c[6] + 2\,543\,959\,c[7] - 2\,645\,665\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,827\,c[5] - 983\,309\,c[6] + \\
& 2\,544\,023\,c[7] - 2\,646\,369\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,827\,c[5] - 983\,277\,c[6] + 2\,543\,319\,c[7] - 2\,642\,497\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,827\,c[5] - 983\,245\,c[6] + \\
& 2\,542\,615\,c[7] - 2\,638\,625\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,843\,c[5] - 983\,837\,c[6] + 2\,549\,767\,c[7] - 2\,666\,961\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,843\,c[5] - 983\,805\,c[6] + \\
& 2\,549\,063\,c[7] - 2\,663\,089\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,843\,c[5] - 983\,805\,c[6] + 2\,549\,127\,c[7] - 2\,663\,793\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + 201\,843\,c[5] - 983\,773\,c[6] + \\
& 2\,548\,423\,c[7] - 2\,659\,921\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,019\,c[4] + \\
& 201\,859\,c[5] - 984\,333\,c[6] + 2\,554\,871\,c[7] - 2\,684\,385\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + 201\,475\,c[5] - 977\,565\,c[6] + \\
& 2\,502\,775\,c[7] - 2\,536\,281\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + \\
& 201\,475\,c[5] - 977\,533\,c[6] + 2\,502\,135\,c[7] - 2\,533\,113\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + 201\,491\,c[5] - 978\,061\,c[6] + \\
& 2\,507\,879\,c[7] - 2\,553\,705\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + \\
& 201\,491\,c[5] - 978\,029\,c[6] + 2\,507\,175\,c[7] - 2\,549\,833\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + 201\,491\,c[5] - 978\,029\,c[6] + \\
& 2\,507\,239\,c[7] - 2\,550\,537\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + \\
& 201\,507\,c[5] - 978\,557\,c[6] + 2\,512\,983\,c[7] - 2\,571\,129\,c[8], \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + 201\,507\,c[5] - 978\,525\,c[6] + \\
& 2\,512\,279\,c[7] - 2\,567\,257\,c[8], c[1] - 63\,c[2] + 1669\,c[3] - 24\,011\,c[4] + \\
& 201\,507\,c[5] - 978\,525\,c[6] + 2\,512\,343\,c[7] - 2\,567\,961\,c[8],
\end{aligned}$$

```

c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 523 c[5] - 979 053 c[6] +
  2 518 087 c[7] - 2 588 553 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 171 c[5] - 973 277 c[6] + 2 476 199 c[7] - 2 475 297 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 187 c[5] - 973 773 c[6] +
  2 481 303 c[7] - 2 492 721 c[8], c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
  200 851 c[5] - 968 493 c[6] + 2 444 519 c[7] - 2 396 889 c[8] }

```

```
Array[c, 8].g
```

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 211 c[4] +
  9 941 779 c[5] - 48 972 573 c[6] + 129 894 983 c[7] - 142 457 457 c[8]

```

```
cert =
```

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 211 c[4] +
  9 941 779 c[5] - 48 972 573 c[6] + 129 894 983 c[7] - 142 457 457 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 123 c[5] -
    1 002 749 c[6] + 2 671 751 c[7] - 2 955 601 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 051 c[4] + 203 139 c[5] - 1 003 245 c[6] +
    2 676 727 c[7] - 2 971 617 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
    202 787 c[5] - 997 565 c[6] + 2 637 143 c[7] - 2 872 089 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 787 c[5] - 997 533 c[6] +
    2 636 375 c[7] - 2 867 513 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
    202 787 c[5] - 997 501 c[6] + 2 635 671 c[7] - 2 863 641 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 803 c[5] - 998 061 c[6] +
    2 642 183 c[7] - 2 888 809 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
    202 803 c[5] - 998 029 c[6] + 2 641 415 c[7] - 2 884 233 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 803 c[5] - 998 029 c[6] +
    2 641 479 c[7] - 2 884 937 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
    202 803 c[5] - 997 997 c[6] + 2 640 711 c[7] - 2 880 361 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 819 c[5] - 998 557 c[6] +
    2 647 159 c[7] - 2 904 825 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
    202 819 c[5] - 998 557 c[6] + 2 647 223 c[7] - 2 905 529 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 819 c[5] - 998 525 c[6] +
    2 646 455 c[7] - 2 900 953 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] +
    202 819 c[5] - 998 525 c[6] + 2 646 519 c[7] - 2 901 657 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 043 c[4] + 202 819 c[5] - 998 493 c[6] +
    2 645 751 c[7] - 2 897 081 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
    202 451 c[5] - 992 285 c[6] + 2 600 295 c[7] - 2 775 553 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 813 c[6] +
    2 606 039 c[7] - 2 796 145 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
    202 467 c[5] - 992 813 c[6] + 2 606 103 c[7] - 2 796 849 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 781 c[6] +
    2 605 271 c[7] - 2 791 569 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
    202 467 c[5] - 992 781 c[6] + 2 605 335 c[7] - 2 792 273 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 781 c[6] +
    2 605 399 c[7] - 2 792 977 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
    202 483 c[5] - 993 341 c[6] + 2 611 847 c[7] - 2 817 441 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 483 c[5] - 993 309 c[6] +

```

$$\begin{aligned}
& 2\,611\,079\,c[7] - 2\,812\,865\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,309\,c[6] + 2\,611\,143\,c[7] - 2\,813\,569\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,277\,c[6] + \\
& 2\,610\,375\,c[7] - 2\,808\,993\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,483\,c[5] - 993\,277\,c[6] + 2\,610\,439\,c[7] - 2\,809\,697\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,483\,c[5] - 993\,245\,c[6] + \\
& 2\,609\,671\,c[7] - 2\,805\,121\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,869\,c[6] + 2\,617\,591\,c[7] - 2\,838\,033\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,837\,c[6] + \\
& 2\,616\,887\,c[7] - 2\,834\,161\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,837\,c[6] + 2\,616\,951\,c[7] - 2\,834\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,805\,c[6] + \\
& 2\,616\,183\,c[7] - 2\,830\,289\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,805\,c[6] + 2\,616\,247\,c[7] - 2\,830\,993\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,499\,c[5] - 993\,773\,c[6] + \\
& 2\,615\,479\,c[7] - 2\,826\,417\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + \\
& 202\,499\,c[5] - 993\,741\,c[6] + 2\,614\,775\,c[7] - 2\,822\,545\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,035\,c[4] + 202\,515\,c[5] - 994\,301\,c[6] + \\
& 2\,621\,287\,c[7] - 2\,847\,713\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,115\,c[5] - 987\,037\,c[6] + 2\,564\,215\,c[7] - 2\,683\,593\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,565\,c[6] + \\
& 2\,569\,959\,c[7] - 2\,704\,185\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,131\,c[5] - 987\,533\,c[6] + 2\,569\,255\,c[7] - 2\,700\,313\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,131\,c[5] - 987\,533\,c[6] + \\
& 2\,569\,319\,c[7] - 2\,701\,017\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,093\,c[6] + 2\,575\,703\,c[7] - 2\,724\,777\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,061\,c[6] + \\
& 2\,574\,935\,c[7] - 2\,720\,201\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,061\,c[6] + 2\,574\,999\,c[7] - 2\,720\,905\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,061\,c[6] + \\
& 2\,575\,063\,c[7] - 2\,721\,609\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 988\,029\,c[6] + 2\,574\,295\,c[7] - 2\,717\,033\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,147\,c[5] - 988\,029\,c[6] + \\
& 2\,574\,359\,c[7] - 2\,717\,737\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,147\,c[5] - 987\,997\,c[6] + 2\,573\,655\,c[7] - 2\,713\,865\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,621\,c[6] + \\
& 2\,581\,447\,c[7] - 2\,745\,369\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,589\,c[6] + 2\,580\,743\,c[7] - 2\,741\,497\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,589\,c[6] + \\
& 2\,580\,807\,c[7] - 2\,742\,201\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,557\,c[6] + 2\,580\,103\,c[7] - 2\,738\,329\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,557\,c[6] + \\
& 2\,580\,167\,c[7] - 2\,739\,033\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,163\,c[5] - 988\,525\,c[6] + 2\,579\,399\,c[7] - 2\,734\,457\,c[8] \geq 0 \&\& \\
& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + 202\,163\,c[5] - 988\,493\,c[6] + \\
& 2\,578\,695\,c[7] - 2\,730\,585\,c[8] \geq 0 \&\& c[1] - 63\,c[2] + 1669\,c[3] - 24\,027\,c[4] + \\
& 202\,179\,c[5] - 989\,117\,c[6] + 2\,586\,551\,c[7] - 2\,762\,793\,c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,179 c[5] - 989\,085 c[6] + \\
& \quad 2\,585\,911 c[7] - 2\,759\,625 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,179 c[5] - 989\,053 c[6] + 2\,585\,207 c[7] - 2\,755\,753 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,179 c[5] - 989\,021 c[6] + \\
& \quad 2\,584\,503 c[7] - 2\,751\,881 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,195 c[5] - 989\,613 c[6] + 2\,591\,655 c[7] - 2\,780\,217 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,195 c[5] - 989\,581 c[6] + \\
& \quad 2\,591\,015 c[7] - 2\,777\,049 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,795 c[5] - 982\,317 c[6] + 2\,533\,815 c[7] - 2\,611\,521 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,795 c[5] - 982\,285 c[6] + \\
& \quad 2\,533\,175 c[7] - 2\,608\,353 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,811 c[5] - 982\,813 c[6] + 2\,538\,855 c[7] - 2\,628\,241 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,813 c[6] + \\
& \quad 2\,538\,919 c[7] - 2\,628\,945 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,811 c[5] - 982\,781 c[6] + 2\,538\,215 c[7] - 2\,625\,073 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,811 c[5] - 982\,781 c[6] + \\
& \quad 2\,538\,279 c[7] - 2\,625\,777 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,827 c[5] - 983\,341 c[6] + 2\,544\,663 c[7] - 2\,649\,537 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,827 c[5] - 983\,309 c[6] + \\
& \quad 2\,543\,959 c[7] - 2\,645\,665 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,827 c[5] - 983\,309 c[6] + 2\,544\,023 c[7] - 2\,646\,369 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,827 c[5] - 983\,277 c[6] + \\
& \quad 2\,543\,319 c[7] - 2\,642\,497 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,827 c[5] - 983\,245 c[6] + 2\,542\,615 c[7] - 2\,638\,625 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,843 c[5] - 983\,837 c[6] + \\
& \quad 2\,549\,767 c[7] - 2\,666\,961 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,843 c[5] - 983\,805 c[6] + 2\,549\,063 c[7] - 2\,663\,089 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,843 c[5] - 983\,805 c[6] + \\
& \quad 2\,549\,127 c[7] - 2\,663\,793 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + \\
& \quad 201\,843 c[5] - 983\,773 c[6] + 2\,548\,423 c[7] - 2\,659\,921 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,859 c[5] - 984\,333 c[6] + \\
& \quad 2\,554\,871 c[7] - 2\,684\,385 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + \\
& \quad 201\,475 c[5] - 977\,565 c[6] + 2\,502\,775 c[7] - 2\,536\,281 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + 201\,475 c[5] - 977\,533 c[6] + \\
& \quad 2\,502\,135 c[7] - 2\,533\,113 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + \\
& \quad 201\,491 c[5] - 978\,061 c[6] + 2\,507\,879 c[7] - 2\,553\,705 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + 201\,491 c[5] - 978\,029 c[6] + \\
& \quad 2\,507\,175 c[7] - 2\,549\,833 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + \\
& \quad 201\,491 c[5] - 978\,029 c[6] + 2\,507\,239 c[7] - 2\,550\,537 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + 201\,507 c[5] - 978\,557 c[6] + \\
& \quad 2\,512\,983 c[7] - 2\,571\,129 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + \\
& \quad 201\,507 c[5] - 978\,525 c[6] + 2\,512\,279 c[7] - 2\,567\,257 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + 201\,507 c[5] - 978\,525 c[6] + \\
& \quad 2\,512\,343 c[7] - 2\,567\,961 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,011 c[4] + \\
& \quad 201\,523 c[5] - 979\,053 c[6] + 2\,518\,087 c[7] - 2\,588\,553 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,003 c[4] + 201\,171 c[5] - 973\,277 c[6] + \\
& \quad 2\,476\,199 c[7] - 2\,475\,297 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,003 c[4] +
\end{aligned}$$


```

201187 c[5] - 973773 c[6] + 2481303 c[7] - 2492721 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 23995 c[4] + 200851 c[5] - 968493 c[6] +
2444519 c[7] - 2396889 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, -34375141077, -4754463451, -432223950, -39293087, -3572098, -324737}

```

```

GCD[0, 0, -34375141077, -4754463451,
-432223950, -39293087, -3572098, -324737]

```

```
1
```

```
cert.g
```

```
-95026700
```

```
{0, 0, -34375141077, -4754463451, -432223950, -39293087, -3572098, -324737}.
```

```
Reverse[gpart[listdim17[[159]]]]
```

```
-95026700
```

```
cert.Transpose[A]
```

```

{4901140, 4917236, 4808964, 4804932, 4801476, 4825636, 4821604, 4822180,
4818148, 4841732, 4842308, 4838276, 4838852, 4834820, 4705268, 4725396,
4725972, 4721364, 4721940, 4722516, 4746100, 4742068, 4742644, 4738612,
4739188, 4735156, 4766228, 4762772, 4763348, 4759316, 4759892, 4755860,
4752404, 4776564, 4605604, 4625732, 4622276, 4622852, 4645860, 4641828,
4642404, 4642980, 4638948, 4639524, 4636068, 4665988, 4662532, 4663108,
4659652, 4660228, 4656196, 4652740, 4683236, 4680356, 4676900, 4673444,
4700484, 4697604, 4525492, 4522612, 4542164, 4542740, 4539284, 4539860,
4562868, 4559412, 4559988, 4556532, 4553076, 4580116, 4576660, 4577236,
4573780, 4597364, 4442500, 4439620, 4459748, 4456292, 4456868,
4476996, 4473540, 4474116, 4494244, 4373876, 4391124, 4288004}

```

```
chi = listdim17[[160]]
```

```
 $(-11 + x)^4 (-9 + x)^8 (5 + x)^{32} (59 - 16x + x^2) (-724 + 251x - 28x^2 + x^3)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -59, 1465, -19827, 157787, -737497, 1872043, -1987641},
{1, -59, 1465, -19819, 157483, -733273, 1846683, -1932417},
{1, -59, 1465, -19819, 157483, -733241, 1846043, -1929249},
{1, -59, 1465, -19819, 157483, -733241, 1846107, -1929825},
{1, -59, 1465, -19819, 157499, -733705, 1850443, -1942929},
{1, -59, 1465, -19819, 157499, -733673, 1849867, -1940337},
{1, -59, 1465, -19819, 157499, -733673, 1849931, -1940913},
{1, -59, 1465, -19819, 157499, -733641, 1849355, -1938321},
{1, -59, 1465, -19819, 157515, -734105, 1853691, -1951425},

```

```

{1, -59, 1465, -19819, 157515, -734073, 1853179, -1949409},
{1, -59, 1465, -19819, 157531, -734505, 1856939, -1959921},
{1, -59, 1465, -19811, 157179, -729017, 1820619, -1873449},
{1, -59, 1465, -19811, 157179, -728985, 1820043, -1870857},
{1, -59, 1465, -19811, 157195, -729449, 1824507, -1885113},
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{1, -59, 1465, -19811, 157195, -729417, 1823931, -1882521},
{1, -59, 1465, -19811, 157195, -729385, 1823355, -1879929},
{1, -59, 1465, -19811, 157211, -729881, 1828331, -1896201},
{1, -59, 1465, -19811, 157211, -729849, 1827755, -1893609},
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{1, -59, 1465, -19811, 157227, -730281, 1831579, -1904697},
{1, -59, 1465, -19811, 157227, -730249, 1831003, -1902105},
{1, -59, 1465, -19811, 157227, -730249, 1831067, -1902681},
{1, -59, 1465, -19811, 157227, -730217, 1830427, -1899513},
{1, -59, 1465, -19811, 157243, -730681, 1834827, -1913193},
{1, -59, 1465, -19811, 157243, -730649, 1834251, -1910601},
{1, -59, 1465, -19811, 157259, -731081, 1838075, -1921689},
{1, -59, 1465, -19803, 156907, -725561, 1801179, -1832625},
{1, -59, 1465, -19803, 156907, -725529, 1800603, -1830033},
{1, -59, 1465, -19803, 156923, -725993, 1805003, -1843713},
{1, -59, 1465, -19803, 156923, -725993, 1805067, -1844289},
{1, -59, 1465, -19803, 156923, -725961, 1804427, -1841121},
{1, -59, 1465, -19803, 156923, -725961, 1804491, -1841697},
{1, -59, 1465, -19803, 156939, -726457, 1809467, -1857969},
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{1, -59, 1465, -19803, 156939, -726393, 1808251, -1852209},
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{1, -59, 1465, -19803, 156955, -726825, 1812139, -1863873},
{1, -59, 1465, -19803, 156955, -726793, 1811499, -1860705},
{1, -59, 1465, -19803, 156971, -727257, 1815963, -1874961},
{1, -59, 1465, -19795, 156635, -722105, 1781739, -1791801},
{1, -59, 1465, -19795, 156651, -722569, 1786139, -1805481},
{1, -59, 1465, -19795, 156651, -722537, 1785563, -1802889},
{1, -59, 1465, -19795, 156667, -723033, 1790603, -1819737},
{1, -59, 1465, -19795, 156667, -723001, 1790027, -1817145},
{1, -59, 1465, -19795, 156667, -722969, 1789387, -1813977},
{1, -59, 1465, -19795, 156683, -723433, 1793851, -1828233},
{1, -59, 1465, -19787, 156363, -718681, 1762811, -1752993},
{1, -59, 1465, -19787, 156379, -719145, 1767275, -1767249},
{1, -59, 1465, -19787, 156395, -719609, 1771739, -1781505},
{1, -59, 1465, -19779, 156075, -714825, 1740059, -1703097}};

```

A // MatrixForm

1	-59	1465	-19827	157787	-737497	1872043	-1987641
1	-59	1465	-19819	157483	-733273	1846683	-1932417
1	-59	1465	-19819	157483	-733241	1846043	-1929249
1	-59	1465	-19819	157483	-733241	1846107	-1929825
1	-59	1465	-19819	157499	-733705	1850443	-1942929
1	-59	1465	-19819	157499	-733673	1849867	-1940337
1	-59	1465	-19819	157499	-733673	1849931	-1940913
1	-59	1465	-19819	157499	-733641	1849355	-1938321
1	-59	1465	-19819	157515	-734105	1853691	-1951425
1	-59	1465	-19819	157515	-734073	1853179	-1949409
1	-59	1465	-19819	157531	-734505	1856939	-1959921
1	-59	1465	-19811	157179	-729017	1820619	-1873449
1	-59	1465	-19811	157179	-728985	1820043	-1870857
1	-59	1465	-19811	157195	-729449	1824507	-1885113
1	-59	1465	-19811	157195	-729417	1823867	-1881945
1	-59	1465	-19811	157195	-729417	1823931	-1882521
1	-59	1465	-19811	157195	-729385	1823355	-1879929
1	-59	1465	-19811	157211	-729881	1828331	-1896201
1	-59	1465	-19811	157211	-729849	1827755	-1893609
1	-59	1465	-19811	157211	-729849	1827819	-1894185
1	-59	1465	-19811	157211	-729817	1827115	-1890441
1	-59	1465	-19811	157211	-729817	1827179	-1891017
1	-59	1465	-19811	157211	-729817	1827243	-1891593
1	-59	1465	-19811	157227	-730281	1831579	-1904697
1	-59	1465	-19811	157227	-730249	1831003	-1902105
1	-59	1465	-19811	157227	-730249	1831067	-1902681
1	-59	1465	-19811	157227	-730217	1830427	-1899513
1	-59	1465	-19811	157243	-730681	1834827	-1913193
1	-59	1465	-19811	157243	-730649	1834251	-1910601
1	-59	1465	-19811	157259	-731081	1838075	-1921689
1	-59	1465	-19803	156907	-725561	1801179	-1832625
1	-59	1465	-19803	156907	-725529	1800603	-1830033
1	-59	1465	-19803	156923	-725993	1805003	-1843713
1	-59	1465	-19803	156923	-725993	1805067	-1844289
1	-59	1465	-19803	156923	-725961	1804427	-1841121
1	-59	1465	-19803	156923	-725961	1804491	-1841697
1	-59	1465	-19803	156939	-726457	1809467	-1857969
1	-59	1465	-19803	156939	-726425	1808891	-1855377
1	-59	1465	-19803	156939	-726425	1808955	-1855953
1	-59	1465	-19803	156939	-726393	1808251	-1852209
1	-59	1465	-19803	156939	-726393	1808315	-1852785
1	-59	1465	-19803	156955	-726857	1812715	-1866465
1	-59	1465	-19803	156955	-726825	1812139	-1863873
1	-59	1465	-19803	156955	-726793	1811499	-1860705
1	-59	1465	-19803	156971	-727257	1815963	-1874961
1	-59	1465	-19795	156635	-722105	1781739	-1791801
1	-59	1465	-19795	156651	-722569	1786139	-1805481
1	-59	1465	-19795	156651	-722537	1785563	-1802889
1	-59	1465	-19795	156667	-723033	1790603	-1819737
1	-59	1465	-19795	156667	-723001	1790027	-1817145
1	-59	1465	-19795	156667	-722969	1789387	-1813977
1	-59	1465	-19795	156683	-723433	1793851	-1828233
1	-59	1465	-19787	156363	-718681	1762811	-1752993

$$\begin{pmatrix} 1 & -59 & 1465 & -19787 & 156379 & -719145 & 1767275 & -1767249 \\ 1 & -59 & 1465 & -19787 & 156395 & -719609 & 1771739 & -1781505 \\ 1 & -59 & 1465 & -19779 & 156075 & -714825 & 1740059 & -1703097 \end{pmatrix}$$

Dimensions[A]

{56, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -2891, 71785, -971235, 7721403, -36004473, 90966955, -95775833}

Array[c, 8].Transpose[A]

{c[1] - 59 c[2] + 1465 c[3] - 19827 c[4] + 157787 c[5] -
 737497 c[6] + 1872043 c[7] - 1987641 c[8], c[1] - 59 c[2] + 1465 c[3] -
 19819 c[4] + 157483 c[5] - 733273 c[6] + 1846683 c[7] - 1932417 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157483 c[5] - 733241 c[6] +
 1846043 c[7] - 1929249 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] +
 157483 c[5] - 733241 c[6] + 1846107 c[7] - 1929825 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157499 c[5] - 733705 c[6] +
 1850443 c[7] - 1942929 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] +
 157499 c[5] - 733673 c[6] + 1849867 c[7] - 1940337 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157499 c[5] - 733673 c[6] +
 1849931 c[7] - 1940913 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] +
 157499 c[5] - 733641 c[6] + 1849355 c[7] - 1938321 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157515 c[5] - 734105 c[6] +
 1853691 c[7] - 1951425 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] +
 157515 c[5] - 734073 c[6] + 1853179 c[7] - 1949409 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157531 c[5] - 734505 c[6] +
 1856939 c[7] - 1959921 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] +
 157179 c[5] - 729017 c[6] + 1820619 c[7] - 1873449 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157179 c[5] - 728985 c[6] +
 1820043 c[7] - 1870857 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] +
 157195 c[5] - 729449 c[6] + 1824507 c[7] - 1885113 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157195 c[5] - 729417 c[6] +
 1823867 c[7] - 1881945 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] +
 157195 c[5] - 729417 c[6] + 1823931 c[7] - 1882521 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157195 c[5] - 729385 c[6] +
 1823355 c[7] - 1879929 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] +
 157211 c[5] - 729881 c[6] + 1828331 c[7] - 1896201 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157211 c[5] - 729849 c[6] +
 1827755 c[7] - 1893609 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] +
 157211 c[5] - 729849 c[6] + 1827819 c[7] - 1894185 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157211 c[5] - 729817 c[6] +
 1827115 c[7] - 1890441 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] +
 157211 c[5] - 729817 c[6] + 1827179 c[7] - 1891017 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157211 c[5] - 729817 c[6] +
 1827243 c[7] - 1891593 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] +
 157227 c[5] - 730281 c[6] + 1831579 c[7] - 1904697 c[8],
 c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157227 c[5] - 730249 c[6] +

$$\begin{aligned}
& 1831003c[7] - 1902105c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157227c[5] - 730249c[6] + 1831067c[7] - 1902681c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157227c[5] - 730217c[6] + \\
& 1830427c[7] - 1899513c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157243c[5] - 730681c[6] + 1834827c[7] - 1913193c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19811c[4] + 157243c[5] - 730649c[6] + \\
& 1834251c[7] - 1910601c[8], c[1] - 59c[2] + 1465c[3] - 19811c[4] + \\
& 157259c[5] - 731081c[6] + 1838075c[7] - 1921689c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156907c[5] - 725561c[6] + \\
& 1801179c[7] - 1832625c[8], c[1] - 59c[2] + 1465c[3] - 19803c[4] + \\
& 156907c[5] - 725529c[6] + 1800603c[7] - 1830033c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156923c[5] - 725993c[6] + \\
& 1805003c[7] - 1843713c[8], c[1] - 59c[2] + 1465c[3] - 19803c[4] + \\
& 156923c[5] - 725993c[6] + 1805067c[7] - 1844289c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156923c[5] - 725961c[6] + \\
& 1804427c[7] - 1841121c[8], c[1] - 59c[2] + 1465c[3] - 19803c[4] + \\
& 156923c[5] - 725961c[6] + 1804491c[7] - 1841697c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156939c[5] - 726457c[6] + \\
& 1809467c[7] - 1857969c[8], c[1] - 59c[2] + 1465c[3] - 19803c[4] + \\
& 156939c[5] - 726425c[6] + 1808891c[7] - 1855377c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156939c[5] - 726425c[6] + \\
& 1808955c[7] - 1855953c[8], c[1] - 59c[2] + 1465c[3] - 19803c[4] + \\
& 156939c[5] - 726393c[6] + 1808251c[7] - 1852209c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156939c[5] - 726393c[6] + \\
& 1808315c[7] - 1852785c[8], c[1] - 59c[2] + 1465c[3] - 19803c[4] + \\
& 156955c[5] - 726857c[6] + 1812715c[7] - 1866465c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156955c[5] - 726825c[6] + \\
& 1812139c[7] - 1863873c[8], c[1] - 59c[2] + 1465c[3] - 19803c[4] + \\
& 156955c[5] - 726793c[6] + 1811499c[7] - 1860705c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19803c[4] + 156971c[5] - 727257c[6] + \\
& 1815963c[7] - 1874961c[8], c[1] - 59c[2] + 1465c[3] - 19795c[4] + \\
& 156635c[5] - 722105c[6] + 1781739c[7] - 1791801c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19795c[4] + 156651c[5] - 722569c[6] + \\
& 1786139c[7] - 1805481c[8], c[1] - 59c[2] + 1465c[3] - 19795c[4] + \\
& 156651c[5] - 722537c[6] + 1785563c[7] - 1802889c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19795c[4] + 156667c[5] - 723033c[6] + \\
& 1790603c[7] - 1819737c[8], c[1] - 59c[2] + 1465c[3] - 19795c[4] + \\
& 156667c[5] - 723001c[6] + 1790027c[7] - 1817145c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19795c[4] + 156667c[5] - 722969c[6] + \\
& 1789387c[7] - 1813977c[8], c[1] - 59c[2] + 1465c[3] - 19795c[4] + \\
& 156683c[5] - 723433c[6] + 1793851c[7] - 1828233c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19787c[4] + 156363c[5] - 718681c[6] + \\
& 1762811c[7] - 1752993c[8], c[1] - 59c[2] + 1465c[3] - 19787c[4] + \\
& 156379c[5] - 719145c[6] + 1767275c[7] - 1767249c[8], \\
& c[1] - 59c[2] + 1465c[3] - 19787c[4] + 156395c[5] - 719609c[6] + \\
& 1771739c[7] - 1781505c[8], c[1] - 59c[2] + 1465c[3] - 19779c[4] + \\
& 156075c[5] - 714825c[6] + 1740059c[7] - 1703097c[8] \}
\end{aligned}$$

Array[c, 8].g

49 c[1] - 2891 c[2] + 71 785 c[3] - 971 235 c[4] +
7 721 403 c[5] - 36 004 473 c[6] + 90 966 955 c[7] - 95 775 833 c[8]

cert =

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2891 c[2] + 71 785 c[3] - 971 235 c[4] +
7 721 403 c[5] - 36 004 473 c[6] + 90 966 955 c[7] - 95 775 833 c[8] < 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 827 c[4] + 157 787 c[5] - 737 497 c[6] +
1 872 043 c[7] - 1 987 641 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] +
157 483 c[5] - 733 273 c[6] + 1 846 683 c[7] - 1 932 417 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] + 157 483 c[5] - 733 241 c[6] +
1 846 043 c[7] - 1 929 249 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] +
157 483 c[5] - 733 241 c[6] + 1 846 107 c[7] - 1 929 825 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] + 157 499 c[5] -
733 705 c[6] + 1 850 443 c[7] - 1 942 929 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] + 157 499 c[5] - 733 673 c[6] +
1 849 867 c[7] - 1 940 337 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] +
157 499 c[5] - 733 673 c[6] + 1 849 931 c[7] - 1 940 913 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] + 157 499 c[5] - 733 641 c[6] +
1 849 355 c[7] - 1 938 321 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] +
157 515 c[5] - 734 105 c[6] + 1 853 691 c[7] - 1 951 425 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] + 157 515 c[5] - 734 073 c[6] +
1 853 179 c[7] - 1 949 409 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] +
157 531 c[5] - 734 505 c[6] + 1 856 939 c[7] - 1 959 921 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 179 c[5] - 729 017 c[6] +
1 820 619 c[7] - 1 873 449 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 179 c[5] - 728 985 c[6] + 1 820 043 c[7] - 1 870 857 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 195 c[5] - 729 449 c[6] +
1 824 507 c[7] - 1 885 113 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 195 c[5] - 729 417 c[6] + 1 823 867 c[7] - 1 881 945 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 195 c[5] - 729 417 c[6] +
1 823 931 c[7] - 1 882 521 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 195 c[5] - 729 385 c[6] + 1 823 355 c[7] - 1 879 929 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 211 c[5] - 729 881 c[6] +
1 828 331 c[7] - 1 896 201 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 211 c[5] - 729 849 c[6] + 1 827 755 c[7] - 1 893 609 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 211 c[5] - 729 849 c[6] +
1 827 819 c[7] - 1 894 185 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 211 c[5] - 729 817 c[6] + 1 827 115 c[7] - 1 890 441 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 211 c[5] - 729 817 c[6] +
1 827 179 c[7] - 1 891 017 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 211 c[5] - 729 817 c[6] + 1 827 243 c[7] - 1 891 593 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 227 c[5] - 730 281 c[6] +
1 831 579 c[7] - 1 904 697 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 227 c[5] - 730 249 c[6] + 1 831 003 c[7] - 1 902 105 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 227 c[5] - 730 249 c[6] +
1 831 067 c[7] - 1 902 681 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +

```

157 227 c[5] - 730 217 c[6] + 1 830 427 c[7] - 1 899 513 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 243 c[5] - 730 681 c[6] +
1 834 827 c[7] - 1 913 193 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 243 c[5] - 730 649 c[6] + 1 834 251 c[7] - 1 910 601 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 259 c[5] - 731 081 c[6] +
1 838 075 c[7] - 1 921 689 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 907 c[5] - 725 561 c[6] + 1 801 179 c[7] - 1 832 625 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 907 c[5] - 725 529 c[6] +
1 800 603 c[7] - 1 830 033 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 923 c[5] - 725 993 c[6] + 1 805 003 c[7] - 1 843 713 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 923 c[5] - 725 993 c[6] +
1 805 067 c[7] - 1 844 289 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 923 c[5] - 725 961 c[6] + 1 804 427 c[7] - 1 841 121 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 923 c[5] - 725 961 c[6] +
1 804 491 c[7] - 1 841 697 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 939 c[5] - 726 457 c[6] + 1 809 467 c[7] - 1 857 969 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 939 c[5] - 726 425 c[6] +
1 808 891 c[7] - 1 855 377 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 939 c[5] - 726 425 c[6] + 1 808 955 c[7] - 1 855 953 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 939 c[5] - 726 393 c[6] +
1 808 251 c[7] - 1 852 209 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 939 c[5] - 726 393 c[6] + 1 808 315 c[7] - 1 852 785 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 857 c[6] +
1 812 715 c[7] - 1 866 465 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 955 c[5] - 726 825 c[6] + 1 812 139 c[7] - 1 863 873 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 793 c[6] +
1 811 499 c[7] - 1 860 705 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 971 c[5] - 727 257 c[6] + 1 815 963 c[7] - 1 874 961 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 635 c[5] - 722 105 c[6] +
1 781 739 c[7] - 1 791 801 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
156 651 c[5] - 722 569 c[6] + 1 786 139 c[7] - 1 805 481 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 651 c[5] - 722 537 c[6] +
1 785 563 c[7] - 1 802 889 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
156 667 c[5] - 723 033 c[6] + 1 790 603 c[7] - 1 819 737 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 667 c[5] - 723 001 c[6] +
1 790 027 c[7] - 1 817 145 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
156 667 c[5] - 722 969 c[6] + 1 789 387 c[7] - 1 813 977 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 683 c[5] - 723 433 c[6] +
1 793 851 c[7] - 1 828 233 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
156 363 c[5] - 718 681 c[6] + 1 762 811 c[7] - 1 752 993 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 379 c[5] - 719 145 c[6] +
1 767 275 c[7] - 1 767 249 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
156 395 c[5] - 719 609 c[6] + 1 771 739 c[7] - 1 781 505 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] + 156 075 c[5] - 714 825 c[6] +
1 740 059 c[7] - 1 703 097 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 864 770 601, 222 403 153, 33 916 787, 4 279 939, 475 548}

```

```
GCD[0, 0, 0, 864 770 601, 222 403 153, 33 916 787, 4 279 939, 475 548]
```

```
1
```

```
cert.g
```

```
-131 082 566
```

```
{0, 0, 0, 864 770 601, 222 403 153, 33 916 787, 4 279 939, 475 548}.
```

```
Reverse[gpart[listdim17[[160]]]
```

```
-131 082 566
```

```
cert.Transpose[A]
```

```
{2 077 354, 296 601 650, 149 313 938, 149 314 386, 296 610 178, 149 322 914,
149 323 362, 2 036 098, 149 331 890, 2 045 074, 2 053 602, 443 837 786, 296 550 522,
443 847 210, 296 559 498, 296 559 946, 149 272 682, 443 856 186, 296 568 922,
296 569 370, 149 281 210, 149 281 658, 149 282 106, 296 577 898, 149 290 634,
149 291 082, 2 003 370, 149 299 610, 2 012 346, 2 021 322, 296 518 242, 149 230 978,
296 527 218, 296 527 666, 149 239 954, 149 240 402, 443 823 906, 296 536 642,
296 537 090, 149 248 930, 149 249 378, 296 545 618, 149 258 354, 1970 642,
149 267 330, 149 198 698, 296 494 938, 149 207 674, 443 791 626, 296 504 362,
149 216 650, 296 513 338, 149 165 970, 296 462 658, 443 759 346, 149 124 266}
```

```
chi = listdim17[[161]]
```

```
 $(-11 + x)^3 (-9 + x)^8 (-7 + x) (5 + x)^{32} (-67\,084 + 37\,989\,x - 8388\,x^2 + 906\,x^3 - 48\,x^4 + x^5)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -70, 2114, -35 942, 375 868, -2 472 482, 9 974 270, -22 512 946, 21 704 067},
{1, -70, 2114, -35 942, 375 884, -2 473 122, 9 983 774, -22 575 026, 21 854 547},
{1, -70, 2114, -35 942, 375 884, -2 473 090, 9 982 846, -22 566 098, 21 826 035},
{1, -70, 2114, -35 934, 375 492, -2 465 522, 9 910 894, -22 229 226, 21 204 747},
{1, -70, 2114, -35 934, 375 492, -2 465 490, 9 909 966, -22 220 426, 21 177 387},
{1, -70, 2114, -35 934, 375 508, -2 466 162, 9 920 398, -22 291 434, 21 356 379},
{1, -70, 2114, -35 934, 375 508, -2 466 162, 9 920 398, -22 291 306, 21 355 227},
{1, -70, 2114, -35 934, 375 508, -2 466 130, 9 919 406, -22 281 226, 21 321 531},
{1, -70, 2114, -35 934, 375 508, -2 466 130, 9 919 470, -22 282 506, 21 327 867},
{1, -70, 2114, -35 934, 375 508, -2 466 130, 9 919 534, -22 283 786, 21 334 203},
{1, -70, 2114, -35 934, 375 508, -2 466 098, 9 918 542, -22 273 578, 21 299 355},
{1, -70, 2114, -35 934, 375 508, -2 466 098, 9 918 606, -22 274 858, 21 305 691},
{1, -70, 2114, -35 934, 375 524, -2 466 770, 9 928 910, -22 343 306, 21 472 011},
{1, -70, 2114, -35 934, 375 524, -2 466 738, 9 927 982, -22 334 378, 21 443 499},
{1, -70, 2114, -35 934, 375 524, -2 466 738, 9 928 046, -22 335 658, 21 449 835},
{1, -70, 2114, -35 934, 375 524, -2 466 706, 9 927 118, -22 326 730, 21 421 323},
{1, -70, 2114, -35 934, 375 524, -2 466 706, 9 927 182, -22 328 010, 21 427 659},
```


{1, -70, 2114, -35 934, 375 540, -2 467 314, 9 935 694, -22 379 882, 21 543 291},
 {1, -70, 2114, -35 926, 375 100, -2 457 922, 9 838 014, -21 883 554, 20 556 099},
 {1, -70, 2114, -35 926, 375 100, -2 457 890, 9 837 086, -21 874 754, 20 528 739},
 {1, -70, 2114, -35 926, 375 116, -2 458 562, 9 847 582, -21 946 914, 20 712 915},
 {1, -70, 2114, -35 926, 375 116, -2 458 530, 9 846 526, -21 935 554, 20 672 883},
 {1, -70, 2114, -35 926, 375 116, -2 458 530, 9 846 590, -21 936 834, 20 679 219},
 {1, -70, 2114, -35 926, 375 116, -2 458 530, 9 846 590, -21 936 706, 20 678 067},
 {1, -70, 2114, -35 926, 375 116, -2 458 530, 9 846 654, -21 937 986, 20 684 403},
 {1, -70, 2114, -35 926, 375 116, -2 458 498, 9 845 662, -21 927 906, 20 650 707},
 {1, -70, 2114, -35 926, 375 116, -2 458 498, 9 845 726, -21 929 186, 20 657 043},
 {1, -70, 2114, -35 926, 375 116, -2 458 466, 9 844 798, -21 920 258, 20 628 531},
 {1, -70, 2114, -35 926, 375 132, -2 459 202, 9 857 022, -22 007 842, 20 858 211},
 {1, -70, 2114, -35 926, 375 132, -2 459 170, 9 856 094, -21 998 914, 20 829 699},
 {1, -70, 2114, -35 926, 375 132, -2 459 170, 9 856 158, -22 000 194, 20 836 035},
 {1, -70, 2114, -35 926, 375 132, -2 459 170, 9 856 222, -22 001 346, 20 841 219},
 {1, -70, 2114, -35 926, 375 132, -2 459 138, 9 855 166, -21 989 986, 20 801 187},
 {1, -70, 2114, -35 926, 375 132, -2 459 138, 9 855 230, -21 991 266, 20 807 523},
 {1, -70, 2114, -35 926, 375 132, -2 459 106, 9 854 238, -21 981 058, 20 772 675},
 {1, -70, 2114, -35 926, 375 132, -2 459 106, 9 854 302, -21 982 338, 20 779 011},
 {1, -70, 2114, -35 926, 375 132, -2 459 074, 9 853 374, -21 973 410, 20 750 499},
 {1, -70, 2114, -35 926, 375 148, -2 459 778, 9 864 734, -22 053 346, 20 958 003},
 {1, -70, 2114, -35 926, 375 148, -2 459 746, 9 863 742, -22 043 138, 20 923 155},
 {1, -70, 2114, -35 926, 375 148, -2 459 746, 9 863 806, -22 044 418, 20 929 491},
 {1, -70, 2114, -35 926, 375 148, -2 459 746, 9 863 870, -22 045 698, 20 935 827},
 {1, -70, 2114, -35 926, 375 148, -2 459 714, 9 862 814, -22 034 210, 20 894 643},
 {1, -70, 2114, -35 926, 375 148, -2 459 714, 9 862 878, -22 035 490, 20 900 979},
 {1, -70, 2114, -35 926, 375 148, -2 459 714, 9 862 942, -22 036 770, 20 907 315},
 {1, -70, 2114, -35 926, 375 148, -2 459 682, 9 861 950, -22 026 562, 20 872 467},
 {1, -70, 2114, -35 926, 375 164, -2 460 354, 9 872 382, -22 097 570, 21 051 459},
 {1, -70, 2114, -35 926, 375 164, -2 460 322, 9 871 454, -22 088 642, 21 022 947},
 {1, -70, 2114, -35 918, 374 724, -2 450 930, 9 773 710, -21 591 162, 20 030 571},
 {1, -70, 2114, -35 918, 374 724, -2 450 898, 9 772 782, -21 582 234, 20 002 059},
 {1, -70, 2114, -35 918, 374 724, -2 450 898, 9 772 846, -21 583 386, 20 007 243},
 {1, -70, 2114, -35 918, 374 740, -2 451 538, 9 782 350, -21 645 594, 20 158 875},
 {1, -70, 2114, -35 918, 374 740, -2 451 506, 9 781 358, -21 635 386, 20 124 027},
 {1, -70, 2114, -35 918, 374 740, -2 451 506, 9 781 422, -21 636 666, 20 130 363},
 {1, -70, 2114, -35 918, 374 740, -2 451 474, 9 780 494, -21 627 738, 20 101 851},
 {1, -70, 2114, -35 918, 374 740, -2 451 442, 9 779 630, -21 620 090, 20 079 675},
 {1, -70, 2114, -35 918, 374 756, -2 452 146, 9 790 926, -21 698 746, 20 280 843},
 {1, -70, 2114, -35 918, 374 756, -2 452 146, 9 790 990, -21 700 026, 20 287 179},
 {1, -70, 2114, -35 918, 374 756, -2 452 114, 9 789 998, -21 689 818, 20 252 331},
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 $c[1] - 70\,c[2] + 2114\,c[3] - 35918\,c[4] + 374756\,c[5] - 2452146\,c[6] + 9790926\,c[7] -$
 $21698746\,c[8] + 20280843\,c[9], c[1] - 70\,c[2] + 2114\,c[3] - 35918\,c[4] +$
 $374756\,c[5] - 2452146\,c[6] + 9790990\,c[7] - 21700026\,c[8] + 20287179\,c[9],$

```

c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] + 374756 c[5] - 2452114 c[6] + 9789998 c[7] -
21689818 c[8] + 20252331 c[9], c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] +
374756 c[5] - 2452114 c[6] + 9790062 c[7] - 21691098 c[8] + 20258667 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] + 374756 c[5] - 2452082 c[6] + 9789070 c[7] -
21680890 c[8] + 20223819 c[9], c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] +
374756 c[5] - 2452082 c[6] + 9789134 c[7] - 21682170 c[8] + 20230155 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] + 374756 c[5] - 2452050 c[6] + 9788206 c[7] -
21673242 c[8] + 20201643 c[9], c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] +
374772 c[5] - 2452754 c[6] + 9799566 c[7] - 21753178 c[8] + 20409147 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] + 374772 c[5] - 2452722 c[6] + 9798638 c[7] -
21744250 c[8] + 20380635 c[9], c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] +
374772 c[5] - 2452722 c[6] + 9798702 c[7] - 21745530 c[8] + 20386971 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] + 374772 c[5] - 2452690 c[6] + 9797646 c[7] -
21734042 c[8] + 20345787 c[9], c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] +
374772 c[5] - 2452690 c[6] + 9797710 c[7] - 21735322 c[8] + 20352123 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] + 374788 c[5] - 2453362 c[6] + 9808206 c[7] -
21807610 c[8] + 20537451 c[9], c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] +
374788 c[5] - 2453330 c[6] + 9807278 c[7] - 21798682 c[8] + 20508939 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35918 c[4] + 374788 c[5] - 2453298 c[6] + 9806286 c[7] -
21788474 c[8] + 20474091 c[9], c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] +
374332 c[5] - 2443298 c[6] + 9699902 c[7] - 21236562 c[8] + 19353411 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] + 374348 c[5] - 2443874 c[6] + 9707614 c[7] -
21282066 c[8] + 19453203 c[9], c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] +
374364 c[5] - 2444482 c[6] + 9716190 c[7] - 21335218 c[8] + 19575171 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] + 374364 c[5] - 2444482 c[6] + 9716254 c[7] -
21336498 c[8] + 19581507 c[9], c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] +
374364 c[5] - 2444450 c[6] + 9715326 c[7] - 21327570 c[8] + 19552995 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] + 374380 c[5] - 2445090 c[6] + 9724830 c[7] -
21389650 c[8] + 19703475 c[9], c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] +
374380 c[5] - 2445090 c[6] + 9724894 c[7] - 21390930 c[8] + 19709811 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] + 374380 c[5] - 2445058 c[6] + 9723902 c[7] -
21380722 c[8] + 19674963 c[9], c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] +
374380 c[5] - 2445058 c[6] + 9723966 c[7] - 21382002 c[8] + 19681299 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] + 374396 c[5] - 2445698 c[6] + 9733470 c[7] -
21444082 c[8] + 19831779 c[9], c[1] - 70 c[2] + 2114 c[3] - 35910 c[4] +
374412 c[5] - 2446338 c[6] + 9743038 c[7] - 21507442 c[8] + 19988595 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35902 c[4] + 373988 c[5] - 2437426 c[6] + 9650158 c[7] -
21027402 c[8] + 19004139 c[9], c[1] - 70 c[2] + 2114 c[3] - 35902 c[4] +
374004 c[5] - 2438034 c[6] + 9658734 c[7] - 21080554 c[8] + 19126107 c[9],
c[1] - 70 c[2] + 2114 c[3] - 35902 c[4] + 374020 c[5] - 2438674 c[6] +
9668302 c[7] - 21143914 c[8] + 19282923 c[9] }

```

Array[c, 9].g

```

49 c[1] - 3430 c[2] + 103586 c[3] - 1760870 c[4] + 18404988 c[5] -
120938498 c[6] + 486980894 c[7] - 1096127794 c[8] + 1052803219 c[9]

```

cert = Flatten[Array[c, 9] /.

```

FindInstance[49 c[1] - 3430 c[2] + 103586 c[3] - 1760870 c[4] + 18404988 c[5] -

```

$$\begin{aligned}
& 120\,938\,498\,c[6] + 486\,980\,894\,c[7] - 1\,096\,127\,794\,c[8] + 1\,052\,803\,219\,c[9] < 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,942\,c[4] + 375\,868\,c[5] - 2\,472\,482\,c[6] + \\
& \quad 9\,974\,270\,c[7] - 22\,512\,946\,c[8] + 21\,704\,067\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,942\,c[4] + 375\,884\,c[5] - 2\,473\,122\,c[6] + \\
& \quad 9\,983\,774\,c[7] - 22\,575\,026\,c[8] + 21\,854\,547\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,942\,c[4] + 375\,884\,c[5] - 2\,473\,090\,c[6] + \\
& \quad 9\,982\,846\,c[7] - 22\,566\,098\,c[8] + 21\,826\,035\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,492\,c[5] - 2\,465\,522\,c[6] + \\
& \quad 9\,910\,894\,c[7] - 22\,229\,226\,c[8] + 21\,204\,747\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,492\,c[5] - 2\,465\,490\,c[6] + \\
& \quad 9\,909\,966\,c[7] - 22\,220\,426\,c[8] + 21\,177\,387\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,508\,c[5] - 2\,466\,162\,c[6] + \\
& \quad 9\,920\,398\,c[7] - 22\,291\,434\,c[8] + 21\,356\,379\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,508\,c[5] - 2\,466\,162\,c[6] + \\
& \quad 9\,920\,398\,c[7] - 22\,291\,306\,c[8] + 21\,355\,227\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,508\,c[5] - 2\,466\,130\,c[6] + \\
& \quad 9\,919\,406\,c[7] - 22\,281\,226\,c[8] + 21\,321\,531\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,508\,c[5] - 2\,466\,130\,c[6] + \\
& \quad 9\,919\,470\,c[7] - 22\,282\,506\,c[8] + 21\,327\,867\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,508\,c[5] - 2\,466\,130\,c[6] + \\
& \quad 9\,919\,534\,c[7] - 22\,283\,786\,c[8] + 21\,334\,203\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,508\,c[5] - 2\,466\,098\,c[6] + \\
& \quad 9\,918\,542\,c[7] - 22\,273\,578\,c[8] + 21\,299\,355\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,508\,c[5] - 2\,466\,098\,c[6] + \\
& \quad 9\,918\,606\,c[7] - 22\,274\,858\,c[8] + 21\,305\,691\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,524\,c[5] - 2\,466\,770\,c[6] + \\
& \quad 9\,928\,910\,c[7] - 22\,343\,306\,c[8] + 21\,472\,011\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,524\,c[5] - 2\,466\,738\,c[6] + \\
& \quad 9\,927\,982\,c[7] - 22\,334\,378\,c[8] + 21\,443\,499\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,524\,c[5] - 2\,466\,738\,c[6] + \\
& \quad 9\,928\,046\,c[7] - 22\,335\,658\,c[8] + 21\,449\,835\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,524\,c[5] - 2\,466\,706\,c[6] + \\
& \quad 9\,927\,118\,c[7] - 22\,326\,730\,c[8] + 21\,421\,323\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,524\,c[5] - 2\,466\,706\,c[6] + \\
& \quad 9\,927\,182\,c[7] - 22\,328\,010\,c[8] + 21\,427\,659\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,934\,c[4] + 375\,540\,c[5] - 2\,467\,314\,c[6] + \\
& \quad 9\,935\,694\,c[7] - 22\,379\,882\,c[8] + 21\,543\,291\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,926\,c[4] + 375\,100\,c[5] - 2\,457\,922\,c[6] + \\
& \quad 9\,838\,014\,c[7] - 21\,883\,554\,c[8] + 20\,556\,099\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,926\,c[4] + 375\,100\,c[5] - 2\,457\,890\,c[6] + \\
& \quad 9\,837\,086\,c[7] - 21\,874\,754\,c[8] + 20\,528\,739\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,926\,c[4] + 375\,116\,c[5] - 2\,458\,562\,c[6] + \\
& \quad 9\,847\,582\,c[7] - 21\,946\,914\,c[8] + 20\,712\,915\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,926\,c[4] + 375\,116\,c[5] - 2\,458\,530\,c[6] + \\
& \quad 9\,846\,526\,c[7] - 21\,935\,554\,c[8] + 20\,672\,883\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,926\,c[4] + 375\,116\,c[5] - 2\,458\,530\,c[6] + \\
& \quad 9\,846\,590\,c[7] - 21\,936\,834\,c[8] + 20\,679\,219\,c[9] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375116 c[5] - 2458530 c[6] + \\
& \quad 9846590 c[7] - 21936706 c[8] + 20678067 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375116 c[5] - 2458530 c[6] + \\
& \quad 9846654 c[7] - 21937986 c[8] + 20684403 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375116 c[5] - 2458498 c[6] + \\
& \quad 9845662 c[7] - 21927906 c[8] + 20650707 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375116 c[5] - 2458498 c[6] + \\
& \quad 9845726 c[7] - 21929186 c[8] + 20657043 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375116 c[5] - 2458466 c[6] + \\
& \quad 9844798 c[7] - 21920258 c[8] + 20628531 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375132 c[5] - 2459202 c[6] + \\
& \quad 9857022 c[7] - 22007842 c[8] + 20858211 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375132 c[5] - 2459170 c[6] + \\
& \quad 9856094 c[7] - 21998914 c[8] + 20829699 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375132 c[5] - 2459170 c[6] + \\
& \quad 9856158 c[7] - 22000194 c[8] + 20836035 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375132 c[5] - 2459170 c[6] + \\
& \quad 9856222 c[7] - 22001346 c[8] + 20841219 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375132 c[5] - 2459138 c[6] + \\
& \quad 9855166 c[7] - 21989986 c[8] + 20801187 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375132 c[5] - 2459138 c[6] + \\
& \quad 9855230 c[7] - 21991266 c[8] + 20807523 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375132 c[5] - 2459106 c[6] + \\
& \quad 9854238 c[7] - 21981058 c[8] + 20772675 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375132 c[5] - 2459106 c[6] + \\
& \quad 9854302 c[7] - 21982338 c[8] + 20779011 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375132 c[5] - 2459074 c[6] + \\
& \quad 9853374 c[7] - 21973410 c[8] + 20750499 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375148 c[5] - 2459778 c[6] + \\
& \quad 9864734 c[7] - 22053346 c[8] + 20958003 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375148 c[5] - 2459746 c[6] + \\
& \quad 9863742 c[7] - 22043138 c[8] + 20923155 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375148 c[5] - 2459746 c[6] + \\
& \quad 9863806 c[7] - 22044418 c[8] + 20929491 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375148 c[5] - 2459746 c[6] + \\
& \quad 9863870 c[7] - 22045698 c[8] + 20935827 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375148 c[5] - 2459714 c[6] + \\
& \quad 9862814 c[7] - 22034210 c[8] + 20894643 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375148 c[5] - 2459714 c[6] + \\
& \quad 9862878 c[7] - 22035490 c[8] + 20900979 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375148 c[5] - 2459714 c[6] + \\
& \quad 9862942 c[7] - 22036770 c[8] + 20907315 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375148 c[5] - 2459682 c[6] + \\
& \quad 9861950 c[7] - 22026562 c[8] + 20872467 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375164 c[5] - 2460354 c[6] + \\
& \quad 9872382 c[7] - 22097570 c[8] + 21051459 c[9] \geq 0 \&\& \\
& c[1] - 70 c[2] + 2114 c[3] - 35926 c[4] + 375164 c[5] - 2460322 c[6] +
\end{aligned}$$

$$\begin{aligned}
& 9\,871\,454\,c[7] - 22\,088\,642\,c[8] + 21\,022\,947\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,724\,c[5] - 2\,450\,930\,c[6] + \\
& \quad 9\,773\,710\,c[7] - 21\,591\,162\,c[8] + 20\,030\,571\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,724\,c[5] - 2\,450\,898\,c[6] + \\
& \quad 9\,772\,782\,c[7] - 21\,582\,234\,c[8] + 20\,002\,059\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,724\,c[5] - 2\,450\,898\,c[6] + \\
& \quad 9\,772\,846\,c[7] - 21\,583\,386\,c[8] + 20\,007\,243\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,740\,c[5] - 2\,451\,538\,c[6] + \\
& \quad 9\,782\,350\,c[7] - 21\,645\,594\,c[8] + 20\,158\,875\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,740\,c[5] - 2\,451\,506\,c[6] + \\
& \quad 9\,781\,358\,c[7] - 21\,635\,386\,c[8] + 20\,124\,027\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,740\,c[5] - 2\,451\,506\,c[6] + \\
& \quad 9\,781\,422\,c[7] - 21\,636\,666\,c[8] + 20\,130\,363\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,740\,c[5] - 2\,451\,474\,c[6] + \\
& \quad 9\,780\,494\,c[7] - 21\,627\,738\,c[8] + 20\,101\,851\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,740\,c[5] - 2\,451\,442\,c[6] + \\
& \quad 9\,779\,630\,c[7] - 21\,620\,090\,c[8] + 20\,079\,675\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,756\,c[5] - 2\,452\,146\,c[6] + \\
& \quad 9\,790\,926\,c[7] - 21\,698\,746\,c[8] + 20\,280\,843\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,756\,c[5] - 2\,452\,146\,c[6] + \\
& \quad 9\,790\,990\,c[7] - 21\,700\,026\,c[8] + 20\,287\,179\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,756\,c[5] - 2\,452\,114\,c[6] + \\
& \quad 9\,789\,998\,c[7] - 21\,689\,818\,c[8] + 20\,252\,331\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,756\,c[5] - 2\,452\,114\,c[6] + \\
& \quad 9\,790\,062\,c[7] - 21\,691\,098\,c[8] + 20\,258\,667\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,756\,c[5] - 2\,452\,082\,c[6] + \\
& \quad 9\,789\,070\,c[7] - 21\,680\,890\,c[8] + 20\,223\,819\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,756\,c[5] - 2\,452\,082\,c[6] + \\
& \quad 9\,789\,134\,c[7] - 21\,682\,170\,c[8] + 20\,230\,155\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,756\,c[5] - 2\,452\,050\,c[6] + \\
& \quad 9\,788\,206\,c[7] - 21\,673\,242\,c[8] + 20\,201\,643\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,772\,c[5] - 2\,452\,754\,c[6] + \\
& \quad 9\,799\,566\,c[7] - 21\,753\,178\,c[8] + 20\,409\,147\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,772\,c[5] - 2\,452\,722\,c[6] + \\
& \quad 9\,798\,638\,c[7] - 21\,744\,250\,c[8] + 20\,380\,635\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,772\,c[5] - 2\,452\,722\,c[6] + \\
& \quad 9\,798\,702\,c[7] - 21\,745\,530\,c[8] + 20\,386\,971\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,772\,c[5] - 2\,452\,690\,c[6] + \\
& \quad 9\,797\,646\,c[7] - 21\,734\,042\,c[8] + 20\,345\,787\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,772\,c[5] - 2\,452\,690\,c[6] + \\
& \quad 9\,797\,710\,c[7] - 21\,735\,322\,c[8] + 20\,352\,123\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,788\,c[5] - 2\,453\,362\,c[6] + \\
& \quad 9\,808\,206\,c[7] - 21\,807\,610\,c[8] + 20\,537\,451\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,788\,c[5] - 2\,453\,330\,c[6] + \\
& \quad 9\,807\,278\,c[7] - 21\,798\,682\,c[8] + 20\,508\,939\,c[9] \geq 0 \&\& \\
& c[1] - 70\,c[2] + 2114\,c[3] - 35\,918\,c[4] + 374\,788\,c[5] - 2\,453\,298\,c[6] + \\
& \quad 9\,806\,286\,c[7] - 21\,788\,474\,c[8] + 20\,474\,091\,c[9] \geq 0 \&\&
\end{aligned}$$

```

c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 332 c[5] - 2 443 298 c[6] +
  9 699 902 c[7] - 21 236 562 c[8] + 19 353 411 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 348 c[5] - 2 443 874 c[6] +
  9 707 614 c[7] - 21 282 066 c[8] + 19 453 203 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 364 c[5] - 2 444 482 c[6] +
  9 716 190 c[7] - 21 335 218 c[8] + 19 575 171 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 364 c[5] - 2 444 482 c[6] +
  9 716 254 c[7] - 21 336 498 c[8] + 19 581 507 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 364 c[5] - 2 444 450 c[6] +
  9 715 326 c[7] - 21 327 570 c[8] + 19 552 995 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 380 c[5] - 2 445 090 c[6] +
  9 724 830 c[7] - 21 389 650 c[8] + 19 703 475 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 380 c[5] - 2 445 090 c[6] +
  9 724 894 c[7] - 21 390 930 c[8] + 19 709 811 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 380 c[5] - 2 445 058 c[6] +
  9 723 902 c[7] - 21 380 722 c[8] + 19 674 963 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 380 c[5] - 2 445 058 c[6] +
  9 723 966 c[7] - 21 382 002 c[8] + 19 681 299 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 396 c[5] - 2 445 698 c[6] +
  9 733 470 c[7] - 21 444 082 c[8] + 19 831 779 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 910 c[4] + 374 412 c[5] - 2 446 338 c[6] +
  9 743 038 c[7] - 21 507 442 c[8] + 19 988 595 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 902 c[4] + 373 988 c[5] - 2 437 426 c[6] +
  9 650 158 c[7] - 21 027 402 c[8] + 19 004 139 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 902 c[4] + 374 004 c[5] - 2 438 034 c[6] +
  9 658 734 c[7] - 21 080 554 c[8] + 19 126 107 c[9] ≥ 0 &&
c[1] - 70 c[2] + 2114 c[3] - 35 902 c[4] + 374 020 c[5] - 2 438 674 c[6] +
  9 668 302 c[7] - 21 143 914 c[8] + 19 282 923 c[9] ≥ 0, Array[c, 9], Integers]]
{0, 0, 0, -3 973 255 445, -998 404 736, -161 564 034, -22 554 302, -2 924 465, -362 979}

GCD[0, 0, 0, -3 973 255 445, -998 404 736,
  -161 564 034, -22 554 302, -2 924 465, -362 979]
1

cert.g
-1 509 060 265

{0, 0, 0, -3 973 255 445, -998 404 736, -161 564 034, -22 554 302, -2 924 465, -362 979}.
Reverse[gpart[listdim17[[161]]]]
-1 509 060 265

```

cert.Transpose[A]

```
{26 084 487, 26 211 543, 26 188 439, 69 453 055, 25 609 663, 25 759 823, 69 580 111,
 25 731 791, 25 736 719, 25 741 647, 25 713 615, 25 718 543, 25 858 847, 25 835 743,
 25 840 671, 25 817 567, 25 822 495, 25 921 519, 68 874 279, 25 030 887, 69 006 263,
 25 153 015, 25 157 943, 68 978 231, 68 983 159, 25 134 839, 25 139 767, 25 116 663,
 25 308 103, 25 284 999, 25 289 927, 69 115 143, 25 261 895, 25 266 823, 25 238 791,
 25 243 719, 25 220 615, 25 393 879, 25 365 847, 25 370 775, 25 375 703, 25 342 743,
 25 347 671, 25 352 599, 25 324 567, 25 474 727, 25 451 623, 24 579 167, 24 556 063,
 68 381 279, 24 688 047, 24 660 015, 24 664 943, 24 641 839, 24 623 663, 24 791 999,
 24 796 927, 24 768 895, 24 773 823, 24 745 791, 24 750 719, 24 727 615, 24 900 879,
 24 877 775, 24 882 703, 24 849 743, 24 854 671, 25 009 759, 24 986 655, 24 958 623,
 23 977 287, 24 063 063, 24 167 015, 24 171 943, 24 148 839, 24 275 895, 24 280 823,
 24 252 791, 24 257 719, 24 384 775, 24 516 759, 23 655 839, 23 759 791, 23 891 775}
```

chi = listdim17[[162]]

$$(-11 + x)^3 (-9 + x)^8 (5 + x)^{32} (95 - 20x + x^2)^2 (52 - 15x + x^2)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {228 285, -188 850, 62 823, -10 812, 1019, -50, 1},
  {229 869, -189 170, 62 839, -10 812, 1019, -50, 1},
  {229 581, -189 138, 62 839, -10 812, 1019, -50, 1},
  {221 445, -186 650, 62 591, -10 804, 1019, -50, 1},
  {223 029, -186 970, 62 607, -10 804, 1019, -50, 1},
  {222 741, -186 938, 62 607, -10 804, 1019, -50, 1},
  {224 613, -187 290, 62 623, -10 804, 1019, -50, 1},
  {224 325, -187 258, 62 623, -10 804, 1019, -50, 1},
  {224 037, -187 226, 62 623, -10 804, 1019, -50, 1},
  {225 909, -187 578, 62 639, -10 804, 1019, -50, 1},
  {225 621, -187 546, 62 639, -10 804, 1019, -50, 1},
  {214 605, -184 450, 62 359, -10 796, 1019, -50, 1},
  {216 189, -184 770, 62 375, -10 796, 1019, -50, 1},
  {215 901, -184 738, 62 375, -10 796, 1019, -50, 1},
  {217 485, -185 058, 62 391, -10 796, 1019, -50, 1},
  {217 197, -185 026, 62 391, -10 796, 1019, -50, 1},
  {216 909, -184 994, 62 391, -10 796, 1019, -50, 1},
  {218 781, -185 346, 62 407, -10 796, 1019, -50, 1},
  {218 493, -185 314, 62 407, -10 796, 1019, -50, 1},
  {220 365, -185 666, 62 423, -10 796, 1019, -50, 1},
  {220 077, -185 634, 62 423, -10 796, 1019, -50, 1},
  {221 661, -185 954, 62 439, -10 796, 1019, -50, 1},
  {210 357, -182 826, 62 159, -10 788, 1019, -50, 1},
  {210 069, -182 794, 62 159, -10 788, 1019, -50, 1},
  {211 653, -183 114, 62 175, -10 788, 1019, -50, 1},
  {211 365, -183 082, 62 175, -10 788, 1019, -50, 1},
  {212 949, -183 402, 62 191, -10 788, 1019, -50, 1},
  {214 533, -183 722, 62 207, -10 788, 1019, -50, 1},
  {203 229, -180 594, 61 927, -10 780, 1019, -50, 1},
  {204 525, -180 882, 61 943, -10 780, 1019, -50, 1},
  {205 821, -181 170, 61 959, -10 780, 1019, -50, 1},
  {198 693, -178 938, 61 727, -10 772, 1019, -50, 1} }
```

```

A = {{228285, -188850, 62823, -10812, 1019, -50, 1},
      {229869, -189170, 62839, -10812, 1019, -50, 1},
      {229581, -189138, 62839, -10812, 1019, -50, 1},
      {221445, -186650, 62591, -10804, 1019, -50, 1},
      {223029, -186970, 62607, -10804, 1019, -50, 1},
      {222741, -186938, 62607, -10804, 1019, -50, 1},
      {224613, -187290, 62623, -10804, 1019, -50, 1},
      {224325, -187258, 62623, -10804, 1019, -50, 1},
      {224037, -187226, 62623, -10804, 1019, -50, 1},
      {225909, -187578, 62639, -10804, 1019, -50, 1},
      {225621, -187546, 62639, -10804, 1019, -50, 1},
      {214605, -184450, 62359, -10796, 1019, -50, 1},
      {216189, -184770, 62375, -10796, 1019, -50, 1},
      {215901, -184738, 62375, -10796, 1019, -50, 1},
      {217485, -185058, 62391, -10796, 1019, -50, 1},
      {217197, -185026, 62391, -10796, 1019, -50, 1},
      {216909, -184994, 62391, -10796, 1019, -50, 1},
      {218781, -185346, 62407, -10796, 1019, -50, 1},
      {218493, -185314, 62407, -10796, 1019, -50, 1},
      {220365, -185666, 62423, -10796, 1019, -50, 1},
      {220077, -185634, 62423, -10796, 1019, -50, 1},
      {221661, -185954, 62439, -10796, 1019, -50, 1},
      {210357, -182826, 62159, -10788, 1019, -50, 1},
      {210069, -182794, 62159, -10788, 1019, -50, 1},
      {211653, -183114, 62175, -10788, 1019, -50, 1},
      {211365, -183082, 62175, -10788, 1019, -50, 1},
      {212949, -183402, 62191, -10788, 1019, -50, 1},
      {214533, -183722, 62207, -10788, 1019, -50, 1},
      {203229, -180594, 61927, -10780, 1019, -50, 1},
      {204525, -180882, 61943, -10780, 1019, -50, 1},
      {205821, -181170, 61959, -10780, 1019, -50, 1},
      {198693, -178938, 61727, -10772, 1019, -50, 1}};

```

A // MatrixForm

$$\begin{pmatrix} 228285 & -188850 & 62823 & -10812 & 1019 & -50 & 1 \\ 229869 & -189170 & 62839 & -10812 & 1019 & -50 & 1 \\ 229581 & -189138 & 62839 & -10812 & 1019 & -50 & 1 \\ 221445 & -186650 & 62591 & -10804 & 1019 & -50 & 1 \\ 223029 & -186970 & 62607 & -10804 & 1019 & -50 & 1 \\ 222741 & -186938 & 62607 & -10804 & 1019 & -50 & 1 \\ 224613 & -187290 & 62623 & -10804 & 1019 & -50 & 1 \\ 224325 & -187258 & 62623 & -10804 & 1019 & -50 & 1 \\ 224037 & -187226 & 62623 & -10804 & 1019 & -50 & 1 \\ 225909 & -187578 & 62639 & -10804 & 1019 & -50 & 1 \\ 225621 & -187546 & 62639 & -10804 & 1019 & -50 & 1 \\ 214605 & -184450 & 62359 & -10796 & 1019 & -50 & 1 \\ 216189 & -184770 & 62375 & -10796 & 1019 & -50 & 1 \\ 215901 & -184738 & 62375 & -10796 & 1019 & -50 & 1 \\ 217485 & -185058 & 62391 & -10796 & 1019 & -50 & 1 \\ 217197 & -185026 & 62391 & -10796 & 1019 & -50 & 1 \\ 216909 & -184994 & 62391 & -10796 & 1019 & -50 & 1 \\ 218781 & -185346 & 62407 & -10796 & 1019 & -50 & 1 \\ 218493 & -185314 & 62407 & -10796 & 1019 & -50 & 1 \\ 220365 & -185666 & 62423 & -10796 & 1019 & -50 & 1 \\ 220077 & -185634 & 62423 & -10796 & 1019 & -50 & 1 \\ 221661 & -185954 & 62439 & -10796 & 1019 & -50 & 1 \\ 210357 & -182826 & 62159 & -10788 & 1019 & -50 & 1 \\ 210069 & -182794 & 62159 & -10788 & 1019 & -50 & 1 \\ 211653 & -183114 & 62175 & -10788 & 1019 & -50 & 1 \\ 211365 & -183082 & 62175 & -10788 & 1019 & -50 & 1 \\ 212949 & -183402 & 62191 & -10788 & 1019 & -50 & 1 \\ 214533 & -183722 & 62207 & -10788 & 1019 & -50 & 1 \\ 203229 & -180594 & 61927 & -10780 & 1019 & -50 & 1 \\ 204525 & -180882 & 61943 & -10780 & 1019 & -50 & 1 \\ 205821 & -181170 & 61959 & -10780 & 1019 & -50 & 1 \\ 198693 & -178938 & 61727 & -10772 & 1019 & -50 & 1 \end{pmatrix}$$

Dimensions[A]

{32, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{11074445, -9203730, 3071543, -529500, 49931, -2450, 49}

Array[c, 7].Transpose[A]

```
{ 228 285 c[1] - 188 850 c[2] + 62 823 c[3] - 10 812 c[4] + 1019 c[5] - 50 c[6] + c[7],
  229 869 c[1] - 189 170 c[2] + 62 839 c[3] - 10 812 c[4] + 1019 c[5] - 50 c[6] + c[7],
  229 581 c[1] - 189 138 c[2] + 62 839 c[3] - 10 812 c[4] + 1019 c[5] - 50 c[6] + c[7],
  221 445 c[1] - 186 650 c[2] + 62 591 c[3] - 10 804 c[4] + 1019 c[5] - 50 c[6] + c[7],
  223 029 c[1] - 186 970 c[2] + 62 607 c[3] - 10 804 c[4] + 1019 c[5] - 50 c[6] + c[7],
  222 741 c[1] - 186 938 c[2] + 62 607 c[3] - 10 804 c[4] + 1019 c[5] - 50 c[6] + c[7],
  224 613 c[1] - 187 290 c[2] + 62 623 c[3] - 10 804 c[4] + 1019 c[5] - 50 c[6] + c[7],
  224 325 c[1] - 187 258 c[2] + 62 623 c[3] - 10 804 c[4] + 1019 c[5] - 50 c[6] + c[7],
  224 037 c[1] - 187 226 c[2] + 62 623 c[3] - 10 804 c[4] + 1019 c[5] - 50 c[6] + c[7],
  225 909 c[1] - 187 578 c[2] + 62 639 c[3] - 10 804 c[4] + 1019 c[5] - 50 c[6] + c[7],
  225 621 c[1] - 187 546 c[2] + 62 639 c[3] - 10 804 c[4] + 1019 c[5] - 50 c[6] + c[7],
  214 605 c[1] - 184 450 c[2] + 62 359 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  216 189 c[1] - 184 770 c[2] + 62 375 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  215 901 c[1] - 184 738 c[2] + 62 375 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  217 485 c[1] - 185 058 c[2] + 62 391 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  217 197 c[1] - 185 026 c[2] + 62 391 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  216 909 c[1] - 184 994 c[2] + 62 391 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  218 781 c[1] - 185 346 c[2] + 62 407 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  218 493 c[1] - 185 314 c[2] + 62 407 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  220 365 c[1] - 185 666 c[2] + 62 423 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  220 077 c[1] - 185 634 c[2] + 62 423 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  221 661 c[1] - 185 954 c[2] + 62 439 c[3] - 10 796 c[4] + 1019 c[5] - 50 c[6] + c[7],
  210 357 c[1] - 182 826 c[2] + 62 159 c[3] - 10 788 c[4] + 1019 c[5] - 50 c[6] + c[7],
  210 069 c[1] - 182 794 c[2] + 62 159 c[3] - 10 788 c[4] + 1019 c[5] - 50 c[6] + c[7],
  211 653 c[1] - 183 114 c[2] + 62 175 c[3] - 10 788 c[4] + 1019 c[5] - 50 c[6] + c[7],
  211 365 c[1] - 183 082 c[2] + 62 175 c[3] - 10 788 c[4] + 1019 c[5] - 50 c[6] + c[7],
  212 949 c[1] - 183 402 c[2] + 62 191 c[3] - 10 788 c[4] + 1019 c[5] - 50 c[6] + c[7],
  214 533 c[1] - 183 722 c[2] + 62 207 c[3] - 10 788 c[4] + 1019 c[5] - 50 c[6] + c[7],
  203 229 c[1] - 180 594 c[2] + 61 927 c[3] - 10 780 c[4] + 1019 c[5] - 50 c[6] + c[7],
  204 525 c[1] - 180 882 c[2] + 61 943 c[3] - 10 780 c[4] + 1019 c[5] - 50 c[6] + c[7],
  205 821 c[1] - 181 170 c[2] + 61 959 c[3] - 10 780 c[4] + 1019 c[5] - 50 c[6] + c[7],
  198 693 c[1] - 178 938 c[2] + 61 727 c[3] - 10 772 c[4] + 1019 c[5] - 50 c[6] + c[7]}
```

Array[c, 7].g

```
11 074 445 c[1] - 9 203 730 c[2] + 3 071 543 c[3] -
  529 500 c[4] + 49 931 c[5] - 2450 c[6] + 49 c[7]
```

cert =

```

Flatten[Array[c, 7] /. FindInstance[11074445 c[1] - 9203730 c[2] + 3071543 c[3] -
  529500 c[4] + 49931 c[5] - 2450 c[6] + 49 c[7] < 0 &&
  228285 c[1] - 188850 c[2] + 62823 c[3] - 10812 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 229869 c[1] - 189170 c[2] + 62839 c[3] - 10812 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 229581 c[1] - 189138 c[2] +
  62839 c[3] - 10812 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  221445 c[1] - 186650 c[2] + 62591 c[3] - 10804 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 223029 c[1] - 186970 c[2] + 62607 c[3] - 10804 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 222741 c[1] - 186938 c[2] +
  62607 c[3] - 10804 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  224613 c[1] - 187290 c[2] + 62623 c[3] - 10804 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 224325 c[1] - 187258 c[2] + 62623 c[3] - 10804 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 224037 c[1] - 187226 c[2] +
  62623 c[3] - 10804 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  225909 c[1] - 187578 c[2] + 62639 c[3] - 10804 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 225621 c[1] - 187546 c[2] + 62639 c[3] - 10804 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 214605 c[1] - 184450 c[2] +
  62359 c[3] - 10796 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  216189 c[1] - 184770 c[2] + 62375 c[3] - 10796 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 215901 c[1] - 184738 c[2] + 62375 c[3] - 10796 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 217485 c[1] - 185058 c[2] +
  62391 c[3] - 10796 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  217197 c[1] - 185026 c[2] + 62391 c[3] - 10796 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 216909 c[1] - 184994 c[2] + 62391 c[3] - 10796 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 218781 c[1] - 185346 c[2] +
  62407 c[3] - 10796 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  218493 c[1] - 185314 c[2] + 62407 c[3] - 10796 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 220365 c[1] - 185666 c[2] + 62423 c[3] - 10796 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 220077 c[1] - 185634 c[2] +
  62423 c[3] - 10796 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  221661 c[1] - 185954 c[2] + 62439 c[3] - 10796 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 210357 c[1] - 182826 c[2] + 62159 c[3] - 10788 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 210069 c[1] - 182794 c[2] +
  62159 c[3] - 10788 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  211653 c[1] - 183114 c[2] + 62175 c[3] - 10788 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 211365 c[1] - 183082 c[2] + 62175 c[3] - 10788 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 212949 c[1] - 183402 c[2] +
  62191 c[3] - 10788 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  214533 c[1] - 183722 c[2] + 62207 c[3] - 10788 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 203229 c[1] - 180594 c[2] + 61927 c[3] - 10780 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0 && 204525 c[1] - 180882 c[2] +
  61943 c[3] - 10780 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥ 0 &&
  205821 c[1] - 181170 c[2] + 61959 c[3] - 10780 c[4] + 1019 c[5] - 50 c[6] + c[7] ≥
  0 && 198693 c[1] - 178938 c[2] + 61727 c[3] - 10772 c[4] +
  1019 c[5] - 50 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]

```



```
{44 003, 310 209, 1 847 930, 6 247 855, 0, 0, 0}
```

```
GCD[44 003, 310 209, 1 847 930, 6 247 855, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 6 247 855, 1 847 930, 310 209, 44 003}
```

```
cert.g
```

```
-13 842 745
```

```
{44 003, 310 209, 1 847 930, 6 247 855, 0, 0, 0}.gpart[listdim17[[162]]]
```

```
-13 842 745
```

```
cert.Transpose[A]
```

```
{2 953 335, 2 954 087, 207 911, 5 695 695, 5 696 447, 2 950 271, 5 697 199, 2 951 023,
 204 847, 2 951 775, 205 599, 8 438 055, 8 438 807, 5 692 631, 5 693 383, 2 947 207,
 201 031, 2 947 959, 201 783, 2 948 711, 202 535, 203 287, 5 689 567, 2 943 391,
 2 944 143, 197 967, 198 719, 199 471, 5 685 751, 2 940 327, 194 903, 191 087}
```

```
chi = listdim17[[163]]
```

```
 $(-11 + x)^3 (-9 + x)^7 (5 + x)^{32} (-811 + 271 x - 29 x^2 + x^3) (5228 - 2533 x + 451 x^2 - 35 x^3 + x^4)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -79, 2744, -54 960, 698 914, -5 845 670, 32 113 360, -111 538 728,
      221 746 261, -191 649 843}, {1, -79, 2744, -54 960, 698 930, -5 846 454,
      32 128 560, -111 684 360, 222 435 045, -192 934 467}, {1, -79, 2744, -54 952,
      698 466, -5 835 326, 31 987 344, -110 684 624, 218 693 205, -187 153 659}};
```

```
A // MatrixForm
```

```

$$\begin{pmatrix} 1 & -79 & 2744 & -54\,960 & 698\,914 & -5\,845\,670 & 32\,113\,360 & -111\,538\,728 & 221\,746\,261 & -191\,649\,843 \\ 1 & -79 & 2744 & -54\,960 & 698\,930 & -5\,846\,454 & 32\,128\,560 & -111\,684\,360 & 222\,435\,045 & -192\,934\,467 \\ 1 & -79 & 2744 & -54\,952 & 698\,466 & -5\,835\,326 & 31\,987\,344 & -110\,684\,624 & 218\,693\,205 & -187\,153\,659 \end{pmatrix}$$

```

```
Dimensions[A]
```

```
{3, 10}
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse
```

```
{49, -3871, 134 456, -2 693 144, 34 253 538, -286 615 630,
 1 575 994 832, -5 483 851 296, 10 938 590 309, -9 509 106 139}
```

Array[c, 10].Transpose[A]

```
{c[1] - 79 c[2] + 2744 c[3] - 54 960 c[4] + 698 914 c[5] - 5 845 670 c[6] +
  32 113 360 c[7] - 111 538 728 c[8] + 221 746 261 c[9] - 191 649 843 c[10],
c[1] - 79 c[2] + 2744 c[3] - 54 960 c[4] + 698 930 c[5] - 5 846 454 c[6] +
  32 128 560 c[7] - 111 684 360 c[8] + 222 435 045 c[9] - 192 934 467 c[10],
c[1] - 79 c[2] + 2744 c[3] - 54 952 c[4] + 698 466 c[5] - 5 835 326 c[6] +
  31 987 344 c[7] - 110 684 624 c[8] + 218 693 205 c[9] - 187 153 659 c[10]}
```

Array[c, 10].g

```
49 c[1] - 3871 c[2] + 134 456 c[3] - 2 693 144 c[4] + 34 253 538 c[5] - 286 615 630 c[6] +
  1 575 994 832 c[7] - 5 483 851 296 c[8] + 10 938 590 309 c[9] - 9 509 106 139 c[10]
```

cert = Flatten[Array[c, 10] /. FindInstance[

```
49 c[1] - 3871 c[2] + 134 456 c[3] - 2 693 144 c[4] + 34 253 538 c[5] - 286 615 630 c[6] +
  1 575 994 832 c[7] - 5 483 851 296 c[8] + 10 938 590 309 c[9] - 9 509 106 139 c[10] <
  0 && c[1] - 79 c[2] + 2744 c[3] - 54 960 c[4] + 698 914 c[5] - 5 845 670 c[6] +
  32 113 360 c[7] - 111 538 728 c[8] + 221 746 261 c[9] - 191 649 843 c[10] ≥ 0 &&
c[1] - 79 c[2] + 2744 c[3] - 54 960 c[4] + 698 930 c[5] - 5 846 454 c[6] +
  32 128 560 c[7] - 111 684 360 c[8] + 222 435 045 c[9] - 192 934 467 c[10] ≥ 0 &&
c[1] - 79 c[2] + 2744 c[3] - 54 952 c[4] + 698 466 c[5] - 5 835 326 c[6] +
  31 987 344 c[7] - 110 684 624 c[8] + 218 693 205 c[9] -
  187 153 659 c[10] ≥ 0, Array[c, 10], Integers]]
```

```
{0, 0, 0, 0, 0, 0, 0, 0, 0, 1137, 1309}
```

GCD[0, 0, 0, 0, 0, 0, 0, 0, 0, 1137, 1309]

1

cert.g

```
-10 242 754 618
```

```
{0, 0, 0, 0, 0, 0, 0, 0, 0, 1137, 1309}.Reverse[gpart[listdim17[[163]]]
```

```
-10 242 754 618
```

cert.Transpose[A]

```
{1 255 854 270, 357 428 862, 3 670 034 454}
```

chi = listdim17[[164]]

$$(-12 + x) (-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (73 - 18 x + x^2)^2$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{{-40 953, 26 669, -6618, 786, -45, 1},
{-38 841, 26 301, -6602, 786, -45, 1}, {-36 729, 25 933, -6586, 786, -45, 1}}
```

```
A = {{-40953, 26669, -6618, 786, -45, 1},
      {-38841, 26301, -6602, 786, -45, 1}, {-36729, 25933, -6586, 786, -45, 1}};
```

```
A // MatrixForm
```

$$\begin{pmatrix} -40953 & 26669 & -6618 & 786 & -45 & 1 \\ -38841 & 26301 & -6602 & 786 & -45 & 1 \\ -36729 & 25933 & -6586 & 786 & -45 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1964553, 1299805, -323994, 38514, -2205, 49}
```

```
Array[c, 6].Transpose[A]
```

```
{-40953 c[1] + 26669 c[2] - 6618 c[3] + 786 c[4] - 45 c[5] + c[6],
 -38841 c[1] + 26301 c[2] - 6602 c[3] + 786 c[4] - 45 c[5] + c[6],
 -36729 c[1] + 25933 c[2] - 6586 c[3] + 786 c[4] - 45 c[5] + c[6]}
```

```
Array[c, 6].g
```

```
-1964553 c[1] + 1299805 c[2] - 323994 c[3] + 38514 c[4] - 2205 c[5] + 49 c[6]
```

```
cert = Flatten[Array[c, 6] /. FindInstance[
```

```
-1964553 c[1] + 1299805 c[2] - 323994 c[3] + 38514 c[4] - 2205 c[5] + 49 c[6] < 0 &&
```

```
-40953 c[1] + 26669 c[2] - 6618 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0 &&
```

```
-38841 c[1] + 26301 c[2] - 6602 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0 &&
```

```
-36729 c[1] + 25933 c[2] - 6586 c[3] + 786 c[4] - 45 c[5] + c[6] ≥ 0,
```

```
Array[c, 6], Integers]]
```

```
{0, 10317, 237202, 0, 0, 1294707168}
```

```
GCD[0, 10317, 237202, 0, 0, 1294707168]
```

```
1
```

```
Reverse[cert]
```

```
{1294707168, 0, 0, 237202, 10317, 0}
```

```
cert.g
```

```
-1285371
```

```
{0, 10317, 237202, 0, 0, 1294707168}.gpart[listdim17[[164]]]
```

```
-1285371
```

```
cert.Transpose[A]
```

```
{48405, 46981, 45557}
```

```
chi = listdim17[[165]]
```

$$(-12 + x) (-11 + x)^6 (-9 + x)^6 (-7 + x)^4 (5 + x)^{32}$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{3927, -2150, 416, -34, 1}, {3823, -2142, 416, -34, 1}, {3839, -2142, 416, -34, 1},  
{3735, -2134, 416, -34, 1}, {3751, -2134, 416, -34, 1}, {3663, -2126, 416, -34, 1}}
```

```
A = {{3927, -2150, 416, -34, 1}, {3823, -2142, 416, -34, 1},  
      {3839, -2142, 416, -34, 1}, {3735, -2134, 416, -34, 1},  
      {3751, -2134, 416, -34, 1}, {3663, -2126, 416, -34, 1}};
```

```
A // MatrixForm
```

$$\begin{pmatrix} 3927 & -2150 & 416 & -34 & 1 \\ 3823 & -2142 & 416 & -34 & 1 \\ 3839 & -2142 & 416 & -34 & 1 \\ 3735 & -2134 & 416 & -34 & 1 \\ 3751 & -2134 & 416 & -34 & 1 \\ 3663 & -2126 & 416 & -34 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{188487, -105062, 20384, -1666, 49}
```

```
Array[c, 5].Transpose[A]
```

```
{3927 c[1] - 2150 c[2] + 416 c[3] - 34 c[4] + c[5],  
 3823 c[1] - 2142 c[2] + 416 c[3] - 34 c[4] + c[5],  
 3839 c[1] - 2142 c[2] + 416 c[3] - 34 c[4] + c[5],  
 3735 c[1] - 2134 c[2] + 416 c[3] - 34 c[4] + c[5],  
 3751 c[1] - 2134 c[2] + 416 c[3] - 34 c[4] + c[5],  
 3663 c[1] - 2126 c[2] + 416 c[3] - 34 c[4] + c[5]}
```

```
Array[c, 5].g
```

```
188487 c[1] - 105062 c[2] + 20384 c[3] - 1666 c[4] + 49 c[5]
```

```
cert = Flatten[Array[c, 5] /.
```

```
FindInstance[188487 c[1] - 105062 c[2] + 20384 c[3] - 1666 c[4] + 49 c[5] < 0 &&
```

```
3927 c[1] - 2150 c[2] + 416 c[3] - 34 c[4] + c[5] ≥ 0 &&
```

```
3823 c[1] - 2142 c[2] + 416 c[3] - 34 c[4] + c[5] ≥ 0 &&
```

```
3839 c[1] - 2142 c[2] + 416 c[3] - 34 c[4] + c[5] ≥ 0 &&
```

```
3735 c[1] - 2134 c[2] + 416 c[3] - 34 c[4] + c[5] ≥ 0 &&
```

```
3751 c[1] - 2134 c[2] + 416 c[3] - 34 c[4] + c[5] ≥ 0 &&
```

```
3663 c[1] - 2126 c[2] + 416 c[3] - 34 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
```

```
{1645, 21372, 0, 0, 39494208}
```

```
GCD[1645, 21372, 0, 0, 39494208]
```

```
1
```

```
Reverse[cert]
```

```
{39494208, 0, 0, 21372, 1645}
```

cert.g

-107 757

{1645, 21 372, 0, 0, 39 494 208}.gpart[listdim17[[165]]

-107 757

cert.Transpose[A]

{4323, 4219, 30 539, 30 435, 56 755, 82 971}

chi = listdim17[[166]]

$(-11 + x)^3 (-9 + x)^{11} (5 + x)^{32} (-632 + 243 x - 28 x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {-29579, 20905, -5594, 710, -43, 1},
  {-29755, 20921, -5594, 710, -43, 1}, {-28643, 20729, -5586, 710, -43, 1},
  {-28611, 20729, -5586, 710, -43, 1}, {-28819, 20745, -5586, 710, -43, 1},
  {-28787, 20745, -5586, 710, -43, 1}, {-28995, 20761, -5586, 710, -43, 1},
  {-28963, 20761, -5586, 710, -43, 1}, {-29139, 20777, -5586, 710, -43, 1},
  {-29315, 20793, -5586, 710, -43, 1}, {-27707, 20553, -5578, 710, -43, 1},
  {-27675, 20553, -5578, 710, -43, 1}, {-27883, 20569, -5578, 710, -43, 1},
  {-27851, 20569, -5578, 710, -43, 1}, {-27819, 20569, -5578, 710, -43, 1},
  {-28027, 20585, -5578, 710, -43, 1}, {-27995, 20585, -5578, 710, -43, 1},
  {-28203, 20601, -5578, 710, -43, 1}, {-28171, 20601, -5578, 710, -43, 1},
  {-28347, 20617, -5578, 710, -43, 1}, {-26771, 20377, -5570, 710, -43, 1},
  {-26739, 20377, -5570, 710, -43, 1}, {-26915, 20393, -5570, 710, -43, 1},
  {-26883, 20393, -5570, 710, -43, 1}, {-27059, 20409, -5570, 710, -43, 1},
  {-27027, 20409, -5570, 710, -43, 1}, {-27235, 20425, -5570, 710, -43, 1},
  {-27203, 20425, -5570, 710, -43, 1}, {-27379, 20441, -5570, 710, -43, 1},
  {-27555, 20457, -5570, 710, -43, 1}, {-25803, 20201, -5562, 710, -43, 1},
  {-25947, 20217, -5562, 710, -43, 1}, {-26123, 20233, -5562, 710, -43, 1},
  {-26091, 20233, -5562, 710, -43, 1}, {-26267, 20249, -5562, 710, -43, 1},
  {-26235, 20249, -5562, 710, -43, 1}, {-26443, 20265, -5562, 710, -43, 1},
  {-26411, 20265, -5562, 710, -43, 1}, {-26587, 20281, -5562, 710, -43, 1},
  {-25011, 20041, -5554, 710, -43, 1}, {-25155, 20057, -5554, 710, -43, 1},
  {-25299, 20073, -5554, 710, -43, 1}, {-25475, 20089, -5554, 710, -43, 1},
  {-25443, 20089, -5554, 710, -43, 1}, {-25619, 20105, -5554, 710, -43, 1},
  {-25795, 20121, -5554, 710, -43, 1}, {-24363, 19897, -5546, 710, -43, 1},
  {-24507, 19913, -5546, 710, -43, 1}, {-24683, 19929, -5546, 710, -43, 1},
  {-24651, 19929, -5546, 710, -43, 1}, {-24827, 19945, -5546, 710, -43, 1},
  {-25003, 19961, -5546, 710, -43, 1}, {-23571, 19737, -5538, 710, -43, 1},
  {-23715, 19753, -5538, 710, -43, 1}, {-23859, 19769, -5538, 710, -43, 1},
  {-24035, 19785, -5538, 710, -43, 1}, {-22923, 19593, -5530, 710, -43, 1},
  {-23067, 19609, -5530, 710, -43, 1}, {-23243, 19625, -5530, 710, -43, 1},
  {-22275, 19449, -5522, 710, -43, 1}, {-21483, 19289, -5514, 710, -43, 1}}
```

```

A = {{-29 579, 20 905, -5594, 710, -43, 1},
      {-29 755, 20 921, -5594, 710, -43, 1}, {-28 643, 20 729, -5586, 710, -43, 1},
      {-28 611, 20 729, -5586, 710, -43, 1}, {-28 819, 20 745, -5586, 710, -43, 1},
      {-28 787, 20 745, -5586, 710, -43, 1}, {-28 995, 20 761, -5586, 710, -43, 1},
      {-28 963, 20 761, -5586, 710, -43, 1}, {-29 139, 20 777, -5586, 710, -43, 1},
      {-29 315, 20 793, -5586, 710, -43, 1}, {-27 707, 20 553, -5578, 710, -43, 1},
      {-27 675, 20 553, -5578, 710, -43, 1}, {-27 883, 20 569, -5578, 710, -43, 1},
      {-27 851, 20 569, -5578, 710, -43, 1}, {-27 819, 20 569, -5578, 710, -43, 1},
      {-28 027, 20 585, -5578, 710, -43, 1}, {-27 995, 20 585, -5578, 710, -43, 1},
      {-28 203, 20 601, -5578, 710, -43, 1}, {-28 171, 20 601, -5578, 710, -43, 1},
      {-28 347, 20 617, -5578, 710, -43, 1}, {-26 771, 20 377, -5570, 710, -43, 1},
      {-26 739, 20 377, -5570, 710, -43, 1}, {-26 915, 20 393, -5570, 710, -43, 1},
      {-26 883, 20 393, -5570, 710, -43, 1}, {-27 059, 20 409, -5570, 710, -43, 1},
      {-27 027, 20 409, -5570, 710, -43, 1}, {-27 235, 20 425, -5570, 710, -43, 1},
      {-27 203, 20 425, -5570, 710, -43, 1}, {-27 379, 20 441, -5570, 710, -43, 1},
      {-27 555, 20 457, -5570, 710, -43, 1}, {-25 803, 20 201, -5562, 710, -43, 1},
      {-25 947, 20 217, -5562, 710, -43, 1}, {-26 123, 20 233, -5562, 710, -43, 1},
      {-26 091, 20 233, -5562, 710, -43, 1}, {-26 267, 20 249, -5562, 710, -43, 1},
      {-26 235, 20 249, -5562, 710, -43, 1}, {-26 443, 20 265, -5562, 710, -43, 1},
      {-26 411, 20 265, -5562, 710, -43, 1}, {-26 587, 20 281, -5562, 710, -43, 1},
      {-25 011, 20 041, -5554, 710, -43, 1}, {-25 155, 20 057, -5554, 710, -43, 1},
      {-25 299, 20 073, -5554, 710, -43, 1}, {-25 475, 20 089, -5554, 710, -43, 1},
      {-25 443, 20 089, -5554, 710, -43, 1}, {-25 619, 20 105, -5554, 710, -43, 1},
      {-25 795, 20 121, -5554, 710, -43, 1}, {-24 363, 19 897, -5546, 710, -43, 1},
      {-24 507, 19 913, -5546, 710, -43, 1}, {-24 683, 19 929, -5546, 710, -43, 1},
      {-24 651, 19 929, -5546, 710, -43, 1}, {-24 827, 19 945, -5546, 710, -43, 1},
      {-25 003, 19 961, -5546, 710, -43, 1}, {-23 571, 19 737, -5538, 710, -43, 1},
      {-23 715, 19 753, -5538, 710, -43, 1}, {-23 859, 19 769, -5538, 710, -43, 1},
      {-24 035, 19 785, -5538, 710, -43, 1}, {-22 923, 19 593, -5530, 710, -43, 1},
      {-23 067, 19 609, -5530, 710, -43, 1}, {-23 243, 19 625, -5530, 710, -43, 1},
      {-22 275, 19 449, -5522, 710, -43, 1}, {-21 483, 19 289, -5514, 710, -43, 1}};

```

```
A // MatrixForm
```

```

(
-29 579 20 905 -5594 710 -43 1
-29 755 20 921 -5594 710 -43 1
-28 643 20 729 -5586 710 -43 1
-28 611 20 729 -5586 710 -43 1
-28 819 20 745 -5586 710 -43 1
-28 787 20 745 -5586 710 -43 1
-28 995 20 761 -5586 710 -43 1
-28 963 20 761 -5586 710 -43 1
-29 139 20 777 -5586 710 -43 1
-29 315 20 793 -5586 710 -43 1
-27 707 20 553 -5578 710 -43 1
-27 675 20 553 -5578 710 -43 1
-27 883 20 569 -5578 710 -43 1
-27 851 20 569 -5578 710 -43 1
-27 819 20 569 -5578 710 -43 1
-28 027 20 585 -5578 710 -43 1
-27 995 20 585 -5578 710 -43 1
-28 203 20 601 -5578 710 -43 1
-28 171 20 601 -5578 710 -43 1
-28 347 20 617 -5578 710 -43 1
-26 771 20 377 -5570 710 -43 1
-26 739 20 377 -5570 710 -43 1
-26 915 20 393 -5570 710 -43 1
-26 883 20 393 -5570 710 -43 1
-27 059 20 409 -5570 710 -43 1
-27 027 20 409 -5570 710 -43 1
-27 235 20 425 -5570 710 -43 1
-27 203 20 425 -5570 710 -43 1
-27 379 20 441 -5570 710 -43 1
-27 555 20 457 -5570 710 -43 1
-25 803 20 201 -5562 710 -43 1
-25 947 20 217 -5562 710 -43 1
-26 123 20 233 -5562 710 -43 1
-26 091 20 233 -5562 710 -43 1
-26 267 20 249 -5562 710 -43 1
-26 235 20 249 -5562 710 -43 1
-26 443 20 265 -5562 710 -43 1
-26 411 20 265 -5562 710 -43 1
-26 587 20 281 -5562 710 -43 1
-25 011 20 041 -5554 710 -43 1
-25 155 20 057 -5554 710 -43 1
-25 299 20 073 -5554 710 -43 1
-25 475 20 089 -5554 710 -43 1
-25 443 20 089 -5554 710 -43 1
-25 619 20 105 -5554 710 -43 1
-25 795 20 121 -5554 710 -43 1
-24 363 19 897 -5546 710 -43 1
-24 507 19 913 -5546 710 -43 1
-24 683 19 929 -5546 710 -43 1
-24 651 19 929 -5546 710 -43 1
-24 827 19 945 -5546 710 -43 1
-25 003 19 961 -5546 710 -43 1
-23 571 19 737 -5538 710 -43 1
-23 715 19 753 -5538 710 -43 1
-23 859 19 769 -5538 710 -43 1
-24 035 19 785 -5538 710 -43 1
-22 923 19 593 -5530 710 -43 1
-23 067 19 609 -5530 710 -43 1
-23 243 19 625 -5530 710 -43 1
-22 275 19 449 -5522 710 -43 1
-21 483 19 289 -5514 710 -43 1
)

```

```

-28 203 20 601 -5578 710 -43 1
-28 171 20 601 -5578 710 -43 1
-28 347 20 617 -5578 710 -43 1
-26 771 20 377 -5570 710 -43 1
-26 739 20 377 -5570 710 -43 1
-26 915 20 393 -5570 710 -43 1
-26 883 20 393 -5570 710 -43 1
-27 059 20 409 -5570 710 -43 1
-27 027 20 409 -5570 710 -43 1
-27 235 20 425 -5570 710 -43 1
-27 203 20 425 -5570 710 -43 1
-27 379 20 441 -5570 710 -43 1
-27 555 20 457 -5570 710 -43 1
-25 803 20 201 -5562 710 -43 1
-25 947 20 217 -5562 710 -43 1
-26 123 20 233 -5562 710 -43 1
-26 091 20 233 -5562 710 -43 1
-26 267 20 249 -5562 710 -43 1
-26 235 20 249 -5562 710 -43 1
-26 443 20 265 -5562 710 -43 1
-26 411 20 265 -5562 710 -43 1
-26 587 20 281 -5562 710 -43 1
-25 011 20 041 -5554 710 -43 1
-25 155 20 057 -5554 710 -43 1
-25 299 20 073 -5554 710 -43 1
-25 475 20 089 -5554 710 -43 1
-25 443 20 089 -5554 710 -43 1
-25 619 20 105 -5554 710 -43 1
-25 795 20 121 -5554 710 -43 1
-24 363 19 897 -5546 710 -43 1
-24 507 19 913 -5546 710 -43 1
-24 683 19 929 -5546 710 -43 1
-24 651 19 929 -5546 710 -43 1
-24 827 19 945 -5546 710 -43 1
-25 003 19 961 -5546 710 -43 1
-23 571 19 737 -5538 710 -43 1
-23 715 19 753 -5538 710 -43 1
-23 859 19 769 -5538 710 -43 1
-24 035 19 785 -5538 710 -43 1
-22 923 19 593 -5530 710 -43 1
-23 067 19 609 -5530 710 -43 1
-23 243 19 625 -5530 710 -43 1
-22 275 19 449 -5522 710 -43 1
-21 483 19 289 -5514 710 -43 1

```

Dimensions[A]

```
{61, 6}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{-1414211, 1015817, -273634, 34790, -2107, 49}
```

Array[c, 6].Transpose[A]

```

{-29579 c[1] + 20905 c[2] - 5594 c[3] + 710 c[4] - 43 c[5] + c[6],
 -29755 c[1] + 20921 c[2] - 5594 c[3] + 710 c[4] - 43 c[5] + c[6],

```


$-28\,643\,c[1] + 20\,729\,c[2] - 5586\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-28\,611\,c[1] + 20\,729\,c[2] - 5586\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-28\,819\,c[1] + 20\,745\,c[2] - 5586\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-28\,787\,c[1] + 20\,745\,c[2] - 5586\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-28\,995\,c[1] + 20\,761\,c[2] - 5586\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-28\,963\,c[1] + 20\,761\,c[2] - 5586\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-29\,139\,c[1] + 20\,777\,c[2] - 5586\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-29\,315\,c[1] + 20\,793\,c[2] - 5586\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,707\,c[1] + 20\,553\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,675\,c[1] + 20\,553\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,883\,c[1] + 20\,569\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,851\,c[1] + 20\,569\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,819\,c[1] + 20\,569\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-28\,027\,c[1] + 20\,585\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,995\,c[1] + 20\,585\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-28\,203\,c[1] + 20\,601\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-28\,171\,c[1] + 20\,601\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-28\,347\,c[1] + 20\,617\,c[2] - 5578\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,771\,c[1] + 20\,377\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,739\,c[1] + 20\,377\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,915\,c[1] + 20\,393\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,883\,c[1] + 20\,393\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,059\,c[1] + 20\,409\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,027\,c[1] + 20\,409\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,235\,c[1] + 20\,425\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,203\,c[1] + 20\,425\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,379\,c[1] + 20\,441\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-27\,555\,c[1] + 20\,457\,c[2] - 5570\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-25\,803\,c[1] + 20\,201\,c[2] - 5562\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-25\,947\,c[1] + 20\,217\,c[2] - 5562\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,123\,c[1] + 20\,233\,c[2] - 5562\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,091\,c[1] + 20\,233\,c[2] - 5562\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,267\,c[1] + 20\,249\,c[2] - 5562\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,235\,c[1] + 20\,249\,c[2] - 5562\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,443\,c[1] + 20\,265\,c[2] - 5562\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,411\,c[1] + 20\,265\,c[2] - 5562\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-26\,587\,c[1] + 20\,281\,c[2] - 5562\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-25\,011\,c[1] + 20\,041\,c[2] - 5554\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-25\,155\,c[1] + 20\,057\,c[2] - 5554\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-25\,299\,c[1] + 20\,073\,c[2] - 5554\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-25\,475\,c[1] + 20\,089\,c[2] - 5554\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-25\,443\,c[1] + 20\,089\,c[2] - 5554\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-25\,619\,c[1] + 20\,105\,c[2] - 5554\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-25\,795\,c[1] + 20\,121\,c[2] - 5554\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-24\,363\,c[1] + 19\,897\,c[2] - 5546\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-24\,507\,c[1] + 19\,913\,c[2] - 5546\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$
 $-24\,683\,c[1] + 19\,929\,c[2] - 5546\,c[3] + 710\,c[4] - 43\,c[5] + c[6],$

```

-24 651 c[1] + 19 929 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-24 827 c[1] + 19 945 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-25 003 c[1] + 19 961 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-23 571 c[1] + 19 737 c[2] - 5538 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-23 715 c[1] + 19 753 c[2] - 5538 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-23 859 c[1] + 19 769 c[2] - 5538 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-24 035 c[1] + 19 785 c[2] - 5538 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-22 923 c[1] + 19 593 c[2] - 5530 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-23 067 c[1] + 19 609 c[2] - 5530 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-23 243 c[1] + 19 625 c[2] - 5530 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-22 275 c[1] + 19 449 c[2] - 5522 c[3] + 710 c[4] - 43 c[5] + c[6] ,
-21 483 c[1] + 19 289 c[2] - 5514 c[3] + 710 c[4] - 43 c[5] + c[6] }

```

Array[c, 6].g

```
-1 414 211 c[1] + 1 015 817 c[2] - 273 634 c[3] + 34 790 c[4] - 2107 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```

-1 414 211 c[1] + 1 015 817 c[2] - 273 634 c[3] + 34 790 c[4] - 2107 c[5] + 49 c[6] < 0 &&
-29 579 c[1] + 20 905 c[2] - 5594 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 755 c[1] + 20 921 c[2] - 5594 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 643 c[1] + 20 729 c[2] - 5586 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 611 c[1] + 20 729 c[2] - 5586 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 819 c[1] + 20 745 c[2] - 5586 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 787 c[1] + 20 745 c[2] - 5586 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 995 c[1] + 20 761 c[2] - 5586 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 963 c[1] + 20 761 c[2] - 5586 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 139 c[1] + 20 777 c[2] - 5586 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-29 315 c[1] + 20 793 c[2] - 5586 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 707 c[1] + 20 553 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 675 c[1] + 20 553 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 883 c[1] + 20 569 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 851 c[1] + 20 569 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 819 c[1] + 20 569 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 027 c[1] + 20 585 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 995 c[1] + 20 585 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 203 c[1] + 20 601 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 171 c[1] + 20 601 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-28 347 c[1] + 20 617 c[2] - 5578 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 771 c[1] + 20 377 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 739 c[1] + 20 377 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 915 c[1] + 20 393 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 883 c[1] + 20 393 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 059 c[1] + 20 409 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 027 c[1] + 20 409 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 235 c[1] + 20 425 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 203 c[1] + 20 425 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-27 379 c[1] + 20 441 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&

```

```

-27 555 c[1] + 20 457 c[2] - 5570 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 803 c[1] + 20 201 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 947 c[1] + 20 217 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 123 c[1] + 20 233 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 091 c[1] + 20 233 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 267 c[1] + 20 249 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 235 c[1] + 20 249 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 443 c[1] + 20 265 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 411 c[1] + 20 265 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-26 587 c[1] + 20 281 c[2] - 5562 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 011 c[1] + 20 041 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 155 c[1] + 20 057 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 299 c[1] + 20 073 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 475 c[1] + 20 089 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 443 c[1] + 20 089 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 619 c[1] + 20 105 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 795 c[1] + 20 121 c[2] - 5554 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-24 363 c[1] + 19 897 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-24 507 c[1] + 19 913 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-24 683 c[1] + 19 929 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-24 651 c[1] + 19 929 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-24 827 c[1] + 19 945 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-25 003 c[1] + 19 961 c[2] - 5546 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-23 571 c[1] + 19 737 c[2] - 5538 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-23 715 c[1] + 19 753 c[2] - 5538 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-23 859 c[1] + 19 769 c[2] - 5538 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-24 035 c[1] + 19 785 c[2] - 5538 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-22 923 c[1] + 19 593 c[2] - 5530 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-23 067 c[1] + 19 609 c[2] - 5530 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-23 243 c[1] + 19 625 c[2] - 5530 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-22 275 c[1] + 19 449 c[2] - 5522 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0 &&
-21 483 c[1] + 19 289 c[2] - 5514 c[3] + 710 c[4] - 43 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{28 548, 285 481, 2 883 349, 0, 0, 11 007 285 490}

GCD[28 548, 285 481, 2 883 349, 0, 0, 11 007 285 490]
1

Reverse[cert]
{11 007 285 490, 0, 0, 2 883 349, 285 481, 28 548}

cert.g
-1 773 907

{28 548, 285 481, 2 883 349, 0, 0, 11 007 285 490}.gpart[listdim17[[166]]]
-1 773 907

```

cert.Transpose[A]

```
{1390197, 933445, 933261, 1846797, 476509, 1390045, 19757, 933293, 476541,
 19789, 476325, 1389861, 19573, 933109, 1846645, 476357, 1389893, 19605,
 933141, 476389, 19389, 932925, 476173, 1389709, 932957, 1846493, 476205,
 1389741, 932989, 476237, 475989, 932773, 476021, 1389557, 932805, 1846341,
 476053, 1389589, 932837, 475837, 932621, 1389405, 932653, 1846189, 1389437,
 932685, 932469, 1389253, 932501, 1846037, 1389285, 932533, 932317,
 1389101, 1845885, 1389133, 1388949, 1845733, 1388981, 1845581, 1845429}
```

chi = listdim17[[167]]

$$(-13 + x) (-11 + x)^4 (-9 + x)^{10} (-8 + x) (-5 + x) (5 + x)^{32}$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{{-23777, 17481, -4870, 646, -41, 1}, {-23985, 17497, -4870, 646, -41, 1},
{-23953, 17497, -4870, 646, -41, 1}, {-23921, 17497, -4870, 646, -41, 1},
{-23889, 17497, -4870, 646, -41, 1}, {-24065, 17513, -4870, 646, -41, 1},
{-24033, 17513, -4870, 646, -41, 1}, {-24145, 17529, -4870, 646, -41, 1},
{-23049, 17321, -4862, 646, -41, 1}, {-23017, 17321, -4862, 646, -41, 1},
{-22985, 17321, -4862, 646, -41, 1}, {-23193, 17337, -4862, 646, -41, 1},
{-23161, 17337, -4862, 646, -41, 1}, {-23129, 17337, -4862, 646, -41, 1},
{-23337, 17353, -4862, 646, -41, 1}, {-23305, 17353, -4862, 646, -41, 1},
{-23273, 17353, -4862, 646, -41, 1}, {-23241, 17353, -4862, 646, -41, 1},
{-23481, 17369, -4862, 646, -41, 1}, {-23449, 17369, -4862, 646, -41, 1},
{-23417, 17369, -4862, 646, -41, 1}, {-23385, 17369, -4862, 646, -41, 1},
{-23625, 17385, -4862, 646, -41, 1}, {-23593, 17385, -4862, 646, -41, 1},
{-23561, 17385, -4862, 646, -41, 1}, {-23529, 17385, -4862, 646, -41, 1},
{-23705, 17401, -4862, 646, -41, 1}, {-22113, 17145, -4854, 646, -41, 1},
{-22257, 17161, -4854, 646, -41, 1}, {-22225, 17161, -4854, 646, -41, 1},
{-22401, 17177, -4854, 646, -41, 1}, {-22369, 17177, -4854, 646, -41, 1},
{-22545, 17193, -4854, 646, -41, 1}, {-22513, 17193, -4854, 646, -41, 1},
{-22481, 17193, -4854, 646, -41, 1}, {-22689, 17209, -4854, 646, -41, 1},
{-22657, 17209, -4854, 646, -41, 1}, {-22625, 17209, -4854, 646, -41, 1},
{-22833, 17225, -4854, 646, -41, 1}, {-22801, 17225, -4854, 646, -41, 1},
{-22769, 17225, -4854, 646, -41, 1}, {-22737, 17225, -4854, 646, -41, 1},
{-22977, 17241, -4854, 646, -41, 1}, {-22945, 17241, -4854, 646, -41, 1},
{-22913, 17241, -4854, 646, -41, 1}, {-23121, 17257, -4854, 646, -41, 1},
{-23089, 17257, -4854, 646, -41, 1}, {-23265, 17273, -4854, 646, -41, 1},
{-21321, 16985, -4846, 646, -41, 1}, {-21465, 17001, -4846, 646, -41, 1},
{-21609, 17017, -4846, 646, -41, 1}, {-21577, 17017, -4846, 646, -41, 1},
{-21753, 17033, -4846, 646, -41, 1}, {-21721, 17033, -4846, 646, -41, 1},
{-21897, 17049, -4846, 646, -41, 1}, {-21865, 17049, -4846, 646, -41, 1},
```

```
{-21833, 17049, -4846, 646, -41, 1}, {-22041, 17065, -4846, 646, -41, 1},
{-22009, 17065, -4846, 646, -41, 1}, {-21977, 17065, -4846, 646, -41, 1},
{-22185, 17081, -4846, 646, -41, 1}, {-22153, 17081, -4846, 646, -41, 1},
{-22121, 17081, -4846, 646, -41, 1}, {-22329, 17097, -4846, 646, -41, 1},
{-22297, 17097, -4846, 646, -41, 1}, {-22473, 17113, -4846, 646, -41, 1},
{-20817, 16857, -4838, 646, -41, 1}, {-20961, 16873, -4838, 646, -41, 1},
{-21105, 16889, -4838, 646, -41, 1}, {-21073, 16889, -4838, 646, -41, 1},
{-21249, 16905, -4838, 646, -41, 1}, {-21217, 16905, -4838, 646, -41, 1},
{-21393, 16921, -4838, 646, -41, 1}, {-21361, 16921, -4838, 646, -41, 1},
{-21329, 16921, -4838, 646, -41, 1}, {-21537, 16937, -4838, 646, -41, 1},
{-21505, 16937, -4838, 646, -41, 1}, {-21681, 16953, -4838, 646, -41, 1},
{-20169, 16713, -4830, 646, -41, 1}, {-20313, 16729, -4830, 646, -41, 1},
{-20457, 16745, -4830, 646, -41, 1}, {-20425, 16745, -4830, 646, -41, 1},
{-20601, 16761, -4830, 646, -41, 1}, {-20569, 16761, -4830, 646, -41, 1},
{-20745, 16777, -4830, 646, -41, 1}, {-20713, 16777, -4830, 646, -41, 1},
{-20889, 16793, -4830, 646, -41, 1}, {-19665, 16585, -4822, 646, -41, 1},
{-19809, 16601, -4822, 646, -41, 1}, {-19953, 16617, -4822, 646, -41, 1},
{-19921, 16617, -4822, 646, -41, 1}, {-20097, 16633, -4822, 646, -41, 1},
{-19017, 16441, -4814, 646, -41, 1}, {-19161, 16457, -4814, 646, -41, 1},
{-19305, 16473, -4814, 646, -41, 1}, {-18513, 16313, -4806, 646, -41, 1}}
```

```
A = {{-23777, 17481, -4870, 646, -41, 1}, {-23985, 17497, -4870, 646, -41, 1},
{-23953, 17497, -4870, 646, -41, 1}, {-23921, 17497, -4870, 646, -41, 1},
{-23889, 17497, -4870, 646, -41, 1}, {-24065, 17513, -4870, 646, -41, 1},
{-24033, 17513, -4870, 646, -41, 1}, {-24145, 17529, -4870, 646, -41, 1},
{-23049, 17321, -4862, 646, -41, 1}, {-23017, 17321, -4862, 646, -41, 1},
{-22985, 17321, -4862, 646, -41, 1}, {-23193, 17337, -4862, 646, -41, 1},
{-23161, 17337, -4862, 646, -41, 1}, {-23129, 17337, -4862, 646, -41, 1},
{-23337, 17353, -4862, 646, -41, 1}, {-23305, 17353, -4862, 646, -41, 1},
{-23273, 17353, -4862, 646, -41, 1}, {-23241, 17353, -4862, 646, -41, 1},
{-23481, 17369, -4862, 646, -41, 1}, {-23449, 17369, -4862, 646, -41, 1},
{-23417, 17369, -4862, 646, -41, 1}, {-23385, 17369, -4862, 646, -41, 1},
{-23625, 17385, -4862, 646, -41, 1}, {-23593, 17385, -4862, 646, -41, 1},
{-23561, 17385, -4862, 646, -41, 1}, {-23529, 17385, -4862, 646, -41, 1},
{-23705, 17401, -4862, 646, -41, 1}, {-22113, 17145, -4854, 646, -41, 1},
{-22257, 17161, -4854, 646, -41, 1}, {-22225, 17161, -4854, 646, -41, 1},
{-22401, 17177, -4854, 646, -41, 1}, {-22369, 17177, -4854, 646, -41, 1},
{-22545, 17193, -4854, 646, -41, 1}, {-22513, 17193, -4854, 646, -41, 1},
{-22481, 17193, -4854, 646, -41, 1}, {-22689, 17209, -4854, 646, -41, 1},
{-22657, 17209, -4854, 646, -41, 1}, {-22625, 17209, -4854, 646, -41, 1},
{-22833, 17225, -4854, 646, -41, 1}, {-22801, 17225, -4854, 646, -41, 1},
{-22769, 17225, -4854, 646, -41, 1}, {-22737, 17225, -4854, 646, -41, 1},
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{-22913, 17241, -4854, 646, -41, 1}, {-23121, 17257, -4854, 646, -41, 1},
{-23089, 17257, -4854, 646, -41, 1}, {-23265, 17273, -4854, 646, -41, 1},
{-21321, 16985, -4846, 646, -41, 1}, {-21465, 17001, -4846, 646, -41, 1},
{-21609, 17017, -4846, 646, -41, 1}, {-21577, 17017, -4846, 646, -41, 1},
```

```
{-21753, 17033, -4846, 646, -41, 1}, {-21721, 17033, -4846, 646, -41, 1},
{-21897, 17049, -4846, 646, -41, 1}, {-21865, 17049, -4846, 646, -41, 1},
{-21833, 17049, -4846, 646, -41, 1}, {-22041, 17065, -4846, 646, -41, 1},
{-22009, 17065, -4846, 646, -41, 1}, {-21977, 17065, -4846, 646, -41, 1},
{-22185, 17081, -4846, 646, -41, 1}, {-22153, 17081, -4846, 646, -41, 1},
{-22121, 17081, -4846, 646, -41, 1}, {-22329, 17097, -4846, 646, -41, 1},
{-22297, 17097, -4846, 646, -41, 1}, {-22473, 17113, -4846, 646, -41, 1},
{-20817, 16857, -4838, 646, -41, 1}, {-20961, 16873, -4838, 646, -41, 1},
{-21105, 16889, -4838, 646, -41, 1}, {-21073, 16889, -4838, 646, -41, 1},
{-21249, 16905, -4838, 646, -41, 1}, {-21217, 16905, -4838, 646, -41, 1},
{-21393, 16921, -4838, 646, -41, 1}, {-21361, 16921, -4838, 646, -41, 1},
{-21329, 16921, -4838, 646, -41, 1}, {-21537, 16937, -4838, 646, -41, 1},
{-21505, 16937, -4838, 646, -41, 1}, {-21681, 16953, -4838, 646, -41, 1},
{-20169, 16713, -4830, 646, -41, 1}, {-20313, 16729, -4830, 646, -41, 1},
{-20457, 16745, -4830, 646, -41, 1}, {-20425, 16745, -4830, 646, -41, 1},
{-20601, 16761, -4830, 646, -41, 1}, {-20569, 16761, -4830, 646, -41, 1},
{-20745, 16777, -4830, 646, -41, 1}, {-20713, 16777, -4830, 646, -41, 1},
{-20889, 16793, -4830, 646, -41, 1}, {-19665, 16585, -4822, 646, -41, 1},
{-19809, 16601, -4822, 646, -41, 1}, {-19953, 16617, -4822, 646, -41, 1},
{-19921, 16617, -4822, 646, -41, 1}, {-20097, 16633, -4822, 646, -41, 1},
{-19017, 16441, -4814, 646, -41, 1}, {-19161, 16457, -4814, 646, -41, 1},
{-19305, 16473, -4814, 646, -41, 1}, {-18513, 16313, -4806, 646, -41, 1}};
```

```
A // MatrixForm
```

```
(-23777 17481 -4870 646 -41 1)
(-23985 17497 -4870 646 -41 1)
(-23953 17497 -4870 646 -41 1)
(-23921 17497 -4870 646 -41 1)
(-23889 17497 -4870 646 -41 1)
(-24065 17513 -4870 646 -41 1)
(-24033 17513 -4870 646 -41 1)
(-24145 17529 -4870 646 -41 1)
(-23049 17321 -4862 646 -41 1)
(-23017 17321 -4862 646 -41 1)
(-22985 17321 -4862 646 -41 1)
(-23193 17337 -4862 646 -41 1)
(-23161 17337 -4862 646 -41 1)
(-23129 17337 -4862 646 -41 1)
(-23337 17353 -4862 646 -41 1)
(-23305 17353 -4862 646 -41 1)
(-23273 17353 -4862 646 -41 1)
(-23241 17353 -4862 646 -41 1)
(-23481 17369 -4862 646 -41 1)
(-23449 17369 -4862 646 -41 1)
(-23417 17369 -4862 646 -41 1)
(-23385 17369 -4862 646 -41 1)
(-23625 17385 -4862 646 -41 1)
(-23593 17385 -4862 646 -41 1)
(-23561 17385 -4862 646 -41 1)
(-23529 17385 -4862 646 -41 1)
(-23705 17401 -4862 646 -41 1)
(22113 17145 4854 646 41 1)
```

-22 113	17 143	-4854	646	-41	1
-22 257	17 161	-4854	646	-41	1
-22 225	17 161	-4854	646	-41	1
-22 401	17 177	-4854	646	-41	1
-22 369	17 177	-4854	646	-41	1
-22 545	17 193	-4854	646	-41	1
-22 513	17 193	-4854	646	-41	1
-22 481	17 193	-4854	646	-41	1
-22 689	17 209	-4854	646	-41	1
-22 657	17 209	-4854	646	-41	1
-22 625	17 209	-4854	646	-41	1
-22 833	17 225	-4854	646	-41	1
-22 801	17 225	-4854	646	-41	1
-22 769	17 225	-4854	646	-41	1
-22 737	17 225	-4854	646	-41	1
-22 977	17 241	-4854	646	-41	1
-22 945	17 241	-4854	646	-41	1
-22 913	17 241	-4854	646	-41	1
-23 121	17 257	-4854	646	-41	1
-23 089	17 257	-4854	646	-41	1
-23 265	17 273	-4854	646	-41	1
-21 321	16 985	-4846	646	-41	1
-21 465	17 001	-4846	646	-41	1
-21 609	17 017	-4846	646	-41	1
-21 577	17 017	-4846	646	-41	1
-21 753	17 033	-4846	646	-41	1
-21 721	17 033	-4846	646	-41	1
-21 897	17 049	-4846	646	-41	1
-21 865	17 049	-4846	646	-41	1
-21 833	17 049	-4846	646	-41	1
-22 041	17 065	-4846	646	-41	1
-22 009	17 065	-4846	646	-41	1
-21 977	17 065	-4846	646	-41	1
-22 185	17 081	-4846	646	-41	1
-22 153	17 081	-4846	646	-41	1
-22 121	17 081	-4846	646	-41	1
-22 329	17 097	-4846	646	-41	1
-22 297	17 097	-4846	646	-41	1
-22 473	17 113	-4846	646	-41	1
-20 817	16 857	-4838	646	-41	1
-20 961	16 873	-4838	646	-41	1
-21 105	16 889	-4838	646	-41	1
-21 073	16 889	-4838	646	-41	1
-21 249	16 905	-4838	646	-41	1
-21 217	16 905	-4838	646	-41	1
-21 393	16 921	-4838	646	-41	1
-21 361	16 921	-4838	646	-41	1
-21 329	16 921	-4838	646	-41	1
-21 537	16 937	-4838	646	-41	1
-21 505	16 937	-4838	646	-41	1
-21 681	16 953	-4838	646	-41	1
-20 169	16 713	-4830	646	-41	1
-20 313	16 729	-4830	646	-41	1
-20 457	16 745	-4830	646	-41	1
-20 425	16 745	-4830	646	-41	1

$$\begin{pmatrix} -20601 & 16761 & -4830 & 646 & -41 & 1 \\ -20569 & 16761 & -4830 & 646 & -41 & 1 \\ -20745 & 16777 & -4830 & 646 & -41 & 1 \\ -20713 & 16777 & -4830 & 646 & -41 & 1 \\ -20889 & 16793 & -4830 & 646 & -41 & 1 \\ -19665 & 16585 & -4822 & 646 & -41 & 1 \\ -19809 & 16601 & -4822 & 646 & -41 & 1 \\ -19953 & 16617 & -4822 & 646 & -41 & 1 \\ -19921 & 16617 & -4822 & 646 & -41 & 1 \\ -20097 & 16633 & -4822 & 646 & -41 & 1 \\ -19017 & 16441 & -4814 & 646 & -41 & 1 \\ -19161 & 16457 & -4814 & 646 & -41 & 1 \\ -19305 & 16473 & -4814 & 646 & -41 & 1 \\ -18513 & 16313 & -4806 & 646 & -41 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1164305, 855913, -238550, 31654, -2009, 49}

Array[c, 6].Transpose[A]

{-23777 c[1] + 17481 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
-23985 c[1] + 17497 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
-23953 c[1] + 17497 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
-23921 c[1] + 17497 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
-23889 c[1] + 17497 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
-24065 c[1] + 17513 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
-24033 c[1] + 17513 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
-24145 c[1] + 17529 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
-23049 c[1] + 17321 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23017 c[1] + 17321 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-22985 c[1] + 17321 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23193 c[1] + 17337 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23161 c[1] + 17337 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23129 c[1] + 17337 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23337 c[1] + 17353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23305 c[1] + 17353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23273 c[1] + 17353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23241 c[1] + 17353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23481 c[1] + 17369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23449 c[1] + 17369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23417 c[1] + 17369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23385 c[1] + 17369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23625 c[1] + 17385 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23593 c[1] + 17385 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23561 c[1] + 17385 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23529 c[1] + 17385 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23705 c[1] + 17401 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-22113 c[1] + 17145 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22257 c[1] + 17161 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22225 c[1] + 17161 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],

[illegible]

```

-21 681 c[1] + 16 953 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 169 c[1] + 16 713 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 313 c[1] + 16 729 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 457 c[1] + 16 745 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 425 c[1] + 16 745 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 601 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 569 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 745 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 713 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 889 c[1] + 16 793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-19 665 c[1] + 16 585 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-19 809 c[1] + 16 601 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-19 953 c[1] + 16 617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-19 921 c[1] + 16 617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-20 097 c[1] + 16 633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-19 017 c[1] + 16 441 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-19 161 c[1] + 16 457 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-19 305 c[1] + 16 473 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ,
-18 513 c[1] + 16 313 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] }

```

Array[c, 6].g

```
-1 164 305 c[1] + 855 913 c[2] - 238 550 c[3] + 31 654 c[4] - 2009 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```

-1 164 305 c[1] + 855 913 c[2] - 238 550 c[3] + 31 654 c[4] - 2009 c[5] + 49 c[6] < 0 &&
-23 777 c[1] + 17 481 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 985 c[1] + 17 497 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 953 c[1] + 17 497 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 921 c[1] + 17 497 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 889 c[1] + 17 497 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 065 c[1] + 17 513 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 033 c[1] + 17 513 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-24 145 c[1] + 17 529 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 049 c[1] + 17 321 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 017 c[1] + 17 321 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-22 985 c[1] + 17 321 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 193 c[1] + 17 337 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 161 c[1] + 17 337 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 129 c[1] + 17 337 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 337 c[1] + 17 353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 305 c[1] + 17 353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 273 c[1] + 17 353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 241 c[1] + 17 353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 481 c[1] + 17 369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 449 c[1] + 17 369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 417 c[1] + 17 369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 385 c[1] + 17 369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&

```

[illegible]

```

-21 073 c[1] + 16 889 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 249 c[1] + 16 905 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 217 c[1] + 16 905 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 393 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 361 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 329 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 537 c[1] + 16 937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 505 c[1] + 16 937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-21 681 c[1] + 16 953 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 169 c[1] + 16 713 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 313 c[1] + 16 729 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 457 c[1] + 16 745 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 425 c[1] + 16 745 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 601 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 569 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 745 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 713 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 889 c[1] + 16 793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 665 c[1] + 16 585 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 809 c[1] + 16 601 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 953 c[1] + 16 617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 921 c[1] + 16 617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 097 c[1] + 16 633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 017 c[1] + 16 441 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 161 c[1] + 16 457 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 305 c[1] + 16 473 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-18 513 c[1] + 16 313 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{c[1], c[2], c[3], c[4], c[5], c[6]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

chi = listdim17[[168]]
(-11 + x)2 (-9 + x)10 (5 + x)32 (-62 888 + 36 729 x - 8264 x2 + 902 x3 - 48 x4 + x5)

CoefficientList[feasibleinterlacingpolylist[chi], x]

A = {{1, -63, 1669, -24 043, 202 771, -997 037, 2 631 399, -2 851 497},
{1, -63, 1669, -24 043, 202 787, -997 565, 2 637 143, -2 872 089},

```

```

{1, -63, 1669, -24 043, 202 803, -998 125, 2 643 591, -2 896 425},
{1, -63, 1669, -24 043, 202 803, -998 061, 2 642 183, -2 888 809},
{1, -63, 1669, -24 043, 202 819, -998 589, 2 647 927, -2 909 401},
{1, -63, 1669, -24 043, 202 819, -998 589, 2 647 991, -2 910 105},
{1, -63, 1669, -24 043, 202 819, -998 557, 2 647 287, -2 906 233},
{1, -63, 1669, -24 035, 202 451, -992 317, 2 600 999, -2 779 297},
{1, -63, 1669, -24 035, 202 451, -992 285, 2 600 359, -2 776 257},
{1, -63, 1669, -24 035, 202 467, -992 813, 2 606 039, -2 796 145},
{1, -63, 1669, -24 035, 202 467, -992 813, 2 606 103, -2 796 849},
{1, -63, 1669, -24 035, 202 483, -993 341, 2 611 847, -2 817 441},
{1, -63, 1669, -24 035, 202 483, -993 309, 2 611 143, -2 813 569},
{1, -63, 1669, -24 035, 202 483, -993 309, 2 611 207, -2 814 273},
{1, -63, 1669, -24 035, 202 499, -993 869, 2 617 591, -2 838 033},
{1, -63, 1669, -24 035, 202 499, -993 837, 2 616 951, -2 834 865},
{1, -63, 1669, -24 035, 202 499, -993 805, 2 616 247, -2 830 993},
{1, -63, 1669, -24 035, 202 515, -994 365, 2 622 695, -2 855 457},
{1, -63, 1669, -24 035, 202 515, -994 333, 2 622 055, -2 852 289},
{1, -63, 1669, -24 027, 202 115, -987 069, 2 564 919, -2 687 337},
{1, -63, 1669, -24 027, 202 115, -987 037, 2 564 215, -2 683 593},
{1, -63, 1669, -24 027, 202 131, -987 565, 2 569 959, -2 704 185},
{1, -63, 1669, -24 027, 202 131, -987 533, 2 569 319, -2 701 017},
{1, -63, 1669, -24 027, 202 147, -988 093, 2 575 703, -2 724 777},
{1, -63, 1669, -24 027, 202 147, -988 061, 2 574 999, -2 720 905},
{1, -63, 1669, -24 027, 202 147, -988 061, 2 575 063, -2 721 609},
{1, -63, 1669, -24 027, 202 147, -988 029, 2 574 359, -2 717 737},
{1, -63, 1669, -24 027, 202 163, -988 589, 2 580 807, -2 742 201},
{1, -63, 1669, -24 027, 202 163, -988 557, 2 580 167, -2 739 033},
{1, -63, 1669, -24 027, 202 179, -989 085, 2 585 911, -2 759 625},
{1, -63, 1669, -24 019, 201 779, -981 821, 2 528 775, -2 594 673},
{1, -63, 1669, -24 019, 201 795, -982 317, 2 533 815, -2 611 521},
{1, -63, 1669, -24 019, 201 795, -982 317, 2 533 879, -2 612 097},
{1, -63, 1669, -24 019, 201 795, -982 285, 2 533 175, -2 608 353},
{1, -63, 1669, -24 019, 201 811, -982 813, 2 538 919, -2 628 945},
{1, -63, 1669, -24 019, 201 811, -982 781, 2 538 279, -2 625 777},
{1, -63, 1669, -24 019, 201 827, -983 341, 2 544 663, -2 649 537},
{1, -63, 1669, -24 019, 201 827, -983 309, 2 544 023, -2 646 369},
{1, -63, 1669, -24 019, 201 827, -983 277, 2 543 319, -2 642 497},
{1, -63, 1669, -24 019, 201 843, -983 805, 2 549 127, -2 663 793},
{1, -63, 1669, -24 011, 201 443, -976 573, 2 492 631, -2 502 009},
{1, -63, 1669, -24 011, 201 475, -977 565, 2 502 775, -2 536 281},
{1, -63, 1669, -24 011, 201 475, -977 533, 2 502 135, -2 533 113},
{1, -63, 1669, -24 011, 201 475, -977 501, 2 501 495, -2 529 945},
{1, -63, 1669, -24 011, 201 491, -978 061, 2 507 879, -2 553 705},
{1, -63, 1669, -24 011, 201 491, -978 029, 2 507 239, -2 550 537},
{1, -63, 1669, -24 011, 201 507, -978 525, 2 512 343, -2 567 961},
{1, -63, 1669, -24 003, 201 139, -972 317, 2 466 631, -2 443 617},
{1, -63, 1669, -24 003, 201 139, -972 285, 2 465 991, -2 440 449},

```

```
{1, -63, 1669, -24 003, 201 155, -972 781, 2 471 095, -2 457 873},  
{1, -63, 1669, -24 003, 201 155, -972 749, 2 470 455, -2 454 705},  
{1, -63, 1669, -24 003, 201 171, -973 277, 2 476 199, -2 475 297},  
{1, -63, 1669, -23 995, 200 835, -967 997, 2 439 415, -2 379 465}};  
  
A // MatrixForm
```

```

1 -63 1669 -24 043 202 771 -997 037 2 631 399 -2 851 497
1 -63 1669 -24 043 202 787 -997 565 2 637 143 -2 872 089
1 -63 1669 -24 043 202 803 -998 125 2 643 591 -2 896 425
1 -63 1669 -24 043 202 803 -998 061 2 642 183 -2 888 809
1 -63 1669 -24 043 202 819 -998 589 2 647 927 -2 909 401
1 -63 1669 -24 043 202 819 -998 589 2 647 991 -2 910 105
1 -63 1669 -24 043 202 819 -998 557 2 647 287 -2 906 233
1 -63 1669 -24 035 202 451 -992 317 2 600 999 -2 779 297
1 -63 1669 -24 035 202 451 -992 285 2 600 359 -2 776 257
1 -63 1669 -24 035 202 467 -992 813 2 606 039 -2 796 145
1 -63 1669 -24 035 202 467 -992 813 2 606 103 -2 796 849
1 -63 1669 -24 035 202 483 -993 341 2 611 847 -2 817 441
1 -63 1669 -24 035 202 483 -993 309 2 611 143 -2 813 569
1 -63 1669 -24 035 202 483 -993 309 2 611 207 -2 814 273
1 -63 1669 -24 035 202 499 -993 869 2 617 591 -2 838 033
1 -63 1669 -24 035 202 499 -993 837 2 616 951 -2 834 865
1 -63 1669 -24 035 202 499 -993 805 2 616 247 -2 830 993
1 -63 1669 -24 035 202 515 -994 365 2 622 695 -2 855 457
1 -63 1669 -24 035 202 515 -994 333 2 622 055 -2 852 289
1 -63 1669 -24 027 202 115 -987 069 2 564 919 -2 687 337
1 -63 1669 -24 027 202 115 -987 037 2 564 215 -2 683 593
1 -63 1669 -24 027 202 131 -987 565 2 569 959 -2 704 185
1 -63 1669 -24 027 202 131 -987 533 2 569 319 -2 701 017
1 -63 1669 -24 027 202 147 -988 093 2 575 703 -2 724 777
1 -63 1669 -24 027 202 147 -988 061 2 574 999 -2 720 905
1 -63 1669 -24 027 202 147 -988 061 2 575 063 -2 721 609
1 -63 1669 -24 027 202 147 -988 029 2 574 359 -2 717 737
1 -63 1669 -24 027 202 163 -988 589 2 580 807 -2 742 201
1 -63 1669 -24 027 202 163 -988 557 2 580 167 -2 739 033
1 -63 1669 -24 027 202 179 -989 085 2 585 911 -2 759 625
1 -63 1669 -24 019 201 779 -981 821 2 528 775 -2 594 673
1 -63 1669 -24 019 201 795 -982 317 2 533 815 -2 611 521
1 -63 1669 -24 019 201 795 -982 317 2 533 879 -2 612 097
1 -63 1669 -24 019 201 795 -982 285 2 533 175 -2 608 353
1 -63 1669 -24 019 201 811 -982 813 2 538 919 -2 628 945
1 -63 1669 -24 019 201 811 -982 781 2 538 279 -2 625 777
1 -63 1669 -24 019 201 827 -983 341 2 544 663 -2 649 537
1 -63 1669 -24 019 201 827 -983 309 2 544 023 -2 646 369
1 -63 1669 -24 019 201 827 -983 277 2 543 319 -2 642 497
1 -63 1669 -24 019 201 843 -983 805 2 549 127 -2 663 793
1 -63 1669 -24 011 201 443 -976 573 2 492 631 -2 502 009
1 -63 1669 -24 011 201 475 -977 565 2 502 775 -2 536 281
1 -63 1669 -24 011 201 475 -977 533 2 502 135 -2 533 113
1 -63 1669 -24 011 201 475 -977 501 2 501 495 -2 529 945
1 -63 1669 -24 011 201 491 -978 061 2 507 879 -2 553 705
1 -63 1669 -24 011 201 491 -978 029 2 507 239 -2 550 537
1 -63 1669 -24 011 201 507 -978 525 2 512 343 -2 567 961
1 -63 1669 -24 003 201 139 -972 317 2 466 631 -2 443 617
1 -63 1669 -24 003 201 139 -972 285 2 465 991 -2 440 449
1 -63 1669 -24 003 201 155 -972 781 2 471 095 -2 457 873
1 -63 1669 -24 003 201 155 -972 749 2 470 455 -2 454 705
1 -63 1669 -24 003 201 171 -973 277 2 476 199 -2 475 297
1 -63 1669 -23 995 200 835 -967 997 2 439 415 -2 379 465

```

Dimensions[A]

{53, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -3087, 81781, -1178027, 9934147, -48857533, 129157527, -140800009}

Array[c, 8].Transpose[A]

{c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202771 c[5] -
 997037 c[6] + 2631399 c[7] - 2851497 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24043 c[4] + 202787 c[5] - 997565 c[6] + 2637143 c[7] - 2872089 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202803 c[5] - 998125 c[6] + 2643591 c[7] -
 2896425 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202803 c[5] -
 998061 c[6] + 2642183 c[7] - 2888809 c[8], c[1] - 63 c[2] + 1669 c[3] -
 24043 c[4] + 202819 c[5] - 998589 c[6] + 2647927 c[7] - 2909401 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] + 202819 c[5] - 998589 c[6] +
 2647991 c[7] - 2910105 c[8], c[1] - 63 c[2] + 1669 c[3] - 24043 c[4] +
 202819 c[5] - 998557 c[6] + 2647287 c[7] - 2906233 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] + 202451 c[5] - 992317 c[6] +
 2600999 c[7] - 2779297 c[8], c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] +
 202451 c[5] - 992285 c[6] + 2600359 c[7] - 2776257 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] + 202467 c[5] - 992813 c[6] +
 2606039 c[7] - 2796145 c[8], c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] +
 202467 c[5] - 992813 c[6] + 2606103 c[7] - 2796849 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] + 202483 c[5] - 993341 c[6] +
 2611847 c[7] - 2817441 c[8], c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] +
 202483 c[5] - 993309 c[6] + 2611143 c[7] - 2813569 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] + 202483 c[5] - 993309 c[6] +
 2611207 c[7] - 2814273 c[8], c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] +
 202499 c[5] - 993869 c[6] + 2617591 c[7] - 2838033 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] + 202499 c[5] - 993837 c[6] +
 2616951 c[7] - 2834865 c[8], c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] +
 202499 c[5] - 993805 c[6] + 2616247 c[7] - 2830993 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] + 202515 c[5] - 994365 c[6] +
 2622695 c[7] - 2855457 c[8], c[1] - 63 c[2] + 1669 c[3] - 24035 c[4] +
 202515 c[5] - 994333 c[6] + 2622055 c[7] - 2852289 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24027 c[4] + 202115 c[5] - 987069 c[6] +
 2564919 c[7] - 2687337 c[8], c[1] - 63 c[2] + 1669 c[3] - 24027 c[4] +
 202115 c[5] - 987037 c[6] + 2564215 c[7] - 2683593 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24027 c[4] + 202131 c[5] - 987565 c[6] +
 2569959 c[7] - 2704185 c[8], c[1] - 63 c[2] + 1669 c[3] - 24027 c[4] +
 202131 c[5] - 987533 c[6] + 2569319 c[7] - 2701017 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24027 c[4] + 202147 c[5] - 988093 c[6] +
 2575703 c[7] - 2724777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24027 c[4] +
 202147 c[5] - 988061 c[6] + 2574999 c[7] - 2720905 c[8],
 c[1] - 63 c[2] + 1669 c[3] - 24027 c[4] + 202147 c[5] - 988061 c[6] +
 2575063 c[7] - 2721609 c[8], c[1] - 63 c[2] + 1669 c[3] - 24027 c[4] +
 202147 c[5] - 988029 c[6] + 2574359 c[7] - 2717737 c[8],


```

c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 163 c[5] - 988 589 c[6] +
  2 580 807 c[7] - 2 742 201 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 163 c[5] - 988 557 c[6] + 2 580 167 c[7] - 2 739 033 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 179 c[5] - 989 085 c[6] +
  2 585 911 c[7] - 2 759 625 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 779 c[5] - 981 821 c[6] + 2 528 775 c[7] - 2 594 673 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 317 c[6] +
  2 533 815 c[7] - 2 611 521 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 795 c[5] - 982 317 c[6] + 2 533 879 c[7] - 2 612 097 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 285 c[6] +
  2 533 175 c[7] - 2 608 353 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 811 c[5] - 982 813 c[6] + 2 538 919 c[7] - 2 628 945 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 781 c[6] +
  2 538 279 c[7] - 2 625 777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 827 c[5] - 983 341 c[6] + 2 544 663 c[7] - 2 649 537 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 309 c[6] +
  2 544 023 c[7] - 2 646 369 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 827 c[5] - 983 277 c[6] + 2 543 319 c[7] - 2 642 497 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 805 c[6] +
  2 549 127 c[7] - 2 663 793 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 443 c[5] - 976 573 c[6] + 2 492 631 c[7] - 2 502 009 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 565 c[6] +
  2 502 775 c[7] - 2 536 281 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 475 c[5] - 977 533 c[6] + 2 502 135 c[7] - 2 533 113 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 501 c[6] +
  2 501 495 c[7] - 2 529 945 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 491 c[5] - 978 061 c[6] + 2 507 879 c[7] - 2 553 705 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 029 c[6] +
  2 507 239 c[7] - 2 550 537 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 507 c[5] - 978 525 c[6] + 2 512 343 c[7] - 2 567 961 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 139 c[5] - 972 317 c[6] +
  2 466 631 c[7] - 2 443 617 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 139 c[5] - 972 285 c[6] + 2 465 991 c[7] - 2 440 449 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 781 c[6] +
  2 471 095 c[7] - 2 457 873 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 155 c[5] - 972 749 c[6] + 2 470 455 c[7] - 2 454 705 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 171 c[5] - 973 277 c[6] +
  2 476 199 c[7] - 2 475 297 c[8], c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
  200 835 c[5] - 967 997 c[6] + 2 439 415 c[7] - 2 379 465 c[8] }

```

Array[c, 8].g

```

49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 027 c[4] +
  9 934 147 c[5] - 48 857 533 c[6] + 129 157 527 c[7] - 140 800 009 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 178 027 c[4] +
  9 934 147 c[5] - 48 857 533 c[6] + 129 157 527 c[7] - 140 800 009 c[8] < 0 &&

```

$$\begin{aligned}
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,771 c[5] - 997\,037 c[6] + \\
& \quad 2\,631\,399 c[7] - 2\,851\,497 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,787 c[5] - 997\,565 c[6] + 2\,637\,143 c[7] - 2\,872\,089 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,803 c[5] - 998\,125 c[6] + \\
& \quad 2\,643\,591 c[7] - 2\,896\,425 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,803 c[5] - 998\,061 c[6] + 2\,642\,183 c[7] - 2\,888\,809 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,819 c[5] - 998\,589 c[6] + \\
& \quad 2\,647\,927 c[7] - 2\,909\,401 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + \\
& \quad 202\,819 c[5] - 998\,589 c[6] + 2\,647\,991 c[7] - 2\,910\,105 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,043 c[4] + 202\,819 c[5] - 998\,557 c[6] + \\
& \quad 2\,647\,287 c[7] - 2\,906\,233 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,451 c[5] - 992\,317 c[6] + 2\,600\,999 c[7] - 2\,779\,297 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,451 c[5] - 992\,285 c[6] + \\
& \quad 2\,600\,359 c[7] - 2\,776\,257 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,467 c[5] - 992\,813 c[6] + 2\,606\,039 c[7] - 2\,796\,145 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,467 c[5] - 992\,813 c[6] + \\
& \quad 2\,606\,103 c[7] - 2\,796\,849 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,483 c[5] - 993\,341 c[6] + 2\,611\,847 c[7] - 2\,817\,441 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,483 c[5] - 993\,309 c[6] + \\
& \quad 2\,611\,143 c[7] - 2\,813\,569 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,483 c[5] - 993\,309 c[6] + 2\,611\,207 c[7] - 2\,814\,273 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,499 c[5] - 993\,869 c[6] + \\
& \quad 2\,617\,591 c[7] - 2\,838\,033 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,499 c[5] - 993\,837 c[6] + 2\,616\,951 c[7] - 2\,834\,865 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,499 c[5] - 993\,805 c[6] + \\
& \quad 2\,616\,247 c[7] - 2\,830\,993 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + \\
& \quad 202\,515 c[5] - 994\,365 c[6] + 2\,622\,695 c[7] - 2\,855\,457 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,035 c[4] + 202\,515 c[5] - 994\,333 c[6] + \\
& \quad 2\,622\,055 c[7] - 2\,852\,289 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,115 c[5] - 987\,069 c[6] + 2\,564\,919 c[7] - 2\,687\,337 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,115 c[5] - 987\,037 c[6] + \\
& \quad 2\,564\,215 c[7] - 2\,683\,593 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,131 c[5] - 987\,565 c[6] + 2\,569\,959 c[7] - 2\,704\,185 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,131 c[5] - 987\,533 c[6] + \\
& \quad 2\,569\,319 c[7] - 2\,701\,017 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,147 c[5] - 988\,093 c[6] + 2\,575\,703 c[7] - 2\,724\,777 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,061 c[6] + \\
& \quad 2\,574\,999 c[7] - 2\,720\,905 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,147 c[5] - 988\,061 c[6] + 2\,575\,063 c[7] - 2\,721\,609 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,147 c[5] - 988\,029 c[6] + \\
& \quad 2\,574\,359 c[7] - 2\,717\,737 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,163 c[5] - 988\,589 c[6] + 2\,580\,807 c[7] - 2\,742\,201 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + 202\,163 c[5] - 988\,557 c[6] + \\
& \quad 2\,580\,167 c[7] - 2\,739\,033 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,027 c[4] + \\
& \quad 202\,179 c[5] - 989\,085 c[6] + 2\,585\,911 c[7] - 2\,759\,625 c[8] \geq 0 \&\& \\
& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] + 201\,779 c[5] - 981\,821 c[6] + \\
& \quad 2\,528\,775 c[7] - 2\,594\,673 c[8] \geq 0 \&\& c[1] - 63 c[2] + 1669 c[3] - 24\,019 c[4] +
\end{aligned}$$

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201 795 c[5] - 982 317 c[6] + 2 533 815 c[7] - 2 611 521 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 795 c[5] - 982 317 c[6] +
2 533 879 c[7] - 2 612 097 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 795 c[5] - 982 285 c[6] + 2 533 175 c[7] - 2 608 353 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 813 c[6] +
2 538 919 c[7] - 2 628 945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 811 c[5] - 982 781 c[6] + 2 538 279 c[7] - 2 625 777 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 341 c[6] +
2 544 663 c[7] - 2 649 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 827 c[5] - 983 309 c[6] + 2 544 023 c[7] - 2 646 369 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 277 c[6] +
2 543 319 c[7] - 2 642 497 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
201 843 c[5] - 983 805 c[6] + 2 549 127 c[7] - 2 663 793 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 443 c[5] - 976 573 c[6] +
2 492 631 c[7] - 2 502 009 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 475 c[5] - 977 565 c[6] + 2 502 775 c[7] - 2 536 281 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 533 c[6] +
2 502 135 c[7] - 2 533 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 475 c[5] - 977 501 c[6] + 2 501 495 c[7] - 2 529 945 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 061 c[6] +
2 507 879 c[7] - 2 553 705 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
201 491 c[5] - 978 029 c[6] + 2 507 239 c[7] - 2 550 537 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 507 c[5] - 978 525 c[6] +
2 512 343 c[7] - 2 567 961 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 139 c[5] - 972 317 c[6] + 2 466 631 c[7] - 2 443 617 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 139 c[5] - 972 285 c[6] +
2 465 991 c[7] - 2 440 449 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 155 c[5] - 972 781 c[6] + 2 471 095 c[7] - 2 457 873 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 749 c[6] +
2 470 455 c[7] - 2 454 705 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
201 171 c[5] - 973 277 c[6] + 2 476 199 c[7] - 2 475 297 c[8] ≥ 0 &&
c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] + 200 835 c[5] - 967 997 c[6] +
2 439 415 c[7] - 2 379 465 c[8] ≥ 0, Array[c, 8], Integers]]
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GCD[0, 0, 0, 0, -16 028 637, -6 112 248, -1 330 674, -230 596]
1

cert.g
-122 011 289

{0, 0, 0, 0, -16 028 637, -6 112 248, -1 330 674, -230 596}.
Reverse[gpart[listdim17[[168]]]]
-122 011 289

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cert.Transpose[A]

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 269 614 983, 195 126 279, 43 461 127, 270 976 407, 196 487 703, 200 691 303, 78 542 439,
 154 392 567, 79 903 863, 230 242 695, 78 577 543, 155 753 991, 4 088 839, 231 604 119,
 157 115 415, 232 965 543, 237 169 143, 190 870 407, 238 530 567, 116 381 703,
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chi = listdim17[[169]]

$$(-11 + x)^4 (-9 + x)^9 (5 + x)^{32} (4712 - 2401 x + 443 x^2 - 35 x^3 + x^4)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

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{201 905, -176 458, 60 727, -10 660, 1015, -50, 1},
{203 489, -176 778, 60 743, -10 660, 1015, -50, 1},
{192 537, -173 682, 60 463, -10 652, 1015, -50, 1},
{193 833, -173 970, 60 479, -10 652, 1015, -50, 1},
{193 481, -173 938, 60 479, -10 652, 1015, -50, 1},
{193 545, -173 938, 60 479, -10 652, 1015, -50, 1},
{195 417, -174 290, 60 495, -10 652, 1015, -50, 1},
{195 129, -174 258, 60 495, -10 652, 1015, -50, 1},
{194 777, -174 226, 60 495, -10 652, 1015, -50, 1},
{197 001, -174 610, 60 511, -10 652, 1015, -50, 1},
{196 713, -174 578, 60 511, -10 652, 1015, -50, 1},
{196 361, -174 546, 60 511, -10 652, 1015, -50, 1},
{198 297, -174 898, 60 527, -10 652, 1015, -50, 1},
{188 289, -172 058, 60 263, -10 644, 1015, -50, 1},

```

```
{188 001, -172 026, 60 263, -10 644, 1015, -50, 1},
{189 585, -172 346, 60 279, -10 644, 1015, -50, 1},
{191 169, -172 666, 60 295, -10 644, 1015, -50, 1},
{182 457, -170 114, 60 047, -10 636, 1015, -50, 1},
{184 041, -170 434, 60 063, -10 636, 1015, -50, 1}};
```

```
A // MatrixForm
```

```
( 217 833 -182 130 61 375 -10 684 1015 -50 1 )
214 137 -181 266 61 327 -10 684 1015 -50 1
215 945 -181 618 61 343 -10 684 1015 -50 1
215 593 -181 586 61 343 -10 684 1015 -50 1
215 657 -181 586 61 343 -10 684 1015 -50 1
215 721 -181 586 61 343 -10 684 1015 -50 1
215 369 -181 554 61 343 -10 684 1015 -50 1
216 889 -181 874 61 359 -10 684 1015 -50 1
216 601 -181 842 61 359 -10 684 1015 -50 1
209 457 -179 450 61 111 -10 676 1015 -50 1
209 105 -179 418 61 111 -10 676 1015 -50 1
209 169 -179 418 61 111 -10 676 1015 -50 1
208 881 -179 386 61 111 -10 676 1015 -50 1
211 041 -179 770 61 127 -10 676 1015 -50 1
210 689 -179 738 61 127 -10 676 1015 -50 1
210 753 -179 738 61 127 -10 676 1015 -50 1
210 401 -179 706 61 127 -10 676 1015 -50 1
210 465 -179 706 61 127 -10 676 1015 -50 1
210 049 -179 674 61 127 -10 676 1015 -50 1
210 113 -179 674 61 127 -10 676 1015 -50 1
210 177 -179 674 61 127 -10 676 1015 -50 1
209 825 -179 642 61 127 -10 676 1015 -50 1
211 697 -179 994 61 143 -10 676 1015 -50 1
211 761 -179 994 61 143 -10 676 1015 -50 1
211 345 -179 962 61 143 -10 676 1015 -50 1
211 409 -179 962 61 143 -10 676 1015 -50 1
211 057 -179 930 61 143 -10 676 1015 -50 1
212 641 -180 250 61 159 -10 676 1015 -50 1
212 289 -180 218 61 159 -10 676 1015 -50 1
202 617 -177 250 60 879 -10 668 1015 -50 1
202 329 -177 218 60 879 -10 668 1015 -50 1
203 913 -177 538 60 895 -10 668 1015 -50 1
203 561 -177 506 60 895 -10 668 1015 -50 1
203 625 -177 506 60 895 -10 668 1015 -50 1
203 337 -177 474 60 895 -10 668 1015 -50 1
205 497 -177 858 60 911 -10 668 1015 -50 1
205 209 -177 826 60 911 -10 668 1015 -50 1
204 857 -177 794 60 911 -10 668 1015 -50 1
204 921 -177 794 60 911 -10 668 1015 -50 1
204 569 -177 762 60 911 -10 668 1015 -50 1
204 633 -177 762 60 911 -10 668 1015 -50 1
206 793 -178 146 60 927 -10 668 1015 -50 1
206 441 -178 114 60 927 -10 668 1015 -50 1
206 505 -178 114 60 927 -10 668 1015 -50 1
206 153 -178 082 60 927 -10 668 1015 -50 1
206 217 -178 082 60 927 -10 668 1015 -50 1
205 801 -178 050 60 927 -10 668 1015 -50 1 )
```



```

205 865 -178 050 60 927 -10 668 1015 -50 1
205 513 -178 018 60 927 -10 668 1015 -50 1
207 737 -178 402 60 943 -10 668 1015 -50 1
207 449 -178 370 60 943 -10 668 1015 -50 1
207 097 -178 338 60 943 -10 668 1015 -50 1
208 681 -178 658 60 959 -10 668 1015 -50 1
198 369 -175 626 60 679 -10 660 1015 -50 1
198 081 -175 594 60 679 -10 660 1015 -50 1
197 793 -175 562 60 679 -10 660 1015 -50 1
199 665 -175 914 60 695 -10 660 1015 -50 1
199 377 -175 882 60 695 -10 660 1015 -50 1
199 025 -175 850 60 695 -10 660 1015 -50 1
199 089 -175 850 60 695 -10 660 1015 -50 1
201 249 -176 234 60 711 -10 660 1015 -50 1
200 961 -176 202 60 711 -10 660 1015 -50 1
200 609 -176 170 60 711 -10 660 1015 -50 1
200 673 -176 170 60 711 -10 660 1015 -50 1
200 321 -176 138 60 711 -10 660 1015 -50 1
202 545 -176 522 60 727 -10 660 1015 -50 1
202 257 -176 490 60 727 -10 660 1015 -50 1
201 905 -176 458 60 727 -10 660 1015 -50 1
203 489 -176 778 60 743 -10 660 1015 -50 1
192 537 -173 682 60 463 -10 652 1015 -50 1
193 833 -173 970 60 479 -10 652 1015 -50 1
193 481 -173 938 60 479 -10 652 1015 -50 1
193 545 -173 938 60 479 -10 652 1015 -50 1
195 417 -174 290 60 495 -10 652 1015 -50 1
195 129 -174 258 60 495 -10 652 1015 -50 1
194 777 -174 226 60 495 -10 652 1015 -50 1
197 001 -174 610 60 511 -10 652 1015 -50 1
196 713 -174 578 60 511 -10 652 1015 -50 1
196 361 -174 546 60 511 -10 652 1015 -50 1
198 297 -174 898 60 527 -10 652 1015 -50 1
188 289 -172 058 60 263 -10 644 1015 -50 1
188 001 -172 026 60 263 -10 644 1015 -50 1
189 585 -172 346 60 279 -10 644 1015 -50 1
191 169 -172 666 60 295 -10 644 1015 -50 1
182 457 -170 114 60 047 -10 636 1015 -50 1
184 041 -170 434 60 063 -10 636 1015 -50 1

```

Dimensions[A]

{86, 7}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{10 558 521, -8 890 242, 3 004 303, -523 436, 49 735, -2450, 49}

Array[c, 7].Transpose[A]

```

{217 833 c[1] - 182 130 c[2] + 61 375 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],
 214 137 c[1] - 181 266 c[2] + 61 327 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],
 215 945 c[1] - 181 618 c[2] + 61 343 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],
 215 593 c[1] - 181 586 c[2] + 61 343 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],
 215 657 c[1] - 181 586 c[2] + 61 343 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],
 215 721 c[1] - 181 586 c[2] + 61 343 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],

```

[illegible]

```

198 369 c[1] - 175 626 c[2] + 60 679 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
198 081 c[1] - 175 594 c[2] + 60 679 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
197 793 c[1] - 175 562 c[2] + 60 679 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
199 665 c[1] - 175 914 c[2] + 60 695 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
199 377 c[1] - 175 882 c[2] + 60 695 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
199 025 c[1] - 175 850 c[2] + 60 695 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
199 089 c[1] - 175 850 c[2] + 60 695 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
201 249 c[1] - 176 234 c[2] + 60 711 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
200 961 c[1] - 176 202 c[2] + 60 711 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
200 609 c[1] - 176 170 c[2] + 60 711 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
200 673 c[1] - 176 170 c[2] + 60 711 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
200 321 c[1] - 176 138 c[2] + 60 711 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
202 545 c[1] - 176 522 c[2] + 60 727 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
202 257 c[1] - 176 490 c[2] + 60 727 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
201 905 c[1] - 176 458 c[2] + 60 727 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
203 489 c[1] - 176 778 c[2] + 60 743 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
192 537 c[1] - 173 682 c[2] + 60 463 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
193 833 c[1] - 173 970 c[2] + 60 479 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
193 481 c[1] - 173 938 c[2] + 60 479 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
193 545 c[1] - 173 938 c[2] + 60 479 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
195 417 c[1] - 174 290 c[2] + 60 495 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
195 129 c[1] - 174 258 c[2] + 60 495 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
194 777 c[1] - 174 226 c[2] + 60 495 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
197 001 c[1] - 174 610 c[2] + 60 511 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
196 713 c[1] - 174 578 c[2] + 60 511 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
196 361 c[1] - 174 546 c[2] + 60 511 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
198 297 c[1] - 174 898 c[2] + 60 527 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
188 289 c[1] - 172 058 c[2] + 60 263 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
188 001 c[1] - 172 026 c[2] + 60 263 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
189 585 c[1] - 172 346 c[2] + 60 279 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
191 169 c[1] - 172 666 c[2] + 60 295 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
182 457 c[1] - 170 114 c[2] + 60 047 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7] ,
184 041 c[1] - 170 434 c[2] + 60 063 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7] }

```

Array[c, 7].g

```

10 558 521 c[1] - 8 890 242 c[2] + 3 004 303 c[3] -
523 436 c[4] + 49 735 c[5] - 2450 c[6] + 49 c[7]

```

cert =

```

Flatten[Array[c, 7] /. FindInstance[10 558 521 c[1] - 8 890 242 c[2] + 3 004 303 c[3] -
523 436 c[4] + 49 735 c[5] - 2450 c[6] + 49 c[7] < 0 &&
217 833 c[1] - 182 130 c[2] + 61 375 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 214 137 c[1] - 181 266 c[2] + 61 327 c[3] - 10 684 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 215 945 c[1] - 181 618 c[2] +
61 343 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
215 593 c[1] - 181 586 c[2] + 61 343 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 215 657 c[1] - 181 586 c[2] + 61 343 c[3] - 10 684 c[4] +

```

$$\begin{aligned}
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 215721 c[1] - 181586 c[2] + \\
& 61343 c[3] - 10684 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 215369 c[1] - 181554 c[2] + 61343 c[3] - 10684 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 216889 c[1] - 181874 c[2] + 61359 c[3] - 10684 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 216601 c[1] - 181842 c[2] + \\
& 61359 c[3] - 10684 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 209457 c[1] - 179450 c[2] + 61111 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 209105 c[1] - 179418 c[2] + 61111 c[3] - 10676 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 209169 c[1] - 179418 c[2] + \\
& 61111 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 208881 c[1] - 179386 c[2] + 61111 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 211041 c[1] - 179770 c[2] + 61127 c[3] - 10676 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 210689 c[1] - 179738 c[2] + \\
& 61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 210753 c[1] - 179738 c[2] + 61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 210401 c[1] - 179706 c[2] + 61127 c[3] - 10676 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 210465 c[1] - 179706 c[2] + \\
& 61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 210049 c[1] - 179674 c[2] + 61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 210113 c[1] - 179674 c[2] + 61127 c[3] - 10676 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 210177 c[1] - 179674 c[2] + \\
& 61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 209825 c[1] - 179642 c[2] + 61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 211697 c[1] - 179994 c[2] + 61143 c[3] - 10676 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 211761 c[1] - 179994 c[2] + \\
& 61143 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 211345 c[1] - 179962 c[2] + 61143 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 211409 c[1] - 179962 c[2] + 61143 c[3] - 10676 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 211057 c[1] - 179930 c[2] + \\
& 61143 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 212641 c[1] - 180250 c[2] + 61159 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 212289 c[1] - 180218 c[2] + 61159 c[3] - 10676 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 202617 c[1] - 177250 c[2] + \\
& 60879 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 202329 c[1] - 177218 c[2] + 60879 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 203913 c[1] - 177538 c[2] + 60895 c[3] - 10668 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 203561 c[1] - 177506 c[2] + \\
& 60895 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 203625 c[1] - 177506 c[2] + 60895 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 203337 c[1] - 177474 c[2] + 60895 c[3] - 10668 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 205497 c[1] - 177858 c[2] + \\
& 60911 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 205209 c[1] - 177826 c[2] + 60911 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq \\
& 0 \& 204857 c[1] - 177794 c[2] + 60911 c[3] - 10668 c[4] + \\
& 1015 c[5] - 50 c[6] + c[7] \geq 0 \& 204921 c[1] - 177794 c[2] + \\
& 60911 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq 0 \& \\
& 204569 c[1] - 177762 c[2] + 60911 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] \geq
\end{aligned}$$

$$\begin{aligned}
& 0 \&\& 204\,633\,c[1] - 177\,762\,c[2] + 60\,911\,c[3] - 10\,668\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 206\,793\,c[1] - 178\,146\,c[2] + \\
& 60\,927\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 206\,441\,c[1] - 178\,114\,c[2] + 60\,927\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 206\,505\,c[1] - 178\,114\,c[2] + 60\,927\,c[3] - 10\,668\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 206\,153\,c[1] - 178\,082\,c[2] + \\
& 60\,927\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 206\,217\,c[1] - 178\,082\,c[2] + 60\,927\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 205\,801\,c[1] - 178\,050\,c[2] + 60\,927\,c[3] - 10\,668\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 205\,865\,c[1] - 178\,050\,c[2] + \\
& 60\,927\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 205\,513\,c[1] - 178\,018\,c[2] + 60\,927\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 207\,737\,c[1] - 178\,402\,c[2] + 60\,943\,c[3] - 10\,668\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 207\,449\,c[1] - 178\,370\,c[2] + \\
& 60\,943\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 207\,097\,c[1] - 178\,338\,c[2] + 60\,943\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 208\,681\,c[1] - 178\,658\,c[2] + 60\,959\,c[3] - 10\,668\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 198\,369\,c[1] - 175\,626\,c[2] + \\
& 60\,679\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 198\,081\,c[1] - 175\,594\,c[2] + 60\,679\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 197\,793\,c[1] - 175\,562\,c[2] + 60\,679\,c[3] - 10\,660\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 199\,665\,c[1] - 175\,914\,c[2] + \\
& 60\,695\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 199\,377\,c[1] - 175\,882\,c[2] + 60\,695\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 199\,025\,c[1] - 175\,850\,c[2] + 60\,695\,c[3] - 10\,660\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 199\,089\,c[1] - 175\,850\,c[2] + \\
& 60\,695\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 201\,249\,c[1] - 176\,234\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 200\,961\,c[1] - 176\,202\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 200\,609\,c[1] - 176\,170\,c[2] + \\
& 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 200\,673\,c[1] - 176\,170\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 200\,321\,c[1] - 176\,138\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 202\,545\,c[1] - 176\,522\,c[2] + \\
& 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 202\,257\,c[1] - 176\,490\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 201\,905\,c[1] - 176\,458\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 203\,489\,c[1] - 176\,778\,c[2] + \\
& 60\,743\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 192\,537\,c[1] - 173\,682\,c[2] + 60\,463\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 193\,833\,c[1] - 173\,970\,c[2] + 60\,479\,c[3] - 10\,652\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 193\,481\,c[1] - 173\,938\,c[2] + \\
& 60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& \\
& 193\,545\,c[1] - 173\,938\,c[2] + 60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \&\& 195\,417\,c[1] - 174\,290\,c[2] + 60\,495\,c[3] - 10\,652\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 195\,129\,c[1] - 174\,258\,c[2] + \\
& 60\,495\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&
\end{aligned}$$

```

194 777 c[1] - 174 226 c[2] + 60 495 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 197 001 c[1] - 174 610 c[2] + 60 511 c[3] - 10 652 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 196 713 c[1] - 174 578 c[2] +
60 511 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
196 361 c[1] - 174 546 c[2] + 60 511 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 198 297 c[1] - 174 898 c[2] + 60 527 c[3] - 10 652 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 188 289 c[1] - 172 058 c[2] +
60 263 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
188 001 c[1] - 172 026 c[2] + 60 263 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 189 585 c[1] - 172 346 c[2] + 60 279 c[3] - 10 644 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 191 169 c[1] - 172 666 c[2] +
60 295 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
182 457 c[1] - 170 114 c[2] + 60 047 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 184 041 c[1] - 170 434 c[2] + 60 063 c[3] - 10 636 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{23 596, 235 950, 2 359 502, 23 665 802, 0, 0, 145 864 846 120}

GCD[23 596, 235 950, 2 359 502, 23 665 802, 0, 0, 145 864 846 120]
2

cert = cert / 2
{11 798, 117 975, 1 179 751, 11 832 901, 0, 0, 72 932 423 060}

Reverse[cert]
{72 932 423 060, 0, 0, 11 832 901, 1 179 751, 117 975, 11 798}

cert.g
-5 038 535

{11 798, 117 975, 1 179 751, 11 832 901, 0, 0, 72 932 423 060}.gpart[listdim17[[169]]]
-5 038 535

cert.Transpose[A]
{133 385, 1 830 329, 509 929, 132 233, 887 305, 1 642 377, 1 264 681, 321 657, 699 033,
695 281, 317 585, 1 072 657, 1 450 033, 507 329, 129 633, 884 705, 507 009, 1 262 081,
129 313, 884 385, 1 639 457, 1 261 761, 696 433, 1 451 505, 318 737, 1 073 809, 696 113,
508 161, 130 465, 502 937, 880 313, 692 361, 314 665, 1 069 737, 1 447 113, 504 409,
881 785, 504 089, 1 259 161, 881 465, 1 636 537, 693 833, 316 137, 1 071 209, 693 513,
1 448 585, 315 817, 1 070 889, 693 193, 505 561, 882 937, 505 241, 317 289, 689 441,
1 066 817, 1 444 193, 878 865, 1 256 241, 878 545, 1 633 617, 690 913, 1 068 289,
690 593, 1 445 665, 1 067 969, 880 337, 1 257 713, 880 017, 692 065, 1 063 897,
1 253 321, 875 625, 1 630 697, 1 065 369, 1 442 745, 1 065 049, 877 417, 1 254 793,
877 097, 1 066 841, 1 250 401, 1 627 777, 1 439 825, 1 251 873, 1 624 857, 1 436 905}

```

```
chi = listdim17[[170]]
```

$$(-11 + x)^4 (-9 + x)^8 (-8 + x) (5 + x)^{32} (5297 - 2628 x + 470 x^2 - 36 x^3 + x^4)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -59, 1465, -19819, 157499, -733673, 1849995, -1941489},
      {1, -59, 1465, -19819, 157499, -733641, 1849355, -1938449},
      {1, -59, 1465, -19819, 157515, -734137, 1854331, -1954593},
      {1, -59, 1465, -19819, 157515, -734105, 1853819, -1952577},
      {1, -59, 1465, -19811, 157179, -728921, 1818955, -1866249},
      {1, -59, 1465, -19811, 157195, -729385, 1823355, -1879929},
      {1, -59, 1465, -19811, 157211, -729849, 1827755, -1893609},
      {1, -59, 1465, -19811, 157211, -729817, 1827243, -1891593},
      {1, -59, 1465, -19811, 157227, -730281, 1831643, -1905273},
      {1, -59, 1465, -19811, 157227, -730249, 1831067, -1902681},
      {1, -59, 1465, -19811, 157243, -730713, 1835467, -1916361},
      {1, -59, 1465, -19811, 157243, -730713, 1835531, -1916937},
      {1, -59, 1465, -19811, 157243, -730681, 1834891, -1913769},
      {1, -59, 1465, -19811, 157243, -730649, 1834315, -1911305},
      {1, -59, 1465, -19811, 157259, -731081, 1838139, -1922393},
      {1, -59, 1465, -19803, 156891, -725097, 1796715, -1818369},
      {1, -59, 1465, -19803, 156907, -725529, 1800603, -1830033},
      {1, -59, 1465, -19803, 156923, -725961, 1804427, -1841121},
      {1, -59, 1465, -19803, 156939, -726425, 1808891, -1855377},
      {1, -59, 1465, -19803, 156939, -726393, 1808315, -1852785},
      {1, -59, 1465, -19803, 156955, -726825, 1812139, -1863873},
      {1, -59, 1465, -19803, 156971, -727289, 1816603, -1878129},
      {1, -59, 1465, -19803, 156971, -727257, 1815963, -1874961},
      {1, -59, 1465, -19795, 156619, -721641, 1777275, -1777545},
      {1, -59, 1465, -19795, 156635, -722105, 1781675, -1791225},
      {1, -59, 1465, -19795, 156651, -722537, 1785563, -1802889},
      {1, -59, 1465, -19795, 156667, -722969, 1789387, -1813977},
      {1, -59, 1465, -19795, 156683, -723433, 1793851, -1828233},
      {1, -59, 1465, -19787, 156347, -718217, 1758347, -1738737},
      {1, -59, 1465, -19787, 156379, -719113, 1766635, -1764081},
      {1, -59, 1465, -19779, 156059, -714361, 1735595, -1688841}};
```

A // MatrixForm

```
( 1 -59 1465 -19819 157499 -733673 1849995 -1941489
 1 -59 1465 -19819 157499 -733641 1849355 -1938449
 1 -59 1465 -19819 157515 -734137 1854331 -1954593
 1 -59 1465 -19819 157515 -734105 1853819 -1952577
 1 -59 1465 -19811 157179 -728921 1818955 -1866249
 1 -59 1465 -19811 157195 -729385 1823355 -1879929
 1 -59 1465 -19811 157211 -729849 1827755 -1893609
 1 -59 1465 -19811 157211 -729817 1827243 -1891593
 1 -59 1465 -19811 157227 -730281 1831643 -1905273
 1 -59 1465 -19811 157227 -730249 1831067 -1902681
 1 -59 1465 -19811 157243 -730713 1835467 -1916361
 1 -59 1465 -19811 157243 -730713 1835531 -1916937
 1 -59 1465 -19811 157243 -730681 1834891 -1913769
 1 -59 1465 -19811 157243 -730649 1834315 -1911305
 1 -59 1465 -19811 157259 -731081 1838139 -1922393
 1 -59 1465 -19803 156891 -725097 1796715 -1818369
 1 -59 1465 -19803 156907 -725529 1800603 -1830033
 1 -59 1465 -19803 156923 -725961 1804427 -1841121
 1 -59 1465 -19803 156939 -726425 1808891 -1855377
 1 -59 1465 -19803 156939 -726393 1808315 -1852785
 1 -59 1465 -19803 156955 -726825 1812139 -1863873
 1 -59 1465 -19803 156971 -727289 1816603 -1878129
 1 -59 1465 -19803 156971 -727257 1815963 -1874961
 1 -59 1465 -19795 156619 -721641 1777275 -1777545
 1 -59 1465 -19795 156635 -722105 1781675 -1791225
 1 -59 1465 -19795 156651 -722537 1785563 -1802889
 1 -59 1465 -19795 156667 -722969 1789387 -1813977
 1 -59 1465 -19795 156683 -723433 1793851 -1828233
 1 -59 1465 -19787 156347 -718217 1758347 -1738737
 1 -59 1465 -19787 156379 -719113 1766635 -1764081
 1 -59 1465 -19779 156059 -714361 1735595 -1688841)
```

Dimensions[A]

```
{31, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -2891, 71785, -971051, 7715227, -35927561, 90548171, -94945153}
```

Array[c, 8].Transpose[A]

$$\begin{aligned}
& \{c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157499 c[5] - \\
& \quad 733673 c[6] + 1849995 c[7] - 1941489 c[8], c[1] - 59 c[2] + 1465 c[3] - \\
& \quad 19819 c[4] + 157499 c[5] - 733641 c[6] + 1849355 c[7] - 1938449 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157515 c[5] - 734137 c[6] + 1854331 c[7] - \\
& \quad 1954593 c[8], c[1] - 59 c[2] + 1465 c[3] - 19819 c[4] + 157515 c[5] - \\
& \quad 734105 c[6] + 1853819 c[7] - 1952577 c[8], c[1] - 59 c[2] + 1465 c[3] - \\
& \quad 19811 c[4] + 157179 c[5] - 728921 c[6] + 1818955 c[7] - 1866249 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157195 c[5] - 729385 c[6] + \\
& \quad 1823355 c[7] - 1879929 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + \\
& \quad 157211 c[5] - 729849 c[6] + 1827755 c[7] - 1893609 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157211 c[5] - 729817 c[6] + \\
& \quad 1827243 c[7] - 1891593 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + \\
& \quad 157227 c[5] - 730281 c[6] + 1831643 c[7] - 1905273 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157227 c[5] - 730249 c[6] + \\
& \quad 1831067 c[7] - 1902681 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + \\
& \quad 157243 c[5] - 730713 c[6] + 1835467 c[7] - 1916361 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157243 c[5] - 730713 c[6] + \\
& \quad 1835531 c[7] - 1916937 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + \\
& \quad 157243 c[5] - 730681 c[6] + 1834891 c[7] - 1913769 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157243 c[5] - 730649 c[6] + \\
& \quad 1834315 c[7] - 1911305 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + \\
& \quad 157259 c[5] - 731081 c[6] + 1838139 c[7] - 1922393 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156891 c[5] - 725097 c[6] + \\
& \quad 1796715 c[7] - 1818369 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + \\
& \quad 156907 c[5] - 725529 c[6] + 1800603 c[7] - 1830033 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156923 c[5] - 725961 c[6] + \\
& \quad 1804427 c[7] - 1841121 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + \\
& \quad 156939 c[5] - 726425 c[6] + 1808891 c[7] - 1855377 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156939 c[5] - 726393 c[6] + \\
& \quad 1808315 c[7] - 1852785 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + \\
& \quad 156955 c[5] - 726825 c[6] + 1812139 c[7] - 1863873 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156971 c[5] - 727289 c[6] + \\
& \quad 1816603 c[7] - 1878129 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + \\
& \quad 156971 c[5] - 727257 c[6] + 1815963 c[7] - 1874961 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156619 c[5] - 721641 c[6] + \\
& \quad 1777275 c[7] - 1777545 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + \\
& \quad 156635 c[5] - 722105 c[6] + 1781675 c[7] - 1791225 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156651 c[5] - 722537 c[6] + \\
& \quad 1785563 c[7] - 1802889 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + \\
& \quad 156667 c[5] - 722969 c[6] + 1789387 c[7] - 1813977 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156683 c[5] - 723433 c[6] + \\
& \quad 1793851 c[7] - 1828233 c[8], c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + \\
& \quad 156347 c[5] - 718217 c[6] + 1758347 c[7] - 1738737 c[8], \\
& c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156379 c[5] - 719113 c[6] + \\
& \quad 1766635 c[7] - 1764081 c[8], c[1] - 59 c[2] + 1465 c[3] - 19779 c[4] + \\
& \quad 156059 c[5] - 714361 c[6] + 1735595 c[7] - 1688841 c[8]\}
\end{aligned}$$

Array[c, 8].g

49 c[1] - 2891 c[2] + 71 785 c[3] - 971 051 c[4] +
7 715 227 c[5] - 35 927 561 c[6] + 90 548 171 c[7] - 94 945 153 c[8]

cert =

```
Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2891 c[2] + 71 785 c[3] - 971 051 c[4] +
  7 715 227 c[5] - 35 927 561 c[6] + 90 548 171 c[7] - 94 945 153 c[8] < 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] + 157 499 c[5] - 733 673 c[6] +
  1 849 995 c[7] - 1 941 489 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] +
  157 499 c[5] - 733 641 c[6] + 1 849 355 c[7] - 1 938 449 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] + 157 515 c[5] - 734 137 c[6] +
  1 854 331 c[7] - 1 954 593 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 819 c[4] +
  157 515 c[5] - 734 105 c[6] + 1 853 819 c[7] - 1 952 577 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 179 c[5] - 728 921 c[6] +
  1 818 955 c[7] - 1 866 249 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
  157 195 c[5] - 729 385 c[6] + 1 823 355 c[7] - 1 879 929 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 211 c[5] - 729 849 c[6] +
  1 827 755 c[7] - 1 893 609 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
  157 211 c[5] - 729 817 c[6] + 1 827 243 c[7] - 1 891 593 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 227 c[5] - 730 281 c[6] +
  1 831 643 c[7] - 1 905 273 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
  157 227 c[5] - 730 249 c[6] + 1 831 067 c[7] - 1 902 681 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 243 c[5] - 730 713 c[6] +
  1 835 467 c[7] - 1 916 361 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
  157 243 c[5] - 730 713 c[6] + 1 835 531 c[7] - 1 916 937 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 243 c[5] - 730 681 c[6] +
  1 834 891 c[7] - 1 913 769 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
  157 243 c[5] - 730 649 c[6] + 1 834 315 c[7] - 1 911 305 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 259 c[5] - 731 081 c[6] +
  1 838 139 c[7] - 1 922 393 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 891 c[5] - 725 097 c[6] + 1 796 715 c[7] - 1 818 369 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 907 c[5] - 725 529 c[6] +
  1 800 603 c[7] - 1 830 033 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 923 c[5] - 725 961 c[6] + 1 804 427 c[7] - 1 841 121 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 939 c[5] - 726 425 c[6] +
  1 808 891 c[7] - 1 855 377 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 939 c[5] - 726 393 c[6] + 1 808 315 c[7] - 1 852 785 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 825 c[6] +
  1 812 139 c[7] - 1 863 873 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 971 c[5] - 727 289 c[6] + 1 816 603 c[7] - 1 878 129 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 971 c[5] - 727 257 c[6] +
  1 815 963 c[7] - 1 874 961 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 619 c[5] - 721 641 c[6] + 1 777 275 c[7] - 1 777 545 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 635 c[5] - 722 105 c[6] +
  1 781 675 c[7] - 1 791 225 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 651 c[5] - 722 537 c[6] + 1 785 563 c[7] - 1 802 889 c[8] ≥ 0 &&
  c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 667 c[5] - 722 969 c[6] +
```

```

1 789 387 c[7] - 1 813 977 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
156 683 c[5] - 723 433 c[6] + 1 793 851 c[7] - 1 828 233 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 347 c[5] - 718 217 c[6] +
1 758 347 c[7] - 1 738 737 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
156 379 c[5] - 719 113 c[6] + 1 766 635 c[7] - 1 764 081 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] + 156 059 c[5] - 714 361 c[6] +
1 735 595 c[7] - 1 688 841 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -2 848 088, -1 208 753, -297 136, -57 413}

GCD[0, 0, 0, 0, -2 848 088, -1 208 753, -297 136, -57 413]
1

cert.g
-133 563 610

{0, 0, 0, 0, -2 848 088, -1 208 753, -297 136, -57 413}.Reverse[gpart[listdim17[[170]]]]
-133 563 610

cert.Transpose[A]
{25 021 494, 1 972 918, 4 271 734, 1 980 662, 95 762 718, 89 066 142, 82 369 566,
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25 001 438, 1 960 606, 153 110 790, 144 123 142, 121 082 310, 128 438 918,
112 094 662, 89 053 830, 96 410 438, 66 012 998, 182 835 886, 176 139 310,
167 151 662, 144 110 830, 151 467 438, 214 852 054, 199 167 830, 269 909 054}

chi = listdim17[[171]]
(-11 + x)3 (-9 + x)9 (-7 + x) (5 + x)32 (7400 - 3389 x + 555 x2 - 39 x3 + x4)

CoefficientList[feasibleinterlacingpolylist[chi], x]
A = {{1, -61, 1565, -21 849, 178 867, -856 295, 2 211 887, -2 366 595},
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A // MatrixForm

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Dimensions[A]

{82, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

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Array[c, 8].Transpose[A]

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 2 194 815 c[7] - 2 336 587 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
 178 227 c[5] - 846 855 c[6] + 2 151 151 c[7] - 2 223 027 c[8],
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 2 156 895 c[7] - 2 243 619 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
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 c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 243 c[5] - 847 351 c[6] +

$$\begin{aligned}
& 2\,156\,255\,c[7] - 2\,240\,451\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,243\,c[5] - 847\,319\,c[6] + 2\,155\,551\,c[7] - 2\,236\,707\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,243\,c[5] - 847\,319\,c[6] + \\
& 2\,155\,615\,c[7] - 2\,237\,283\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,243\,c[5] - 847\,287\,c[6] + 2\,154\,911\,c[7] - 2\,233\,539\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,259\,c[5] - 847\,847\,c[6] + \\
& 2\,161\,295\,c[7] - 2\,257\,299\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,259\,c[5] - 847\,847\,c[6] + 2\,161\,359\,c[7] - 2\,257\,875\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,259\,c[5] - 847\,815\,c[6] + \\
& 2\,160\,655\,c[7] - 2\,254\,131\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,259\,c[5] - 847\,783\,c[6] + 2\,160\,015\,c[7] - 2\,250\,963\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,259\,c[5] - 847\,751\,c[6] + \\
& 2\,159\,311\,c[7] - 2\,247\,091\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,259\,c[5] - 847\,751\,c[6] + 2\,159\,375\,c[7] - 2\,247\,795\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,259\,c[5] - 847\,719\,c[6] + \\
& 2\,158\,735\,c[7] - 2\,244\,627\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,275\,c[5] - 848\,375\,c[6] + 2\,167\,039\,c[7] - 2\,277\,891\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,275\,c[5] - 848\,343\,c[6] + \\
& 2\,166\,399\,c[7] - 2\,274\,723\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,275\,c[5] - 848\,311\,c[6] + 2\,165\,759\,c[7] - 2\,271\,555\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,275\,c[5] - 848\,279\,c[6] + \\
& 2\,165\,119\,c[7] - 2\,268\,387\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,275\,c[5] - 848\,247\,c[6] + 2\,164\,479\,c[7] - 2\,265\,219\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,275\,c[5] - 848\,215\,c[6] + \\
& 2\,163\,775\,c[7] - 2\,261\,347\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,291\,c[5] - 848\,775\,c[6] + 2\,170\,223\,c[7] - 2\,285\,811\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,291\,c[5] - 848\,743\,c[6] + \\
& 2\,169\,583\,c[7] - 2\,282\,643\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& 178\,291\,c[5] - 848\,711\,c[6] + 2\,168\,879\,c[7] - 2\,278\,771\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,923\,c[5] - 842\,599\,c[6] + \\
& 2\,125\,151\,c[7] - 2\,164\,635\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& 177\,923\,c[5] - 842\,599\,c[6] + 2\,125\,215\,c[7] - 2\,165\,211\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,923\,c[5] - 842\,567\,c[6] + \\
& 2\,124\,511\,c[7] - 2\,161\,467\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& 177\,923\,c[5] - 842\,567\,c[6] + 2\,124\,575\,c[7] - 2\,162\,043\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,939\,c[5] - 843\,095\,c[6] + \\
& 2\,130\,255\,c[7] - 2\,182\,059\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& 177\,939\,c[5] - 843\,063\,c[6] + 2\,129\,615\,c[7] - 2\,178\,891\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,939\,c[5] - 843\,063\,c[6] + \\
& 2\,129\,679\,c[7] - 2\,179\,467\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& 177\,939\,c[5] - 843\,031\,c[6] + 2\,128\,975\,c[7] - 2\,175\,723\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,939\,c[5] - 842\,999\,c[6] + \\
& 2\,128\,335\,c[7] - 2\,172\,555\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& 177\,955\,c[5] - 843\,559\,c[6] + 2\,134\,719\,c[7] - 2\,196\,315\,c[8], \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,955\,c[5] - 843\,527\,c[6] + \\
& 2\,134\,079\,c[7] - 2\,193\,147\,c[8], c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& 177\,955\,c[5] - 843\,495\,c[6] + 2\,133\,439\,c[7] - 2\,189\,979\,c[8],
\end{aligned}$$


```

c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177955 c[5] - 843463 c[6] +
  2132799 c[7] - 2186811 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] +
  177971 c[5] - 844055 c[6] + 2139823 c[7] - 2213739 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177971 c[5] - 844023 c[6] +
  2139183 c[7] - 2210571 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] +
  177971 c[5] - 843991 c[6] + 2138543 c[7] - 2207403 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177971 c[5] - 843959 c[6] +
  2137903 c[7] - 2204235 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] +
  177987 c[5] - 844519 c[6] + 2144287 c[7] - 2227995 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177987 c[5] - 844487 c[6] +
  2143647 c[7] - 2224827 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] +
  178003 c[5] - 844983 c[6] + 2148751 c[7] - 2242251 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177603 c[5] - 837847 c[6] +
  2094111 c[7] - 2089395 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] +
  177619 c[5] - 838311 c[6] + 2098575 c[7] - 2103651 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177619 c[5] - 838279 c[6] +
  2097935 c[7] - 2100483 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] +
  177619 c[5] - 838279 c[6] + 2097999 c[7] - 2101059 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177635 c[5] - 838775 c[6] +
  2103039 c[7] - 2117907 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] +
  177635 c[5] - 838743 c[6] + 2102399 c[7] - 2114739 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177635 c[5] - 838711 c[6] +
  2101759 c[7] - 2111571 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] +
  177651 c[5] - 839239 c[6] + 2107503 c[7] - 2132163 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177651 c[5] - 839207 c[6] +
  2106863 c[7] - 2128995 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] +
  177667 c[5] - 839735 c[6] + 2112607 c[7] - 2149587 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177667 c[5] - 839703 c[6] +
  2111967 c[7] - 2146419 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] +
  177683 c[5] - 840199 c[6] + 2117071 c[7] - 2163843 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21809 c[4] + 177315 c[5] - 833991 c[6] +
  2071359 c[7] - 2039499 c[8], c[1] - 61 c[2] + 1565 c[3] - 21809 c[4] +
  177331 c[5] - 834455 c[6] + 2075823 c[7] - 2053755 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21809 c[4] + 177331 c[5] - 834423 c[6] +
  2075183 c[7] - 2050587 c[8], c[1] - 61 c[2] + 1565 c[3] - 21809 c[4] +
  177347 c[5] - 834919 c[6] + 2080287 c[7] - 2068011 c[8] }

```

Array[c, 8].g

```

49 c[1] - 2989 c[2] + 76685 c[3] - 1070521 c[4] +
  8762099 c[5] - 41936167 c[6] + 108328591 c[7] - 116062515 c[8]

```

cert =

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Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2989 c[2] + 76685 c[3] - 1070521 c[4] +
  8762099 c[5] - 41936167 c[6] + 108328591 c[7] - 116062515 c[8] < 0 &&
  c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178867 c[5] - 856295 c[6] +
  2211887 c[7] - 2366595 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] +
  178883 c[5] - 856791 c[6] + 2216927 c[7] - 2383315 c[8] ≥ 0 &&

```

$$\begin{aligned}
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178883 c[5] - 856791 c[6] + \\
& \quad 2216991 c[7] - 2384019 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + \\
& \quad 178883 c[5] - 856759 c[6] + 2216287 c[7] - 2380147 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178883 c[5] - \\
& \quad 856759 c[6] + 2216351 c[7] - 2380851 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178547 c[5] - 851607 c[6] + \\
& \quad 2182191 c[7] - 2298267 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178563 c[5] - 852135 c[6] + 2187935 c[7] - 2318859 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178563 c[5] - 852103 c[6] + \\
& \quad 2187295 c[7] - 2315691 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178563 c[5] - 852071 c[6] + 2186527 c[7] - 2311243 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178563 c[5] - 852071 c[6] + \\
& \quad 2186591 c[7] - 2311947 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178563 c[5] - 852039 c[6] + 2185887 c[7] - 2308075 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178563 c[5] - 852039 c[6] + \\
& \quad 2185951 c[7] - 2308779 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178563 c[5] - 852007 c[6] + 2185311 c[7] - 2305611 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178579 c[5] - 852599 c[6] + \\
& \quad 2192335 c[7] - 2332539 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178579 c[5] - 852567 c[6] + 2191695 c[7] - 2329371 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178579 c[5] - 852535 c[6] + \\
& \quad 2190991 c[7] - 2325499 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178579 c[5] - 852535 c[6] + 2191055 c[7] - 2326203 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178579 c[5] - 852503 c[6] + \\
& \quad 2190351 c[7] - 2322331 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178579 c[5] - 852503 c[6] + 2190415 c[7] - 2323035 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178579 c[5] - 852471 c[6] + \\
& \quad 2189711 c[7] - 2319163 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178595 c[5] - 852999 c[6] + 2195455 c[7] - 2339755 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178595 c[5] - 852999 c[6] + \\
& \quad 2195519 c[7] - 2340459 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + \\
& \quad 178595 c[5] - 852967 c[6] + 2194815 c[7] - 2336587 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178227 c[5] - 846855 c[6] + \\
& \quad 2151151 c[7] - 2223027 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178243 c[5] - 847383 c[6] + 2156895 c[7] - 2243619 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178243 c[5] - 847351 c[6] + \\
& \quad 2156191 c[7] - 2239875 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178243 c[5] - 847351 c[6] + 2156255 c[7] - 2240451 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178243 c[5] - 847319 c[6] + \\
& \quad 2155551 c[7] - 2236707 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178243 c[5] - 847319 c[6] + 2155615 c[7] - 2237283 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178243 c[5] - 847287 c[6] + \\
& \quad 2154911 c[7] - 2233539 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178259 c[5] - 847847 c[6] + 2161295 c[7] - 2257299 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178259 c[5] - 847847 c[6] + \\
& \quad 2161359 c[7] - 2257875 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178259 c[5] - 847815 c[6] + 2160655 c[7] - 2254131 c[8] \geq 0 \&\&
\end{aligned}$$

$$\begin{aligned}
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178259 c[5] - 847783 c[6] + \\
& \quad 2160015 c[7] - 2250963 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178259 c[5] - 847751 c[6] + 2159311 c[7] - 2247091 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178259 c[5] - 847751 c[6] + \\
& \quad 2159375 c[7] - 2247795 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178259 c[5] - 847719 c[6] + 2158735 c[7] - 2244627 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178275 c[5] - 848375 c[6] + \\
& \quad 2167039 c[7] - 2277891 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178275 c[5] - 848343 c[6] + 2166399 c[7] - 2274723 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178275 c[5] - 848311 c[6] + \\
& \quad 2165759 c[7] - 2271555 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178275 c[5] - 848279 c[6] + 2165119 c[7] - 2268387 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178275 c[5] - 848247 c[6] + \\
& \quad 2164479 c[7] - 2265219 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178275 c[5] - 848215 c[6] + 2163775 c[7] - 2261347 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178291 c[5] - 848775 c[6] + \\
& \quad 2170223 c[7] - 2285811 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& \quad 178291 c[5] - 848743 c[6] + 2169583 c[7] - 2282643 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178291 c[5] - 848711 c[6] + \\
& \quad 2168879 c[7] - 2278771 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& \quad 177923 c[5] - 842599 c[6] + 2125151 c[7] - 2164635 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177923 c[5] - 842599 c[6] + \\
& \quad 2125215 c[7] - 2165211 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& \quad 177923 c[5] - 842567 c[6] + 2124511 c[7] - 2161467 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177923 c[5] - 842567 c[6] + \\
& \quad 2124575 c[7] - 2162043 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& \quad 177939 c[5] - 843095 c[6] + 2130255 c[7] - 2182059 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177939 c[5] - 843063 c[6] + \\
& \quad 2129615 c[7] - 2178891 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& \quad 177939 c[5] - 843063 c[6] + 2129679 c[7] - 2179467 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177939 c[5] - 843031 c[6] + \\
& \quad 2128975 c[7] - 2175723 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& \quad 177939 c[5] - 842999 c[6] + 2128335 c[7] - 2172555 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177955 c[5] - 843559 c[6] + \\
& \quad 2134719 c[7] - 2196315 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& \quad 177955 c[5] - 843527 c[6] + 2134079 c[7] - 2193147 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177955 c[5] - 843495 c[6] + \\
& \quad 2133439 c[7] - 2189979 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& \quad 177955 c[5] - 843463 c[6] + 2132799 c[7] - 2186811 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177971 c[5] - 844055 c[6] + \\
& \quad 2139823 c[7] - 2213739 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& \quad 177971 c[5] - 844023 c[6] + 2139183 c[7] - 2210571 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177971 c[5] - 843991 c[6] + \\
& \quad 2138543 c[7] - 2207403 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& \quad 177971 c[5] - 843959 c[6] + 2137903 c[7] - 2204235 c[8] \geq 0 \&\& \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177987 c[5] - 844519 c[6] + \\
& \quad 2144287 c[7] - 2227995 c[8] \geq 0 \&\& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] +
\end{aligned}$$

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177 987 c[5] - 844 487 c[6] + 2 143 647 c[7] - 2 224 827 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 825 c[4] + 178 003 c[5] - 844 983 c[6] +
2 148 751 c[7] - 2 242 251 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 603 c[5] - 837 847 c[6] + 2 094 111 c[7] - 2 089 395 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 619 c[5] - 838 311 c[6] +
2 098 575 c[7] - 2 103 651 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 619 c[5] - 838 279 c[6] + 2 097 935 c[7] - 2 100 483 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 619 c[5] - 838 279 c[6] +
2 097 999 c[7] - 2 101 059 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 635 c[5] - 838 775 c[6] + 2 103 039 c[7] - 2 117 907 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 635 c[5] - 838 743 c[6] +
2 102 399 c[7] - 2 114 739 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 635 c[5] - 838 711 c[6] + 2 101 759 c[7] - 2 111 571 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 651 c[5] - 839 239 c[6] +
2 107 503 c[7] - 2 132 163 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 651 c[5] - 839 207 c[6] + 2 106 863 c[7] - 2 128 995 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 667 c[5] - 839 735 c[6] +
2 112 607 c[7] - 2 149 587 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] +
177 667 c[5] - 839 703 c[6] + 2 111 967 c[7] - 2 146 419 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 817 c[4] + 177 683 c[5] - 840 199 c[6] +
2 117 071 c[7] - 2 163 843 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] +
177 315 c[5] - 833 991 c[6] + 2 071 359 c[7] - 2 039 499 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] + 177 331 c[5] - 834 455 c[6] +
2 075 823 c[7] - 2 053 755 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] +
177 331 c[5] - 834 423 c[6] + 2 075 183 c[7] - 2 050 587 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] + 177 347 c[5] - 834 919 c[6] +
2 080 287 c[7] - 2 068 011 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -364 965 233, -96 892 815, -15 887 789, -2 230 938, -290 213}

GCD[0, 0, 0, -364 965 233, -96 892 815, -15 887 789, -2 230 938, -290 213]
1

cert.g
-37 940 192

{0, 0, 0, -364 965 233, -96 892 815, -15 887 789, -2 230 938, -290 213}.
Reverse[gpart[listdim17[[171]]]]
-37 940 192

```

cert.Transpose[A]

```
{66391696, 4883840, 66413760, 4880128, 66410048, 90676784, 90702560,
 90698848, 4782560, 66312480, 4778848, 66308768, 66305056, 66338256,
 66334544, 4800912, 66330832, 4797200, 66327120, 4793488, 4819264,
 66349184, 4815552, 90571792, 90597568, 66211200, 90593856, 66207488,
 90590144, 66203776, 66233264, 90615920, 66229552, 66225840,
 4692208, 66222128, 66218416, 66259040, 66255328, 66251616, 66247904,
 66244192, 4710560, 66269968, 66266256, 4732624, 66106208, 90488864,
 66102496, 90485152, 66128272, 66124560, 90507216, 66120848,
 66117136, 66146624, 66142912, 66139200, 66135488, 66168688, 66164976,
 66161264, 66157552, 66187040, 66183328, 66205392, 66001216, 66019568,
 66015856, 90398512, 66037920, 66034208, 66030496, 66056272, 66052560,
 66078336, 66074624, 66096688, 65929216, 65947568, 65943856, 65965920}
```

chi = listdim17[[172]]

$$(-11 + x)^4 (-9 + x)^8 (-8 + x) (5 + x)^{32} (73 - 18x + x^2)^2$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{{-26937, 18833, -5054, 654, -41, 1}, {-26905, 18833, -5054, 654, -41, 1},
 {-26145, 18673, -5046, 654, -41, 1}, {-26289, 18689, -5046, 654, -41, 1},
 {-26257, 18689, -5046, 654, -41, 1}, {-26433, 18705, -5046, 654, -41, 1},
 {-25353, 18513, -5038, 654, -41, 1}, {-25497, 18529, -5038, 654, -41, 1},
 {-25641, 18545, -5038, 654, -41, 1}, {-24849, 18385, -5030, 654, -41, 1}}
```

```
A = {{-26937, 18833, -5054, 654, -41, 1}, {-26905, 18833, -5054, 654, -41, 1},
      {-26145, 18673, -5046, 654, -41, 1}, {-26289, 18689, -5046, 654, -41, 1},
      {-26257, 18689, -5046, 654, -41, 1}, {-26433, 18705, -5046, 654, -41, 1},
      {-25353, 18513, -5038, 654, -41, 1}, {-25497, 18529, -5038, 654, -41, 1},
      {-25641, 18545, -5038, 654, -41, 1}, {-24849, 18385, -5030, 654, -41, 1}};
```

A // MatrixForm

$$\begin{pmatrix} -26937 & 18833 & -5054 & 654 & -41 & 1 \\ -26905 & 18833 & -5054 & 654 & -41 & 1 \\ -26145 & 18673 & -5046 & 654 & -41 & 1 \\ -26289 & 18689 & -5046 & 654 & -41 & 1 \\ -26257 & 18689 & -5046 & 654 & -41 & 1 \\ -26433 & 18705 & -5046 & 654 & -41 & 1 \\ -25353 & 18513 & -5038 & 654 & -41 & 1 \\ -25497 & 18529 & -5038 & 654 & -41 & 1 \\ -25641 & 18545 & -5038 & 654 & -41 & 1 \\ -24849 & 18385 & -5030 & 654 & -41 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1309337, 921121, -247566, 32046, -2009, 49}
```

```
Array[c, 6].Transpose[A]
```

```
{-26937 c[1] + 18833 c[2] - 5054 c[3] + 654 c[4] - 41 c[5] + c[6],  
-26905 c[1] + 18833 c[2] - 5054 c[3] + 654 c[4] - 41 c[5] + c[6],  
-26145 c[1] + 18673 c[2] - 5046 c[3] + 654 c[4] - 41 c[5] + c[6],  
-26289 c[1] + 18689 c[2] - 5046 c[3] + 654 c[4] - 41 c[5] + c[6],  
-26257 c[1] + 18689 c[2] - 5046 c[3] + 654 c[4] - 41 c[5] + c[6],  
-26433 c[1] + 18705 c[2] - 5046 c[3] + 654 c[4] - 41 c[5] + c[6],  
-25353 c[1] + 18513 c[2] - 5038 c[3] + 654 c[4] - 41 c[5] + c[6],  
-25497 c[1] + 18529 c[2] - 5038 c[3] + 654 c[4] - 41 c[5] + c[6],  
-25641 c[1] + 18545 c[2] - 5038 c[3] + 654 c[4] - 41 c[5] + c[6],  
-24849 c[1] + 18385 c[2] - 5030 c[3] + 654 c[4] - 41 c[5] + c[6]}
```

```
Array[c, 6].g
```

```
-1309337 c[1] + 921121 c[2] - 247566 c[3] + 32046 c[4] - 2009 c[5] + 49 c[6]
```

```
cert = Flatten[Array[c, 6] /. FindInstance[
```

```
-1309337 c[1] + 921121 c[2] - 247566 c[3] + 32046 c[4] - 2009 c[5] + 49 c[6] < 0 &&  
-26937 c[1] + 18833 c[2] - 5054 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0 &&  
-26905 c[1] + 18833 c[2] - 5054 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0 &&  
-26145 c[1] + 18673 c[2] - 5046 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0 &&  
-26289 c[1] + 18689 c[2] - 5046 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0 &&  
-26257 c[1] + 18689 c[2] - 5046 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0 &&  
-26433 c[1] + 18705 c[2] - 5046 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0 &&  
-25353 c[1] + 18513 c[2] - 5038 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0 &&  
-25497 c[1] + 18529 c[2] - 5038 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0 &&  
-25641 c[1] + 18545 c[2] - 5038 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0 &&  
-24849 c[1] + 18385 c[2] - 5030 c[3] + 654 c[4] - 41 c[5] + c[6] ≥ 0,  
Array[c, 6], Integers]]
```

```
{-3553, -20011, -55660, 0, 0, 0}
```

```
GCD[-3553, -20011, -55660, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, -55660, -20011, -3553}
```

```
cert.g
```

```
-954410
```

```
{-3553, -20011, -55660, 0, 0, 0}.gpart[listdim17[[172]]]
```

```
-954410
```

```
cert.Transpose[A]
```

```
{145638, 31942, 88142, 279598, 165902, 471054, 30646, 222102, 413558, 356062}
```

```

chi = listdim17[[173]]
(-11 + x)8 (-9 + x)4 (-8 + x) (-7 + x)4 (5 + x)32

CoefficientList[feasibleinterlacingpolylist[chi], x]
{{2583, -1538, 328, -30, 1}}

A = {2583, -1538, 328, -30, 1};

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{125 623, -75 282, 16 072, -1470, 49}

Array[c, 5].A
2583 c[1] - 1538 c[2] + 328 c[3] - 30 c[4] + c[5]

Array[c, 5].g
125 623 c[1] - 75 282 c[2] + 16 072 c[3] - 1470 c[4] + 49 c[5]

cert = Flatten[Array[c, 5] /.
  FindInstance[125 623 c[1] - 75 282 c[2] + 16 072 c[3] - 1470 c[4] + 49 c[5] < 0 &&
    2583 c[1] - 1538 c[2] + 328 c[3] - 30 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{0, -2733, 0, 0, -4 202 658}

GCD[0, -2733, 0, 0, -4 202 658]
3

cert = cert / 3
{0, -911, 0, 0, -1 400 886}

Reverse[cert]
{-1 400 886, 0, 0, -911, 0}

cert.g
-61 512

{0, -911, 0, 0, -1 400 886}.gpart[listdim17[[173]]]
-61 512

cert.A
232

```

```
chi = listdim17[[174]]
```

$$(-11 + x)^4 (-9 + x)^{10} (5 + x)^{32} (-516 + 209x - 26x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-24065, 17513, -4870, 646, -41, 1},
 {-23161, 17337, -4862, 646, -41, 1}, {-23337, 17353, -4862, 646, -41, 1},
 {-23305, 17353, -4862, 646, -41, 1}, {-23273, 17353, -4862, 646, -41, 1},
 {-23481, 17369, -4862, 646, -41, 1}, {-23449, 17369, -4862, 646, -41, 1},
 {-23417, 17369, -4862, 646, -41, 1}, {-23625, 17385, -4862, 646, -41, 1},
 {-23593, 17385, -4862, 646, -41, 1}, {-23561, 17385, -4862, 646, -41, 1},
 {-23705, 17401, -4862, 646, -41, 1}, {-22401, 17177, -4854, 646, -41, 1},
 {-22369, 17177, -4854, 646, -41, 1}, {-22545, 17193, -4854, 646, -41, 1},
 {-22513, 17193, -4854, 646, -41, 1}, {-22689, 17209, -4854, 646, -41, 1},
 {-22657, 17209, -4854, 646, -41, 1}, {-22625, 17209, -4854, 646, -41, 1},
 {-22833, 17225, -4854, 646, -41, 1}, {-22801, 17225, -4854, 646, -41, 1},
 {-22769, 17225, -4854, 646, -41, 1}, {-22977, 17241, -4854, 646, -41, 1},
 {-22945, 17241, -4854, 646, -41, 1}, {-22913, 17241, -4854, 646, -41, 1},
 {-23121, 17257, -4854, 646, -41, 1}, {-23089, 17257, -4854, 646, -41, 1},
 {-23265, 17273, -4854, 646, -41, 1}, {-21465, 17001, -4846, 646, -41, 1},
 {-21609, 17017, -4846, 646, -41, 1}, {-21753, 17033, -4846, 646, -41, 1},
 {-21721, 17033, -4846, 646, -41, 1}, {-21897, 17049, -4846, 646, -41, 1},
 {-21865, 17049, -4846, 646, -41, 1}, {-22041, 17065, -4846, 646, -41, 1},
 {-22009, 17065, -4846, 646, -41, 1}, {-22185, 17081, -4846, 646, -41, 1},
 {-22153, 17081, -4846, 646, -41, 1}, {-22121, 17081, -4846, 646, -41, 1},
 {-22329, 17097, -4846, 646, -41, 1}, {-22297, 17097, -4846, 646, -41, 1},
 {-22473, 17113, -4846, 646, -41, 1}, {-20817, 16857, -4838, 646, -41, 1},
 {-20961, 16873, -4838, 646, -41, 1}, {-21105, 16889, -4838, 646, -41, 1},
 {-21073, 16889, -4838, 646, -41, 1}, {-21249, 16905, -4838, 646, -41, 1},
 {-21217, 16905, -4838, 646, -41, 1}, {-21393, 16921, -4838, 646, -41, 1},
 {-21361, 16921, -4838, 646, -41, 1}, {-21537, 16937, -4838, 646, -41, 1},
 {-21505, 16937, -4838, 646, -41, 1}, {-21681, 16953, -4838, 646, -41, 1},
 {-20169, 16713, -4830, 646, -41, 1}, {-20313, 16729, -4830, 646, -41, 1},
 {-20457, 16745, -4830, 646, -41, 1}, {-20601, 16761, -4830, 646, -41, 1},
 {-20569, 16761, -4830, 646, -41, 1}, {-20745, 16777, -4830, 646, -41, 1},
 {-20713, 16777, -4830, 646, -41, 1}, {-20889, 16793, -4830, 646, -41, 1},
 {-19665, 16585, -4822, 646, -41, 1}, {-19809, 16601, -4822, 646, -41, 1},
 {-19953, 16617, -4822, 646, -41, 1}, {-19921, 16617, -4822, 646, -41, 1},
 {-20097, 16633, -4822, 646, -41, 1}, {-19017, 16441, -4814, 646, -41, 1},
 {-19161, 16457, -4814, 646, -41, 1}, {-19305, 16473, -4814, 646, -41, 1},
 {-18369, 16297, -4806, 646, -41, 1}, {-18513, 16313, -4806, 646, -41, 1}}
```



```

A = {{-24 065, 17 513, -4870, 646, -41, 1},
      {-23 161, 17 337, -4862, 646, -41, 1}, {-23 337, 17 353, -4862, 646, -41, 1},
      {-23 305, 17 353, -4862, 646, -41, 1}, {-23 273, 17 353, -4862, 646, -41, 1},
      {-23 481, 17 369, -4862, 646, -41, 1}, {-23 449, 17 369, -4862, 646, -41, 1},
      {-23 417, 17 369, -4862, 646, -41, 1}, {-23 625, 17 385, -4862, 646, -41, 1},
      {-23 593, 17 385, -4862, 646, -41, 1}, {-23 561, 17 385, -4862, 646, -41, 1},
      {-23 705, 17 401, -4862, 646, -41, 1}, {-22 401, 17 177, -4854, 646, -41, 1},
      {-22 369, 17 177, -4854, 646, -41, 1}, {-22 545, 17 193, -4854, 646, -41, 1},
      {-22 513, 17 193, -4854, 646, -41, 1}, {-22 689, 17 209, -4854, 646, -41, 1},
      {-22 657, 17 209, -4854, 646, -41, 1}, {-22 625, 17 209, -4854, 646, -41, 1},
      {-22 833, 17 225, -4854, 646, -41, 1}, {-22 801, 17 225, -4854, 646, -41, 1},
      {-22 769, 17 225, -4854, 646, -41, 1}, {-22 977, 17 241, -4854, 646, -41, 1},
      {-22 945, 17 241, -4854, 646, -41, 1}, {-22 913, 17 241, -4854, 646, -41, 1},
      {-23 121, 17 257, -4854, 646, -41, 1}, {-23 089, 17 257, -4854, 646, -41, 1},
      {-23 265, 17 273, -4854, 646, -41, 1}, {-21 465, 17 001, -4846, 646, -41, 1},
      {-21 609, 17 017, -4846, 646, -41, 1}, {-21 753, 17 033, -4846, 646, -41, 1},
      {-21 721, 17 033, -4846, 646, -41, 1}, {-21 897, 17 049, -4846, 646, -41, 1},
      {-21 865, 17 049, -4846, 646, -41, 1}, {-22 041, 17 065, -4846, 646, -41, 1},
      {-22 009, 17 065, -4846, 646, -41, 1}, {-22 185, 17 081, -4846, 646, -41, 1},
      {-22 153, 17 081, -4846, 646, -41, 1}, {-22 121, 17 081, -4846, 646, -41, 1},
      {-22 329, 17 097, -4846, 646, -41, 1}, {-22 297, 17 097, -4846, 646, -41, 1},
      {-22 473, 17 113, -4846, 646, -41, 1}, {-20 817, 16 857, -4838, 646, -41, 1},
      {-20 961, 16 873, -4838, 646, -41, 1}, {-21 105, 16 889, -4838, 646, -41, 1},
      {-21 073, 16 889, -4838, 646, -41, 1}, {-21 249, 16 905, -4838, 646, -41, 1},
      {-21 217, 16 905, -4838, 646, -41, 1}, {-21 393, 16 921, -4838, 646, -41, 1},
      {-21 361, 16 921, -4838, 646, -41, 1}, {-21 537, 16 937, -4838, 646, -41, 1},
      {-21 505, 16 937, -4838, 646, -41, 1}, {-21 681, 16 953, -4838, 646, -41, 1},
      {-20 169, 16 713, -4830, 646, -41, 1}, {-20 313, 16 729, -4830, 646, -41, 1},
      {-20 457, 16 745, -4830, 646, -41, 1}, {-20 601, 16 761, -4830, 646, -41, 1},
      {-20 569, 16 761, -4830, 646, -41, 1}, {-20 745, 16 777, -4830, 646, -41, 1},
      {-20 713, 16 777, -4830, 646, -41, 1}, {-20 889, 16 793, -4830, 646, -41, 1},
      {-19 665, 16 585, -4822, 646, -41, 1}, {-19 809, 16 601, -4822, 646, -41, 1},
      {-19 953, 16 617, -4822, 646, -41, 1}, {-19 921, 16 617, -4822, 646, -41, 1},
      {-20 097, 16 633, -4822, 646, -41, 1}, {-19 017, 16 441, -4814, 646, -41, 1},
      {-19 161, 16 457, -4814, 646, -41, 1}, {-19 305, 16 473, -4814, 646, -41, 1},
      {-18 369, 16 297, -4806, 646, -41, 1}, {-18 513, 16 313, -4806, 646, -41, 1}};

```

```
A // MatrixForm
```

```

( -24 065 17 513 -4870 646 -41 1
  -23 161 17 337 -4862 646 -41 1
  -23 337 17 353 -4862 646 -41 1
  -23 305 17 353 -4862 646 -41 1
  -23 273 17 353 -4862 646 -41 1
  -23 481 17 369 -4862 646 -41 1
  -23 449 17 369 -4862 646 -41 1
  -23 417 17 369 -4862 646 -41 1
  -23 625 17 385 -4862 646 -41 1
  -23 593 17 385 -4862 646 -41 1
  -23 561 17 385 -4862 646 -41 1

```

-23 705	17 401	-4862	646	-41	1
-22 401	17 177	-4854	646	-41	1
-22 369	17 177	-4854	646	-41	1
-22 545	17 193	-4854	646	-41	1
-22 513	17 193	-4854	646	-41	1
-22 689	17 209	-4854	646	-41	1
-22 657	17 209	-4854	646	-41	1
-22 625	17 209	-4854	646	-41	1
-22 833	17 225	-4854	646	-41	1
-22 801	17 225	-4854	646	-41	1
-22 769	17 225	-4854	646	-41	1
-22 977	17 241	-4854	646	-41	1
-22 945	17 241	-4854	646	-41	1
-22 913	17 241	-4854	646	-41	1
-23 121	17 257	-4854	646	-41	1
-23 089	17 257	-4854	646	-41	1
-23 265	17 273	-4854	646	-41	1
-21 465	17 001	-4846	646	-41	1
-21 609	17 017	-4846	646	-41	1
-21 753	17 033	-4846	646	-41	1
-21 721	17 033	-4846	646	-41	1
-21 897	17 049	-4846	646	-41	1
-21 865	17 049	-4846	646	-41	1
-22 041	17 065	-4846	646	-41	1
-22 009	17 065	-4846	646	-41	1
-22 185	17 081	-4846	646	-41	1
-22 153	17 081	-4846	646	-41	1
-22 121	17 081	-4846	646	-41	1
-22 329	17 097	-4846	646	-41	1
-22 297	17 097	-4846	646	-41	1
-22 473	17 113	-4846	646	-41	1
-20 817	16 857	-4838	646	-41	1
-20 961	16 873	-4838	646	-41	1
-21 105	16 889	-4838	646	-41	1
-21 073	16 889	-4838	646	-41	1
-21 249	16 905	-4838	646	-41	1
-21 217	16 905	-4838	646	-41	1
-21 393	16 921	-4838	646	-41	1
-21 361	16 921	-4838	646	-41	1
-21 537	16 937	-4838	646	-41	1
-21 505	16 937	-4838	646	-41	1
-21 681	16 953	-4838	646	-41	1
-20 169	16 713	-4830	646	-41	1
-20 313	16 729	-4830	646	-41	1
-20 457	16 745	-4830	646	-41	1
-20 601	16 761	-4830	646	-41	1
-20 569	16 761	-4830	646	-41	1
-20 745	16 777	-4830	646	-41	1
-20 713	16 777	-4830	646	-41	1
-20 889	16 793	-4830	646	-41	1
-19 665	16 585	-4822	646	-41	1
-19 809	16 601	-4822	646	-41	1
-19 953	16 617	-4822	646	-41	1
-19 921	16 617	-4822	646	-41	1
-20 097	16 633	-4822	646	-41	1

$$\begin{pmatrix} -19017 & 16441 & -4814 & 646 & -41 & 1 \\ -19161 & 16457 & -4814 & 646 & -41 & 1 \\ -19305 & 16473 & -4814 & 646 & -41 & 1 \\ -18369 & 16297 & -4806 & 646 & -41 & 1 \\ -18513 & 16313 & -4806 & 646 & -41 & 1 \end{pmatrix}$$

Dimensions[A]

{71, 6}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1154553, 853049, -238366, 31654, -2009, 49}

Array[c, 6].Transpose[A]

```
{-24065 c[1] + 17513 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6],
-23161 c[1] + 17337 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23337 c[1] + 17353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23305 c[1] + 17353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23273 c[1] + 17353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23481 c[1] + 17369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23449 c[1] + 17369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23417 c[1] + 17369 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23625 c[1] + 17385 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23593 c[1] + 17385 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23561 c[1] + 17385 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-23705 c[1] + 17401 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6],
-22401 c[1] + 17177 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22369 c[1] + 17177 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22545 c[1] + 17193 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22513 c[1] + 17193 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22689 c[1] + 17209 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22657 c[1] + 17209 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22625 c[1] + 17209 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22833 c[1] + 17225 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22801 c[1] + 17225 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22769 c[1] + 17225 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22977 c[1] + 17241 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22945 c[1] + 17241 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-22913 c[1] + 17241 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-23121 c[1] + 17257 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-23089 c[1] + 17257 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-23265 c[1] + 17273 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
-21465 c[1] + 17001 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-21609 c[1] + 17017 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-21753 c[1] + 17033 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-21721 c[1] + 17033 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-21897 c[1] + 17049 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-21865 c[1] + 17049 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-22041 c[1] + 17065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
```

```

-22 009 c[1] + 17 065 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-22 185 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-22 153 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-22 121 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-22 329 c[1] + 17 097 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-22 297 c[1] + 17 097 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-22 473 c[1] + 17 113 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 817 c[1] + 16 857 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 961 c[1] + 16 873 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-21 105 c[1] + 16 889 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-21 073 c[1] + 16 889 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-21 249 c[1] + 16 905 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-21 217 c[1] + 16 905 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-21 393 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-21 361 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-21 537 c[1] + 16 937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-21 505 c[1] + 16 937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-21 681 c[1] + 16 953 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 169 c[1] + 16 713 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 313 c[1] + 16 729 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 457 c[1] + 16 745 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 601 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 569 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 745 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 713 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 889 c[1] + 16 793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
-19 665 c[1] + 16 585 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6],
-19 809 c[1] + 16 601 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6],
-19 953 c[1] + 16 617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6],
-19 921 c[1] + 16 617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6],
-20 097 c[1] + 16 633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6],
-19 017 c[1] + 16 441 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6],
-19 161 c[1] + 16 457 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6],
-19 305 c[1] + 16 473 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6],
-18 369 c[1] + 16 297 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6],
-18 513 c[1] + 16 313 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] }

```

Array[c, 6].g

```
-1 154 553 c[1] + 853 049 c[2] - 238 366 c[3] + 31 654 c[4] - 2009 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```

-1 154 553 c[1] + 853 049 c[2] - 238 366 c[3] + 31 654 c[4] - 2009 c[5] + 49 c[6] < 0 &&
-24 065 c[1] + 17 513 c[2] - 4870 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 161 c[1] + 17 337 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 337 c[1] + 17 353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 305 c[1] + 17 353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-23 273 c[1] + 17 353 c[2] - 4862 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&

```

[illegible]

```

-21 681 c[1] + 16 953 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 169 c[1] + 16 713 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 313 c[1] + 16 729 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 457 c[1] + 16 745 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 601 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 569 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 745 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 713 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 889 c[1] + 16 793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 665 c[1] + 16 585 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 809 c[1] + 16 601 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 953 c[1] + 16 617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 921 c[1] + 16 617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-20 097 c[1] + 16 633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 017 c[1] + 16 441 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 161 c[1] + 16 457 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-19 305 c[1] + 16 473 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-18 369 c[1] + 16 297 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
-18 513 c[1] + 16 313 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{-10 178, -91 594, -824 349, 0, 0, -2 655 400 442}

GCD[-10 178, -91 594, -824 349, 0, 0, -2 655 400 442]
1

Reverse[cert]
{-2 655 400 442, 0, 0, -824 349, -91 594, -10 178}

cert.g
-977 596

{-10 178, -91 594, -824 349, 0, 0, -2 655 400 442}.gpart[listdim17[[174]]]
-977 596

cert.Transpose[A]
{27 036, 351 876, 677 700, 352 004, 26 308, 677 828, 352 132, 26 436, 677 956,
352 260, 26 564, 26 692, 676 844, 351 148, 676 972, 351 276, 677 100, 351 404,
25 708, 677 228, 351 532, 25 836, 677 356, 351 660, 25 964, 677 484, 351 788,
677 612, 675 988, 676 116, 676 244, 350 548, 676 372, 350 676, 676 500,
350 804, 676 628, 350 932, 25 236, 676 756, 351 060, 676 884, 675 388, 675 516,
675 644, 349 948, 675 772, 350 076, 675 900, 350 204, 676 028, 350 332, 676 156,
674 788, 674 916, 675 044, 675 172, 349 476, 675 300, 349 604, 675 428, 674 316,
674 444, 674 572, 348 876, 674 700, 673 716, 673 844, 673 972, 673 116, 673 244}

```

chi = listdim17[[175]]

$$(-11 + x)^4 (-9 + x)^9 (-7 + x) (5 + x)^{32} (-668 + 247 x - 28 x^2 + x^3)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {217833, -182130, 61375, -10684, 1015, -50, 1},
  {216889, -181874, 61359, -10684, 1015, -50, 1},
  {216953, -181874, 61359, -10684, 1015, -50, 1},
  {216601, -181842, 61359, -10684, 1015, -50, 1},
  {208593, -179354, 61111, -10676, 1015, -50, 1},
  {210401, -179706, 61127, -10676, 1015, -50, 1},
  {210465, -179706, 61127, -10676, 1015, -50, 1},
  {210049, -179674, 61127, -10676, 1015, -50, 1},
  {210113, -179674, 61127, -10676, 1015, -50, 1},
  {210177, -179674, 61127, -10676, 1015, -50, 1},
  {209825, -179642, 61127, -10676, 1015, -50, 1},
  {211985, -180026, 61143, -10676, 1015, -50, 1},
  {212049, -180026, 61143, -10676, 1015, -50, 1},
  {211697, -179994, 61143, -10676, 1015, -50, 1},
  {211761, -179994, 61143, -10676, 1015, -50, 1},
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  {211409, -179962, 61143, -10676, 1015, -50, 1},
  {211057, -179930, 61143, -10676, 1015, -50, 1},
  {212929, -180282, 61159, -10676, 1015, -50, 1},
  {212993, -180282, 61159, -10676, 1015, -50, 1},
  {212641, -180250, 61159, -10676, 1015, -50, 1},
  {212289, -180218, 61159, -10676, 1015, -50, 1},
  {213873, -180538, 61175, -10676, 1015, -50, 1},
  {202041, -177186, 60879, -10668, 1015, -50, 1},
  {203913, -177538, 60895, -10668, 1015, -50, 1},
  {203625, -177506, 60895, -10668, 1015, -50, 1},
  {203273, -177474, 60895, -10668, 1015, -50, 1},
  {203337, -177474, 60895, -10668, 1015, -50, 1},
  {203049, -177442, 60895, -10668, 1015, -50, 1},
  {205497, -177858, 60911, -10668, 1015, -50, 1},
  {205209, -177826, 60911, -10668, 1015, -50, 1},
  {204857, -177794, 60911, -10668, 1015, -50, 1},
  {204921, -177794, 60911, -10668, 1015, -50, 1},
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  {204281, -177730, 60911, -10668, 1015, -50, 1},
  {206793, -178146, 60927, -10668, 1015, -50, 1},
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{208089, -178434, 60943, -10668, 1015, -50, 1},
{207737, -178402, 60943, -10668, 1015, -50, 1},
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{199089, -175850, 60695, -10660, 1015, -50, 1},
{198737, -175818, 60695, -10660, 1015, -50, 1},
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{192249, -173650, 60463, -10652, 1015, -50, 1},
{191961, -173618, 60463, -10652, 1015, -50, 1},
{193833, -173970, 60479, -10652, 1015, -50, 1},
{193481, -173938, 60479, -10652, 1015, -50, 1},
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{195417, -174290, 60495, -10652, 1015, -50, 1},
{195129, -174258, 60495, -10652, 1015, -50, 1},
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{196713, -174578, 60511, -10652, 1015, -50, 1},
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{186705, -171738, 60247, -10644, 1015, -50, 1},
{186417, -171706, 60247, -10644, 1015, -50, 1},
{188289, -172058, 60263, -10644, 1015, -50, 1},
{188001, -172026, 60263, -10644, 1015, -50, 1},
{187649, -171994, 60263, -10644, 1015, -50, 1},
{189585, -172346, 60279, -10644, 1015, -50, 1},
{189233, -172314, 60279, -10644, 1015, -50, 1},
{191169, -172666, 60295, -10644, 1015, -50, 1},
{180873, -169794, 60031, -10636, 1015, -50, 1},
{182457, -170114, 60047, -10636, 1015, -50, 1},
{184041, -170434, 60063, -10636, 1015, -50, 1},
{175329, -167882, 59815, -10628, 1015, -50, 1}}

```

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A = {{217833, -182130, 61375, -10684, 1015, -50, 1},
      {216889, -181874, 61359, -10684, 1015, -50, 1},
      {216953, -181874, 61359, -10684, 1015, -50, 1},
      {216601, -181842, 61359, -10684, 1015, -50, 1},
      {208593, -179354, 61111, -10676, 1015, -50, 1},
      {210401, -179706, 61127, -10676, 1015, -50, 1},
      {210465, -179706, 61127, -10676, 1015, -50, 1},
      {210049, -179674, 61127, -10676, 1015, -50, 1},
      {210113, -179674, 61127, -10676, 1015, -50, 1},
      {210177, -179674, 61127, -10676, 1015, -50, 1},
      {209825, -179642, 61127, -10676, 1015, -50, 1},
      {211985, -180026, 61143, -10676, 1015, -50, 1},
      {212049, -180026, 61143, -10676, 1015, -50, 1},
      {211697, -179994, 61143, -10676, 1015, -50, 1},
      {211761, -179994, 61143, -10676, 1015, -50, 1},
      {211345, -179962, 61143, -10676, 1015, -50, 1},
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      {212929, -180282, 61159, -10676, 1015, -50, 1},
      {212993, -180282, 61159, -10676, 1015, -50, 1},
      {212641, -180250, 61159, -10676, 1015, -50, 1},
      {212289, -180218, 61159, -10676, 1015, -50, 1},
      {213873, -180538, 61175, -10676, 1015, -50, 1},
      {202041, -177186, 60879, -10668, 1015, -50, 1},
      {203913, -177538, 60895, -10668, 1015, -50, 1},

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{206 505, -178 114, 60 927, -10 668, 1015, -50, 1},
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{205 801, -178 050, 60 927, -10 668, 1015, -50, 1},
{205 865, -178 050, 60 927, -10 668, 1015, -50, 1},
{205 513, -178 018, 60 927, -10 668, 1015, -50, 1},
{208 089, -178 434, 60 943, -10 668, 1015, -50, 1},
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{196 497, -175 274, 60 663, -10 660, 1015, -50, 1},
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{200 321, -176 138, 60 711, -10 660, 1015, -50, 1},
{199 969, -176 106, 60 711, -10 660, 1015, -50, 1},
{202 545, -176 522, 60 727, -10 660, 1015, -50, 1},
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{201 905, -176 458, 60 727, -10 660, 1015, -50, 1},

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{201553, -176426, 60727, -10660, 1015, -50, 1},
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{203841, -176810, 60743, -10660, 1015, -50, 1},
{203489, -176778, 60743, -10660, 1015, -50, 1},
{190953, -173362, 60447, -10652, 1015, -50, 1},
{192537, -173682, 60463, -10652, 1015, -50, 1},
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{191961, -173618, 60463, -10652, 1015, -50, 1},
{193833, -173970, 60479, -10652, 1015, -50, 1},
{193481, -173938, 60479, -10652, 1015, -50, 1},
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{193193, -173906, 60479, -10652, 1015, -50, 1},
{195417, -174290, 60495, -10652, 1015, -50, 1},
{195129, -174258, 60495, -10652, 1015, -50, 1},
{194777, -174226, 60495, -10652, 1015, -50, 1},
{197001, -174610, 60511, -10652, 1015, -50, 1},
{196713, -174578, 60511, -10652, 1015, -50, 1},
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{186705, -171738, 60247, -10644, 1015, -50, 1},
{186417, -171706, 60247, -10644, 1015, -50, 1},
{188289, -172058, 60263, -10644, 1015, -50, 1},
{188001, -172026, 60263, -10644, 1015, -50, 1},
{187649, -171994, 60263, -10644, 1015, -50, 1},
{189585, -172346, 60279, -10644, 1015, -50, 1},
{189233, -172314, 60279, -10644, 1015, -50, 1},
{191169, -172666, 60295, -10644, 1015, -50, 1},
{180873, -169794, 60031, -10636, 1015, -50, 1},
{182457, -170114, 60047, -10636, 1015, -50, 1},
{184041, -170434, 60063, -10636, 1015, -50, 1},
{175329, -167882, 59815, -10628, 1015, -50, 1}};

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A // MatrixForm

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( 217833 -182130 61375 -10684 1015 -50 1 )
( 216889 -181874 61359 -10684 1015 -50 1 )
( 216953 -181874 61359 -10684 1015 -50 1 )
( 216601 -181842 61359 -10684 1015 -50 1 )
( 208593 -179354 61111 -10676 1015 -50 1 )
( 210401 -179706 61127 -10676 1015 -50 1 )
( 210465 -179706 61127 -10676 1015 -50 1 )
( 210049 -179674 61127 -10676 1015 -50 1 )
( 210113 -179674 61127 -10676 1015 -50 1 )
( 210177 -179674 61127 -10676 1015 -50 1 )
( 209825 -179642 61127 -10676 1015 -50 1 )
( 211985 -180026 61143 -10676 1015 -50 1 )
( 212049 -180026 61143 -10676 1015 -50 1 )
( 211697 -179994 61143 -10676 1015 -50 1 )
( 211761 -179994 61143 -10676 1015 -50 1 )

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211 345	-179 962	61 143	-10 676	1015	-50	1
211 409	-179 962	61 143	-10 676	1015	-50	1
211 057	-179 930	61 143	-10 676	1015	-50	1
212 929	-180 282	61 159	-10 676	1015	-50	1
212 993	-180 282	61 159	-10 676	1015	-50	1
212 641	-180 250	61 159	-10 676	1015	-50	1
212 289	-180 218	61 159	-10 676	1015	-50	1
213 873	-180 538	61 175	-10 676	1015	-50	1
202 041	-177 186	60 879	-10 668	1015	-50	1
203 913	-177 538	60 895	-10 668	1015	-50	1
203 625	-177 506	60 895	-10 668	1015	-50	1
203 273	-177 474	60 895	-10 668	1015	-50	1
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203 049	-177 442	60 895	-10 668	1015	-50	1
205 497	-177 858	60 911	-10 668	1015	-50	1
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204 857	-177 794	60 911	-10 668	1015	-50	1
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204 569	-177 762	60 911	-10 668	1015	-50	1
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204 281	-177 730	60 911	-10 668	1015	-50	1
206 793	-178 146	60 927	-10 668	1015	-50	1
206 441	-178 114	60 927	-10 668	1015	-50	1
206 505	-178 114	60 927	-10 668	1015	-50	1
206 153	-178 082	60 927	-10 668	1015	-50	1
206 217	-178 082	60 927	-10 668	1015	-50	1
205 801	-178 050	60 927	-10 668	1015	-50	1
205 865	-178 050	60 927	-10 668	1015	-50	1
205 513	-178 018	60 927	-10 668	1015	-50	1
208 089	-178 434	60 943	-10 668	1015	-50	1
207 737	-178 402	60 943	-10 668	1015	-50	1
207 801	-178 402	60 943	-10 668	1015	-50	1
207 449	-178 370	60 943	-10 668	1015	-50	1
207 097	-178 338	60 943	-10 668	1015	-50	1
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209 033	-178 690	60 959	-10 668	1015	-50	1
208 681	-178 658	60 959	-10 668	1015	-50	1
196 785	-175 306	60 663	-10 660	1015	-50	1
196 497	-175 274	60 663	-10 660	1015	-50	1
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197 793	-175 562	60 679	-10 660	1015	-50	1
197 505	-175 530	60 679	-10 660	1015	-50	1
199 665	-175 914	60 695	-10 660	1015	-50	1
199 377	-175 882	60 695	-10 660	1015	-50	1
199 025	-175 850	60 695	-10 660	1015	-50	1
199 089	-175 850	60 695	-10 660	1015	-50	1
198 737	-175 818	60 695	-10 660	1015	-50	1
201 249	-176 234	60 711	-10 660	1015	-50	1
200 961	-176 202	60 711	-10 660	1015	-50	1
200 609	-176 170	60 711	-10 660	1015	-50	1
200 673	-176 170	60 711	-10 660	1015	-50	1
200 321	-176 138	60 711	-10 660	1015	-50	1
199 969	-176 106	60 711	-10 660	1015	-50	1
202 545	-176 522	60 727	-10 660	1015	-50	1

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202 257 -176 490 60 727 -10 660 1015 -50 1
201 905 -176 458 60 727 -10 660 1015 -50 1
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203 841 -176 810 60 743 -10 660 1015 -50 1
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190 953 -173 362 60 447 -10 652 1015 -50 1
192 537 -173 682 60 463 -10 652 1015 -50 1
192 249 -173 650 60 463 -10 652 1015 -50 1
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195 129 -174 258 60 495 -10 652 1015 -50 1
194 777 -174 226 60 495 -10 652 1015 -50 1
197 001 -174 610 60 511 -10 652 1015 -50 1
196 713 -174 578 60 511 -10 652 1015 -50 1
196 361 -174 546 60 511 -10 652 1015 -50 1
198 297 -174 898 60 527 -10 652 1015 -50 1
199 881 -175 218 60 543 -10 652 1015 -50 1
185 409 -171 450 60 231 -10 644 1015 -50 1
186 705 -171 738 60 247 -10 644 1015 -50 1
186 417 -171 706 60 247 -10 644 1015 -50 1
188 289 -172 058 60 263 -10 644 1015 -50 1
188 001 -172 026 60 263 -10 644 1015 -50 1
187 649 -171 994 60 263 -10 644 1015 -50 1
189 585 -172 346 60 279 -10 644 1015 -50 1
189 233 -172 314 60 279 -10 644 1015 -50 1
191 169 -172 666 60 295 -10 644 1015 -50 1
180 873 -169 794 60 031 -10 636 1015 -50 1
182 457 -170 114 60 047 -10 636 1015 -50 1
184 041 -170 434 60 063 -10 636 1015 -50 1
175 329 -167 882 59 815 -10 628 1015 -50 1

```

Dimensions[A]

```
{105, 7}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{10 470 753, -8 854 714, 2 999 783, -523 252, 49 735, -2450, 49}
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Array[c, 7].Transpose[A]

```

{217 833 c[1] - 182 130 c[2] + 61 375 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],
 216 889 c[1] - 181 874 c[2] + 61 359 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],
 216 953 c[1] - 181 874 c[2] + 61 359 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],
 216 601 c[1] - 181 842 c[2] + 61 359 c[3] - 10 684 c[4] + 1015 c[5] - 50 c[6] + c[7],
 208 593 c[1] - 179 354 c[2] + 61 111 c[3] - 10 676 c[4] + 1015 c[5] - 50 c[6] + c[7],
 210 401 c[1] - 179 706 c[2] + 61 127 c[3] - 10 676 c[4] + 1015 c[5] - 50 c[6] + c[7],
 210 465 c[1] - 179 706 c[2] + 61 127 c[3] - 10 676 c[4] + 1015 c[5] - 50 c[6] + c[7],
 210 049 c[1] - 179 674 c[2] + 61 127 c[3] - 10 676 c[4] + 1015 c[5] - 50 c[6] + c[7],
 210 113 c[1] - 179 674 c[2] + 61 127 c[3] - 10 676 c[4] + 1015 c[5] - 50 c[6] + c[7],

```

[illegible]

$197\,793\,c[1] - 175\,562\,c[2] + 60\,679\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $197\,505\,c[1] - 175\,530\,c[2] + 60\,679\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $199\,665\,c[1] - 175\,914\,c[2] + 60\,695\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $199\,377\,c[1] - 175\,882\,c[2] + 60\,695\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $199\,025\,c[1] - 175\,850\,c[2] + 60\,695\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $199\,089\,c[1] - 175\,850\,c[2] + 60\,695\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $198\,737\,c[1] - 175\,818\,c[2] + 60\,695\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $201\,249\,c[1] - 176\,234\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $200\,961\,c[1] - 176\,202\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $200\,609\,c[1] - 176\,170\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $200\,673\,c[1] - 176\,170\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $200\,321\,c[1] - 176\,138\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $199\,969\,c[1] - 176\,106\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $202\,545\,c[1] - 176\,522\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $202\,257\,c[1] - 176\,490\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $201\,905\,c[1] - 176\,458\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $201\,553\,c[1] - 176\,426\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $204\,129\,c[1] - 176\,842\,c[2] + 60\,743\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $203\,841\,c[1] - 176\,810\,c[2] + 60\,743\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $203\,489\,c[1] - 176\,778\,c[2] + 60\,743\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $190\,953\,c[1] - 173\,362\,c[2] + 60\,447\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $192\,537\,c[1] - 173\,682\,c[2] + 60\,463\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $192\,249\,c[1] - 173\,650\,c[2] + 60\,463\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $191\,961\,c[1] - 173\,618\,c[2] + 60\,463\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $193\,833\,c[1] - 173\,970\,c[2] + 60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $193\,481\,c[1] - 173\,938\,c[2] + 60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $193\,545\,c[1] - 173\,938\,c[2] + 60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $193\,193\,c[1] - 173\,906\,c[2] + 60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $195\,417\,c[1] - 174\,290\,c[2] + 60\,495\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $195\,129\,c[1] - 174\,258\,c[2] + 60\,495\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $194\,777\,c[1] - 174\,226\,c[2] + 60\,495\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $197\,001\,c[1] - 174\,610\,c[2] + 60\,511\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $196\,713\,c[1] - 174\,578\,c[2] + 60\,511\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $196\,361\,c[1] - 174\,546\,c[2] + 60\,511\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $198\,297\,c[1] - 174\,898\,c[2] + 60\,527\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $199\,881\,c[1] - 175\,218\,c[2] + 60\,543\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $185\,409\,c[1] - 171\,450\,c[2] + 60\,231\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $186\,705\,c[1] - 171\,738\,c[2] + 60\,247\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $186\,417\,c[1] - 171\,706\,c[2] + 60\,247\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $188\,289\,c[1] - 172\,058\,c[2] + 60\,263\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $188\,001\,c[1] - 172\,026\,c[2] + 60\,263\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $187\,649\,c[1] - 171\,994\,c[2] + 60\,263\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $189\,585\,c[1] - 172\,346\,c[2] + 60\,279\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $189\,233\,c[1] - 172\,314\,c[2] + 60\,279\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $191\,169\,c[1] - 172\,666\,c[2] + 60\,295\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $180\,873\,c[1] - 169\,794\,c[2] + 60\,031\,c[3] - 10\,636\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$
 $182\,457\,c[1] - 170\,114\,c[2] + 60\,047\,c[3] - 10\,636\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$

$$184\,041\,c[1] - 170\,434\,c[2] + 60\,063\,c[3] - 10\,636\,c[4] + 1015\,c[5] - 50\,c[6] + c[7],$$

$$175\,329\,c[1] - 167\,882\,c[2] + 59\,815\,c[3] - 10\,628\,c[4] + 1015\,c[5] - 50\,c[6] + c[7]\}$$

Array[c, 7].g

$$10\,470\,753\,c[1] - 8\,854\,714\,c[2] + 2\,999\,783\,c[3] -$$

$$523\,252\,c[4] + 49\,735\,c[5] - 2450\,c[6] + 49\,c[7]$$

cert =

```
Flatten[Array[c, 7] /. FindInstance[10470753 c[1] - 8854714 c[2] + 2999783 c[3] -
523252 c[4] + 49735 c[5] - 2450 c[6] + 49 c[7] < 0 &&
217833 c[1] - 182130 c[2] + 61375 c[3] - 10684 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 216889 c[1] - 181874 c[2] + 61359 c[3] - 10684 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 216953 c[1] - 181874 c[2] +
61359 c[3] - 10684 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
216601 c[1] - 181842 c[2] + 61359 c[3] - 10684 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 208593 c[1] - 179354 c[2] + 61111 c[3] - 10676 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 210401 c[1] - 179706 c[2] +
61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
210465 c[1] - 179706 c[2] + 61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 210049 c[1] - 179674 c[2] + 61127 c[3] - 10676 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 210113 c[1] - 179674 c[2] +
61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
210177 c[1] - 179674 c[2] + 61127 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 209825 c[1] - 179642 c[2] + 61127 c[3] - 10676 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 211985 c[1] - 180026 c[2] +
61143 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
212049 c[1] - 180026 c[2] + 61143 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 211697 c[1] - 179994 c[2] + 61143 c[3] - 10676 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 211761 c[1] - 179994 c[2] +
61143 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
211345 c[1] - 179962 c[2] + 61143 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 211409 c[1] - 179962 c[2] + 61143 c[3] - 10676 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 211057 c[1] - 179930 c[2] +
61143 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
212929 c[1] - 180282 c[2] + 61159 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 212993 c[1] - 180282 c[2] + 61159 c[3] - 10676 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 212641 c[1] - 180250 c[2] +
61159 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
212289 c[1] - 180218 c[2] + 61159 c[3] - 10676 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 213873 c[1] - 180538 c[2] + 61175 c[3] - 10676 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 202041 c[1] - 177186 c[2] +
60879 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
203913 c[1] - 177538 c[2] + 60895 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 203625 c[1] - 177506 c[2] + 60895 c[3] - 10668 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 203273 c[1] - 177474 c[2] +
60895 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
203337 c[1] - 177474 c[2] + 60895 c[3] - 10668 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
```


$$\begin{aligned}
& 201\,249\,c[1] - 176\,234\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 200\,961\,c[1] - 176\,202\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 200\,609\,c[1] - 176\,170\,c[2] + \\
& 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 200\,673\,c[1] - 176\,170\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 200\,321\,c[1] - 176\,138\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 199\,969\,c[1] - 176\,106\,c[2] + \\
& 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 202\,545\,c[1] - 176\,522\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 202\,257\,c[1] - 176\,490\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 201\,905\,c[1] - 176\,458\,c[2] + \\
& 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 201\,553\,c[1] - 176\,426\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 204\,129\,c[1] - 176\,842\,c[2] + 60\,743\,c[3] - 10\,660\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 203\,841\,c[1] - 176\,810\,c[2] + \\
& 60\,743\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 203\,489\,c[1] - 176\,778\,c[2] + 60\,743\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 190\,953\,c[1] - 173\,362\,c[2] + 60\,447\,c[3] - 10\,652\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 192\,537\,c[1] - 173\,682\,c[2] + \\
& 60\,463\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 192\,249\,c[1] - 173\,650\,c[2] + 60\,463\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 191\,961\,c[1] - 173\,618\,c[2] + 60\,463\,c[3] - 10\,652\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 193\,833\,c[1] - 173\,970\,c[2] + \\
& 60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 193\,481\,c[1] - 173\,938\,c[2] + 60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 193\,545\,c[1] - 173\,938\,c[2] + 60\,479\,c[3] - 10\,652\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 193\,193\,c[1] - 173\,906\,c[2] + \\
& 60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 195\,417\,c[1] - 174\,290\,c[2] + 60\,495\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 195\,129\,c[1] - 174\,258\,c[2] + 60\,495\,c[3] - 10\,652\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 194\,777\,c[1] - 174\,226\,c[2] + \\
& 60\,495\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 197\,001\,c[1] - 174\,610\,c[2] + 60\,511\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 196\,713\,c[1] - 174\,578\,c[2] + 60\,511\,c[3] - 10\,652\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 196\,361\,c[1] - 174\,546\,c[2] + \\
& 60\,511\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 198\,297\,c[1] - 174\,898\,c[2] + 60\,527\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 199\,881\,c[1] - 175\,218\,c[2] + 60\,543\,c[3] - 10\,652\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 185\,409\,c[1] - 171\,450\,c[2] + \\
& 60\,231\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 186\,705\,c[1] - 171\,738\,c[2] + 60\,247\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 186\,417\,c[1] - 171\,706\,c[2] + 60\,247\,c[3] - 10\,644\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 188\,289\,c[1] - 172\,058\,c[2] + \\
& 60\,263\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& \\
& 188\,001\,c[1] - 172\,026\,c[2] + 60\,263\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq \\
& 0 \ \&\& 187\,649\,c[1] - 171\,994\,c[2] + 60\,263\,c[3] - 10\,644\,c[4] + \\
& 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \ \&\& 189\,585\,c[1] - 172\,346\,c[2] +
\end{aligned}$$

```

60 279 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
189 233 c[1] - 172 314 c[2] + 60 279 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 191 169 c[1] - 172 666 c[2] + 60 295 c[3] -
10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
180 873 c[1] - 169 794 c[2] + 60 031 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 182 457 c[1] - 170 114 c[2] + 60 047 c[3] -
10 636 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
184 041 c[1] - 170 434 c[2] + 60 063 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 175 329 c[1] - 167 882 c[2] + 59 815 c[3] - 10 628 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]
{23 855, 246 500, 2 536 575, 26 168 863, 0, 0, 163 604 694 365}

```

```
GCD[23 855, 246 500, 2 536 575, 26 168 863, 0, 0, 163 604 694 365]
```

```
1
```

```
Reverse[cert]
```

```
{163 604 694 365, 0, 0, 26 168 863, 2 536 575, 246 500, 23 855}
```

```
cert.g
```

```
-12 503 551
```

```
{23 855, 246 500, 2 536 575, 26 168 863, 0, 0, 163 604 694 365}.gpart[listdim17[[175]]]
```

```
-12 503 551
```

```
cert.Transpose[A]
```

```

{213 913, 213 593, 1 740 313, 1 231 353, 3 772 817, 719 857, 2 246 577, 210 897, 1 737 617,
3 264 337, 2 755 377, 211 377, 1 738 097, 1 229 137, 2 755 857, 720 177, 2 246 897,
1 737 937, 211 697, 1 738 417, 1 229 457, 720 497, 212 017, 2 752 361, 1 226 121,
2 243 881, 1 734 921, 3 261 641, 4 279 401, 717 641, 1 735 401, 1 226 441, 2 753 161,
2 244 201, 3 770 921, 3 261 961, 1 226 921, 717 961, 2 244 681, 1 735 721, 3 262 441,
1 226 761, 2 753 481, 2 244 521, 1 736 201, 1 227 241, 2 753 961, 2 245 001, 1 736 041,
1 227 081, 1 736 521, 1 227 561, 2 241 185, 3 258 945, 2 750 465, 2 241 505, 3 768 225,
4 785 985, 2 241 985, 3 259 745, 2 750 785, 4 277 505, 3 768 545, 1 733 505, 2 751 265,
2 242 305, 3 769 025, 3 260 065, 2 751 105, 2 242 785, 3 260 545, 2 751 585, 2 242 625,
1 734 305, 2 752 065, 2 243 105, 3 765 529, 3 257 049, 4 274 809, 5 292 569, 3 766 329,
3 257 369, 4 784 089, 4 275 129, 3 257 849, 4 275 609, 3 766 649, 2 749 369, 3 767 129,
3 258 169, 3 258 649, 2 750 169, 4 272 113, 4 781 393, 5 799 153, 4 272 913, 5 290 673,
4 781 713, 4 782 193, 4 273 233, 4 273 713, 6 305 737, 5 797 257, 5 288 777, 6 812 321}

```

```
chi = listdim17[[176]]
```

```
 $(-11 + x)^3 (-9 + x)^9 (5 + x)^{32} (-51\,404 + 31\,043\,x - 7270\,x^2 + 828\,x^3 - 46\,x^4 + x^5)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -61, 1565, -21 849, 178 883, -856 759, 2 216 351, -2 380 851},
{1, -61, 1565, -21 849, 178 899, -857 255, 2 221 391, -2 397 571},

```

```

{1, -61, 1565, -21849, 178899, -857223, 2220751, -2394403},
{1, -61, 1565, -21841, 178563, -852039, 2185951, -2308651},
{1, -61, 1565, -21841, 178579, -852567, 2191759, -2329947},
{1, -61, 1565, -21841, 178579, -852503, 2190351, -2322331},
{1, -61, 1565, -21841, 178579, -852503, 2190415, -2323035},
{1, -61, 1565, -21841, 178595, -853031, 2196095, -2342923},
{1, -61, 1565, -21841, 178595, -853031, 2196159, -2343627},
{1, -61, 1565, -21841, 178595, -852999, 2195455, -2339755},
{1, -61, 1565, -21841, 178595, -852999, 2195519, -2340459},
{1, -61, 1565, -21841, 178595, -852967, 2194815, -2336587},
{1, -61, 1565, -21833, 178259, -847815, 2160719, -2254707},
{1, -61, 1565, -21833, 178259, -847783, 2160015, -2250963},
{1, -61, 1565, -21833, 178259, -847751, 2159375, -2247795},
{1, -61, 1565, -21833, 178275, -848311, 2165823, -2272131},
{1, -61, 1565, -21833, 178275, -848279, 2165119, -2268387},
{1, -61, 1565, -21833, 178275, -848247, 2164415, -2264515},
{1, -61, 1565, -21833, 178275, -848247, 2164479, -2265219},
{1, -61, 1565, -21833, 178275, -848215, 2163775, -2261347},
{1, -61, 1565, -21833, 178275, -848215, 2163839, -2262051},
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{1, -61, 1565, -21833, 178291, -848775, 2170223, -2285811},
{1, -61, 1565, -21833, 178291, -848743, 2169583, -2282643},
{1, -61, 1565, -21833, 178291, -848711, 2168879, -2278771},
{1, -61, 1565, -21833, 178307, -849239, 2174687, -2300067},
{1, -61, 1565, -21825, 177923, -842567, 2124575, -2162043},
{1, -61, 1565, -21825, 177939, -843063, 2129679, -2179467},
{1, -61, 1565, -21825, 177939, -843031, 2128975, -2175723},
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{1, -61, 1565, -21825, 177939, -842999, 2128335, -2172555},
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{1, -61, 1565, -21825, 177955, -843495, 2133439, -2189979},
{1, -61, 1565, -21825, 177955, -843463, 2132735, -2186107},
{1, -61, 1565, -21825, 177955, -843463, 2132799, -2186811},
{1, -61, 1565, -21825, 177971, -844055, 2139823, -2213739},
{1, -61, 1565, -21825, 177971, -844023, 2139183, -2210571},
{1, -61, 1565, -21825, 177971, -843991, 2138543, -2207403},
{1, -61, 1565, -21825, 177971, -843959, 2137903, -2204235},
{1, -61, 1565, -21825, 177987, -844519, 2144287, -2227995},
{1, -61, 1565, -21825, 177987, -844487, 2143647, -2224827},
{1, -61, 1565, -21825, 178003, -844983, 2148751, -2242251},
{1, -61, 1565, -21817, 177619, -838279, 2097935, -2100483},
{1, -61, 1565, -21817, 177619, -838279, 2097999, -2101059},
{1, -61, 1565, -21817, 177635, -838775, 2103039, -2117907},
{1, -61, 1565, -21817, 177635, -838743, 2102399, -2114739},
{1, -61, 1565, -21817, 177635, -838711, 2101759, -2111571},
{1, -61, 1565, -21817, 177651, -839239, 2107503, -2132163},
{1, -61, 1565, -21817, 177651, -839207, 2106863, -2128995},

```

```
{1, -61, 1565, -21817, 177667, -839735, 2112607, -2149587},
{1, -61, 1565, -21817, 177667, -839703, 2111967, -2146419},
{1, -61, 1565, -21809, 177299, -833527, 2066895, -2025243},
{1, -61, 1565, -21809, 177315, -833991, 2071359, -2039499},
{1, -61, 1565, -21809, 177331, -834455, 2075823, -2053755},
{1, -61, 1565, -21809, 177331, -834423, 2075183, -2050587},
{1, -61, 1565, -21809, 177347, -834951, 2080927, -2071179},
{1, -61, 1565, -21801, 177011, -829671, 2044143, -1975347}};
```

```
A // MatrixForm
```

```
( 1 -61 1565 -21849 178883 -856759 2216351 -2380851
 1 -61 1565 -21849 178899 -857255 2221391 -2397571
 1 -61 1565 -21849 178899 -857223 2220751 -2394403
 1 -61 1565 -21841 178563 -852039 2185951 -2308651
 1 -61 1565 -21841 178579 -852567 2191759 -2329947
 1 -61 1565 -21841 178579 -852503 2190351 -2322331
 1 -61 1565 -21841 178579 -852503 2190415 -2323035
 1 -61 1565 -21841 178595 -853031 2196095 -2342923
 1 -61 1565 -21841 178595 -853031 2196159 -2343627
 1 -61 1565 -21841 178595 -852999 2195455 -2339755
 1 -61 1565 -21841 178595 -852999 2195519 -2340459
 1 -61 1565 -21841 178595 -852967 2194815 -2336587
 1 -61 1565 -21833 178259 -847815 2160719 -2254707
 1 -61 1565 -21833 178259 -847783 2160015 -2250963
 1 -61 1565 -21833 178259 -847751 2159375 -2247795
 1 -61 1565 -21833 178275 -848311 2165823 -2272131
 1 -61 1565 -21833 178275 -848279 2165119 -2268387
 1 -61 1565 -21833 178275 -848247 2164415 -2264515
 1 -61 1565 -21833 178275 -848247 2164479 -2265219
 1 -61 1565 -21833 178275 -848215 2163775 -2261347
 1 -61 1565 -21833 178275 -848215 2163839 -2262051
 1 -61 1565 -21833 178291 -848807 2170863 -2288979
 1 -61 1565 -21833 178291 -848775 2170223 -2285811
 1 -61 1565 -21833 178291 -848743 2169583 -2282643
 1 -61 1565 -21833 178291 -848711 2168879 -2278771
 1 -61 1565 -21833 178307 -849239 2174687 -2300067
 1 -61 1565 -21825 177923 -842567 2124575 -2162043
 1 -61 1565 -21825 177939 -843063 2129679 -2179467
 1 -61 1565 -21825 177939 -843031 2128975 -2175723
 1 -61 1565 -21825 177939 -843031 2129039 -2176299
 1 -61 1565 -21825 177939 -842999 2128335 -2172555
 1 -61 1565 -21825 177955 -843527 2134079 -2193147
 1 -61 1565 -21825 177955 -843495 2133439 -2189979
 1 -61 1565 -21825 177955 -843463 2132735 -2186107
 1 -61 1565 -21825 177955 -843463 2132799 -2186811
 1 -61 1565 -21825 177971 -844055 2139823 -2213739
 1 -61 1565 -21825 177971 -844023 2139183 -2210571
 1 -61 1565 -21825 177971 -843991 2138543 -2207403
 1 -61 1565 -21825 177971 -843959 2137903 -2204235
 1 -61 1565 -21825 177987 -844519 2144287 -2227995
 1 -61 1565 -21825 177987 -844487 2143647 -2224827
 1 -61 1565 -21825 178003 -844983 2148751 -2242251
 1 -61 1565 -21817 177619 -838279 2097935 -2100483
 1 -61 1565 -21817 177619 -838279 2097999 -2101059)
```

```

1 -61 1565 -21817 177635 -838775 2103039 -2117907
1 -61 1565 -21817 177635 -838743 2102399 -2114739
1 -61 1565 -21817 177635 -838711 2101759 -2111571
1 -61 1565 -21817 177651 -839239 2107503 -2132163
1 -61 1565 -21817 177651 -839207 2106863 -2128995
1 -61 1565 -21817 177667 -839735 2112607 -2149587
1 -61 1565 -21817 177667 -839703 2111967 -2146419
1 -61 1565 -21809 177299 -833527 2066895 -2025243
1 -61 1565 -21809 177315 -833991 2071359 -2039499
1 -61 1565 -21809 177331 -834455 2075823 -2053755
1 -61 1565 -21809 177331 -834423 2075183 -2050587
1 -61 1565 -21809 177347 -834951 2080927 -2071179
1 -61 1565 -21801 177011 -829671 2044143 -1975347

```

Dimensions[A]

{57, 8}

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

{49, -2989, 76685, -1070337, 8755555, -41850919, 107850015, -115097067}

Array[c, 8].Transpose[A]

```

{c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178883 c[5] -
  856759 c[6] + 2216351 c[7] - 2380851 c[8], c[1] - 61 c[2] + 1565 c[3] -
  21849 c[4] + 178899 c[5] - 857255 c[6] + 2221391 c[7] - 2397571 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21849 c[4] + 178899 c[5] - 857223 c[6] + 2220751 c[7] -
  2394403 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178563 c[5] -
  852039 c[6] + 2185951 c[7] - 2308651 c[8], c[1] - 61 c[2] + 1565 c[3] -
  21841 c[4] + 178579 c[5] - 852567 c[6] + 2191759 c[7] - 2329947 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178579 c[5] - 852503 c[6] +
  2190351 c[7] - 2322331 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] +
  178579 c[5] - 852503 c[6] + 2190415 c[7] - 2323035 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178595 c[5] - 853031 c[6] +
  2196095 c[7] - 2342923 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] +
  178595 c[5] - 853031 c[6] + 2196159 c[7] - 2343627 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178595 c[5] - 852999 c[6] +
  2195455 c[7] - 2339755 c[8], c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] +
  178595 c[5] - 852999 c[6] + 2195519 c[7] - 2340459 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21841 c[4] + 178595 c[5] - 852967 c[6] +
  2194815 c[7] - 2336587 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] +
  178259 c[5] - 847815 c[6] + 2160719 c[7] - 2254707 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178259 c[5] - 847783 c[6] +
  2160015 c[7] - 2250963 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] +
  178259 c[5] - 847751 c[6] + 2159375 c[7] - 2247795 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178275 c[5] - 848311 c[6] +
  2165823 c[7] - 2272131 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] +
  178275 c[5] - 848279 c[6] + 2165119 c[7] - 2268387 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178275 c[5] - 848247 c[6] +
  2164415 c[7] - 2264515 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] +
  178275 c[5] - 848247 c[6] + 2164479 c[7] - 2265219 c[8],

```

$$\begin{aligned}
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178275 c[5] - 848215 c[6] + \\
& 2163775 c[7] - 2261347 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& 178275 c[5] - 848215 c[6] + 2163839 c[7] - 2262051 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178291 c[5] - 848807 c[6] + \\
& 2170863 c[7] - 2288979 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& 178291 c[5] - 848775 c[6] + 2170223 c[7] - 2285811 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178291 c[5] - 848743 c[6] + \\
& 2169583 c[7] - 2282643 c[8], c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + \\
& 178291 c[5] - 848711 c[6] + 2168879 c[7] - 2278771 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21833 c[4] + 178307 c[5] - 849239 c[6] + \\
& 2174687 c[7] - 2300067 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& 177923 c[5] - 842567 c[6] + 2124575 c[7] - 2162043 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177939 c[5] - 843063 c[6] + \\
& 2129679 c[7] - 2179467 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& 177939 c[5] - 843031 c[6] + 2128975 c[7] - 2175723 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177939 c[5] - 843031 c[6] + \\
& 2129039 c[7] - 2176299 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& 177939 c[5] - 842999 c[6] + 2128335 c[7] - 2172555 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177955 c[5] - 843527 c[6] + \\
& 2134079 c[7] - 2193147 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& 177955 c[5] - 843495 c[6] + 2133439 c[7] - 2189979 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177955 c[5] - 843463 c[6] + \\
& 2132735 c[7] - 2186107 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& 177955 c[5] - 843463 c[6] + 2132799 c[7] - 2186811 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177971 c[5] - 844055 c[6] + \\
& 2139823 c[7] - 2213739 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& 177971 c[5] - 844023 c[6] + 2139183 c[7] - 2210571 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177971 c[5] - 843991 c[6] + \\
& 2138543 c[7] - 2207403 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& 177971 c[5] - 843959 c[6] + 2137903 c[7] - 2204235 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 177987 c[5] - 844519 c[6] + \\
& 2144287 c[7] - 2227995 c[8], c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + \\
& 177987 c[5] - 844487 c[6] + 2143647 c[7] - 2224827 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21825 c[4] + 178003 c[5] - 844983 c[6] + \\
& 2148751 c[7] - 2242251 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + \\
& 177619 c[5] - 838279 c[6] + 2097935 c[7] - 2100483 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177619 c[5] - 838279 c[6] + \\
& 2097999 c[7] - 2101059 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + \\
& 177635 c[5] - 838775 c[6] + 2103039 c[7] - 2117907 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177635 c[5] - 838743 c[6] + \\
& 2102399 c[7] - 2114739 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + \\
& 177635 c[5] - 838711 c[6] + 2101759 c[7] - 2111571 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177651 c[5] - 839239 c[6] + \\
& 2107503 c[7] - 2132163 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + \\
& 177651 c[5] - 839207 c[6] + 2106863 c[7] - 2128995 c[8], \\
& c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] + 177667 c[5] - 839735 c[6] + \\
& 2112607 c[7] - 2149587 c[8], c[1] - 61 c[2] + 1565 c[3] - 21817 c[4] +
\end{aligned}$$

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177 667 c[5] - 839 703 c[6] + 2 111 967 c[7] - 2 146 419 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] + 177 299 c[5] - 833 527 c[6] +
2 066 895 c[7] - 2 025 243 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] +
177 315 c[5] - 833 991 c[6] + 2 071 359 c[7] - 2 039 499 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] + 177 331 c[5] - 834 455 c[6] +
2 075 823 c[7] - 2 053 755 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] +
177 331 c[5] - 834 423 c[6] + 2 075 183 c[7] - 2 050 587 c[8],
c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] + 177 347 c[5] - 834 951 c[6] +
2 080 927 c[7] - 2 071 179 c[8], c[1] - 61 c[2] + 1565 c[3] - 21 801 c[4] +
177 011 c[5] - 829 671 c[6] + 2 044 143 c[7] - 1 975 347 c[8] }

```

Array[c, 8].g

```

49 c[1] - 2989 c[2] + 76 685 c[3] - 1 070 337 c[4] +
8 755 555 c[5] - 41 850 919 c[6] + 107 850 015 c[7] - 115 097 067 c[8]

```

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2989 c[2] + 76 685 c[3] - 1 070 337 c[4] +
8 755 555 c[5] - 41 850 919 c[6] + 107 850 015 c[7] - 115 097 067 c[8] < 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] + 178 883 c[5] - 856 759 c[6] +
2 216 351 c[7] - 2 380 851 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] +
178 899 c[5] - 857 255 c[6] + 2 221 391 c[7] - 2 397 571 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 849 c[4] + 178 899 c[5] - 857 223 c[6] +
2 220 751 c[7] - 2 394 403 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 563 c[5] - 852 039 c[6] + 2 185 951 c[7] - 2 308 651 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 579 c[5] - 852 567 c[6] +
2 191 759 c[7] - 2 329 947 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 579 c[5] - 852 503 c[6] + 2 190 351 c[7] - 2 322 331 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 579 c[5] - 852 503 c[6] +
2 190 415 c[7] - 2 323 035 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 595 c[5] - 853 031 c[6] + 2 196 095 c[7] - 2 342 923 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 595 c[5] - 853 031 c[6] +
2 196 159 c[7] - 2 343 627 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 595 c[5] - 852 999 c[6] + 2 195 455 c[7] - 2 339 755 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] + 178 595 c[5] - 852 999 c[6] +
2 195 519 c[7] - 2 340 459 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 841 c[4] +
178 595 c[5] - 852 967 c[6] + 2 194 815 c[7] - 2 336 587 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 259 c[5] - 847 815 c[6] +
2 160 719 c[7] - 2 254 707 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 259 c[5] - 847 783 c[6] + 2 160 015 c[7] - 2 250 963 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 259 c[5] - 847 751 c[6] +
2 159 375 c[7] - 2 247 795 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 275 c[5] - 848 311 c[6] + 2 165 823 c[7] - 2 272 131 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 275 c[5] - 848 279 c[6] +
2 165 119 c[7] - 2 268 387 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +
178 275 c[5] - 848 247 c[6] + 2 164 415 c[7] - 2 264 515 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] + 178 275 c[5] - 848 247 c[6] +
2 164 479 c[7] - 2 265 219 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 833 c[4] +

```


$$\begin{aligned}
& 178\,275\,c[5] - 848\,215\,c[6] + 2\,163\,775\,c[7] - 2\,261\,347\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,275\,c[5] - 848\,215\,c[6] + \\
& \quad 2\,163\,839\,c[7] - 2\,262\,051\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& \quad 178\,291\,c[5] - 848\,807\,c[6] + 2\,170\,863\,c[7] - 2\,288\,979\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,291\,c[5] - 848\,775\,c[6] + \\
& \quad 2\,170\,223\,c[7] - 2\,285\,811\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& \quad 178\,291\,c[5] - 848\,743\,c[6] + 2\,169\,583\,c[7] - 2\,282\,643\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + 178\,291\,c[5] - 848\,711\,c[6] + \\
& \quad 2\,168\,879\,c[7] - 2\,278\,771\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,833\,c[4] + \\
& \quad 178\,307\,c[5] - 849\,239\,c[6] + 2\,174\,687\,c[7] - 2\,300\,067\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,923\,c[5] - 842\,567\,c[6] + \\
& \quad 2\,124\,575\,c[7] - 2\,162\,043\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& \quad 177\,939\,c[5] - 843\,063\,c[6] + 2\,129\,679\,c[7] - 2\,179\,467\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,939\,c[5] - 843\,031\,c[6] + \\
& \quad 2\,128\,975\,c[7] - 2\,175\,723\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& \quad 177\,939\,c[5] - 843\,031\,c[6] + 2\,129\,039\,c[7] - 2\,176\,299\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,939\,c[5] - 842\,999\,c[6] + \\
& \quad 2\,128\,335\,c[7] - 2\,172\,555\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& \quad 177\,955\,c[5] - 843\,527\,c[6] + 2\,134\,079\,c[7] - 2\,193\,147\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,955\,c[5] - 843\,495\,c[6] + \\
& \quad 2\,133\,439\,c[7] - 2\,189\,979\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& \quad 177\,955\,c[5] - 843\,463\,c[6] + 2\,132\,735\,c[7] - 2\,186\,107\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,955\,c[5] - 843\,463\,c[6] + \\
& \quad 2\,132\,799\,c[7] - 2\,186\,811\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& \quad 177\,971\,c[5] - 844\,055\,c[6] + 2\,139\,823\,c[7] - 2\,213\,739\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,971\,c[5] - 844\,023\,c[6] + \\
& \quad 2\,139\,183\,c[7] - 2\,210\,571\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& \quad 177\,971\,c[5] - 843\,991\,c[6] + 2\,138\,543\,c[7] - 2\,207\,403\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,971\,c[5] - 843\,959\,c[6] + \\
& \quad 2\,137\,903\,c[7] - 2\,204\,235\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& \quad 177\,987\,c[5] - 844\,519\,c[6] + 2\,144\,287\,c[7] - 2\,227\,995\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + 177\,987\,c[5] - 844\,487\,c[6] + \\
& \quad 2\,143\,647\,c[7] - 2\,224\,827\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,825\,c[4] + \\
& \quad 178\,003\,c[5] - 844\,983\,c[6] + 2\,148\,751\,c[7] - 2\,242\,251\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + 177\,619\,c[5] - 838\,279\,c[6] + \\
& \quad 2\,097\,935\,c[7] - 2\,100\,483\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + \\
& \quad 177\,619\,c[5] - 838\,279\,c[6] + 2\,097\,999\,c[7] - 2\,101\,059\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + 177\,635\,c[5] - 838\,775\,c[6] + \\
& \quad 2\,103\,039\,c[7] - 2\,117\,907\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + \\
& \quad 177\,635\,c[5] - 838\,743\,c[6] + 2\,102\,399\,c[7] - 2\,114\,739\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + 177\,635\,c[5] - 838\,711\,c[6] + \\
& \quad 2\,101\,759\,c[7] - 2\,111\,571\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + \\
& \quad 177\,651\,c[5] - 839\,239\,c[6] + 2\,107\,503\,c[7] - 2\,132\,163\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + 177\,651\,c[5] - 839\,207\,c[6] + \\
& \quad 2\,106\,863\,c[7] - 2\,128\,995\,c[8] \geq 0 \&\& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + \\
& \quad 177\,667\,c[5] - 839\,735\,c[6] + 2\,112\,607\,c[7] - 2\,149\,587\,c[8] \geq 0 \&\& \\
& c[1] - 61\,c[2] + 1565\,c[3] - 21\,817\,c[4] + 177\,667\,c[5] - 839\,703\,c[6] +
\end{aligned}$$

```

2 111 967 c[7] - 2 146 419 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] +
177 299 c[5] - 833 527 c[6] + 2 066 895 c[7] - 2 025 243 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] + 177 315 c[5] - 833 991 c[6] +
2 071 359 c[7] - 2 039 499 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] +
177 331 c[5] - 834 455 c[6] + 2 075 823 c[7] - 2 053 755 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] + 177 331 c[5] - 834 423 c[6] +
2 075 183 c[7] - 2 050 587 c[8] ≥ 0 && c[1] - 61 c[2] + 1565 c[3] - 21 809 c[4] +
177 347 c[5] - 834 951 c[6] + 2 080 927 c[7] - 2 071 179 c[8] ≥ 0 &&
c[1] - 61 c[2] + 1565 c[3] - 21 801 c[4] + 177 011 c[5] - 829 671 c[6] +
2 044 143 c[7] - 1 975 347 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -316 467 666, -81 782 200, -12 927 692, -1 754 267, -221 407}

GCD[0, 0, 0, -316 467 666, -81 782 200, -12 927 692, -1 754 267, -221 407]
1

cert.g
-133 099 346

{0, 0, 0, -316 467 666, -81 782 200, -12 927 692, -1 754 267, -221 407}.
Reverse[gpart[listdim17[[176]]]]
-133 099 346

cert.Transpose[A]
{38 879 702, 2 919 094, 10 546 454, 2 867 534, 46 474 446, 2 874 382, 46 471 822, 2 883 854,
46 481 294, 10 511 214, 54 108 654, 18 138 574, 46 429 734, 38 799 750, 46 427 110,
54 066 566, 46 436 582, 10 466 502, 54 063 942, 18 093 862, 61 691 302, 46 446 054,
54 073 414, 61 700 774, 25 730 694, 69 337 606, 38 748 190, 46 385 022, 38 755 038,
54 012 382, 46 382 398, 46 391 870, 54 019 230, 18 049 150, 61 646 590, 46 401 342,
54 028 702, 61 656 062, 69 283 422, 61 665 534, 69 292 894, 76 929 726, 38 710 326,
53 967 670, 46 347 158, 53 974 518, 61 601 878, 61 611 350, 69 238 710, 69 248 182,
76 875 542, 38 665 614, 53 929 806, 69 193 998, 76 821 358, 76 830 830, 76 776 646}

chi = listdim17[[177]]
(-11 + x)5 (-9 + x)7 (-7 + x) (5 + x)32 (4948 - 2465 x + 447 x2 - 35 x3 + x4)

CoefficientList[feasibleinterlacingpolylist[chi], x]

```

```

A = {{1, -57, 1369, -17945, 138523, -629011, 1553547, -1607067},
      {1, -57, 1369, -17937, 138235, -625187, 1531307, -1559187},
      {1, -57, 1369, -17937, 138235, -625155, 1530795, -1557171},
      {1, -57, 1369, -17937, 138251, -625651, 1535643, -1572291},
      {1, -57, 1369, -17937, 138251, -625619, 1535131, -1570275},
      {1, -57, 1369, -17937, 138251, -625587, 1534555, -1567811},
      {1, -57, 1369, -17937, 138251, -625587, 1534619, -1568259},
      {1, -57, 1369, -17937, 138267, -626019, 1538443, -1579347},
      {1, -57, 1369, -17937, 138267, -625987, 1537867, -1576883},
      {1, -57, 1369, -17929, 137947, -621363, 1509067, -1511307},
      {1, -57, 1369, -17929, 137963, -621795, 1512891, -1522395},
      {1, -57, 1369, -17929, 137963, -621763, 1512379, -1520379},
      {1, -57, 1369, -17929, 137963, -621731, 1511867, -1518363},
      {1, -57, 1369, -17929, 137979, -622195, 1516203, -1531467},
      {1, -57, 1369, -17929, 137979, -622163, 1515691, -1529451},
      {1, -57, 1369, -17929, 137995, -622627, 1520027, -1542555},
      {1, -57, 1369, -17929, 137995, -622595, 1519515, -1540539},
      {1, -57, 1369, -17921, 137675, -617939, 1490139, -1472499},
      {1, -57, 1369, -17921, 137691, -618339, 1493451, -1481571},
      {1, -57, 1369, -17921, 137691, -618307, 1492939, -1479555},
      {1, -57, 1369, -17921, 137707, -618739, 1496763, -1490643},
      {1, -57, 1369, -17921, 137723, -619203, 1501163, -1504323},
      {1, -57, 1369, -17921, 137723, -619171, 1500587, -1501731},
      {1, -57, 1369, -17913, 137403, -614483, 1470699, -1431675},
      {1, -57, 1369, -17913, 137419, -614883, 1474011, -1440747},
      {1, -57, 1369, -17913, 137435, -615315, 1477835, -1451835}};

```

A // MatrixForm

```
( 1 -57 1369 -17945 138523 -629011 1553547 -1607067
 1 -57 1369 -17937 138235 -625187 1531307 -1559187
 1 -57 1369 -17937 138235 -625155 1530795 -1557171
 1 -57 1369 -17937 138251 -625651 1535643 -1572291
 1 -57 1369 -17937 138251 -625619 1535131 -1570275
 1 -57 1369 -17937 138251 -625587 1534555 -1567811
 1 -57 1369 -17937 138251 -625587 1534619 -1568259
 1 -57 1369 -17937 138267 -626019 1538443 -1579347
 1 -57 1369 -17937 138267 -625987 1537867 -1576883
 1 -57 1369 -17929 137947 -621363 1509067 -1511307
 1 -57 1369 -17929 137963 -621795 1512891 -1522395
 1 -57 1369 -17929 137963 -621763 1512379 -1520379
 1 -57 1369 -17929 137963 -621731 1511867 -1518363
 1 -57 1369 -17929 137979 -622195 1516203 -1531467
 1 -57 1369 -17929 137979 -622163 1515691 -1529451
 1 -57 1369 -17929 137995 -622627 1520027 -1542555
 1 -57 1369 -17929 137995 -622595 1519515 -1540539
 1 -57 1369 -17921 137675 -617939 1490139 -1472499
 1 -57 1369 -17921 137691 -618339 1493451 -1481571
 1 -57 1369 -17921 137691 -618307 1492939 -1479555
 1 -57 1369 -17921 137707 -618739 1496763 -1490643
 1 -57 1369 -17921 137723 -619203 1501163 -1504323
 1 -57 1369 -17921 137723 -619171 1500587 -1501731
 1 -57 1369 -17913 137403 -614483 1470699 -1431675
 1 -57 1369 -17913 137419 -614883 1474011 -1440747
 1 -57 1369 -17913 137435 -615315 1477835 -1451835)
```

Dimensions[A]

```
{26, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -2793, 67081, -879041, 6778843, -30714179, 75549483, -77608403}
```

Array[c, 8].Transpose[A]

$$\{c[1] - 57 c[2] + 1369 c[3] - 17945 c[4] + 138523 c[5] - 629011 c[6] + 1553547 c[7] - 1607067 c[8], c[1] - 57 c[2] + 1369 c[3] - 17937 c[4] + 138235 c[5] - 625187 c[6] + 1531307 c[7] - 1559187 c[8], c[1] - 57 c[2] + 1369 c[3] - 17937 c[4] + 138235 c[5] - 625155 c[6] + 1530795 c[7] - 1557171 c[8], c[1] - 57 c[2] + 1369 c[3] - 17937 c[4] + 138251 c[5] - 625651 c[6] + 1535643 c[7] - 1572291 c[8], c[1] - 57 c[2] + 1369 c[3] - 17937 c[4] + 138251 c[5] - 625619 c[6] + 1535131 c[7] - 1570275 c[8], c[1] - 57 c[2] + 1369 c[3] - 17937 c[4] + 138251 c[5] - 625587 c[6] + 1534555 c[7] - 1567811 c[8], c[1] - 57 c[2] + 1369 c[3] - 17937 c[4] + 138251 c[5] - 625587 c[6] + 1534619 c[7] - 1568259 c[8], c[1] - 57 c[2] + 1369 c[3] - 17937 c[4] + 138267 c[5] - 626019 c[6] + 1538443 c[7] - 1579347 c[8], c[1] - 57 c[2] + 1369 c[3] - 17937 c[4] + 138267 c[5] - 625987 c[6] + 1537867 c[7] - 1576883 c[8], c[1] - 57 c[2] + 1369 c[3] - 17929 c[4] + 137947 c[5] - 621363 c[6] + 1509067 c[7] - 1511307 c[8], c[1] - 57 c[2] + 1369 c[3] - 17929 c[4] + 137963 c[5] - 621795 c[6] + 1512891 c[7] - 1522395 c[8], c[1] - 57 c[2] + 1369 c[3] - 17929 c[4] + 137963 c[5] - 621763 c[6] + 1512379 c[7] - 1520379 c[8], c[1] - 57 c[2] + 1369 c[3] - 17929 c[4] + 137963 c[5] - 621731 c[6] + 1511867 c[7] - 1518363 c[8], c[1] - 57 c[2] + 1369 c[3] - 17929 c[4] + 137979 c[5] - 622195 c[6] + 1516203 c[7] - 1531467 c[8], c[1] - 57 c[2] + 1369 c[3] - 17929 c[4] + 137979 c[5] - 622163 c[6] + 1515691 c[7] - 1529451 c[8], c[1] - 57 c[2] + 1369 c[3] - 17929 c[4] + 137995 c[5] - 622627 c[6] + 1520027 c[7] - 1542555 c[8], c[1] - 57 c[2] + 1369 c[3] - 17929 c[4] + 137995 c[5] - 622595 c[6] + 1519515 c[7] - 1540539 c[8], c[1] - 57 c[2] + 1369 c[3] - 17921 c[4] + 137675 c[5] - 617939 c[6] + 1490139 c[7] - 1472499 c[8], c[1] - 57 c[2] + 1369 c[3] - 17921 c[4] + 137691 c[5] - 618339 c[6] + 1493451 c[7] - 1481571 c[8], c[1] - 57 c[2] + 1369 c[3] - 17921 c[4] + 137691 c[5] - 618307 c[6] + 1492939 c[7] - 1479555 c[8], c[1] - 57 c[2] + 1369 c[3] - 17921 c[4] + 137707 c[5] - 618739 c[6] + 1496763 c[7] - 1490643 c[8], c[1] - 57 c[2] + 1369 c[3] - 17921 c[4] + 137723 c[5] - 619203 c[6] + 1501163 c[7] - 1504323 c[8], c[1] - 57 c[2] + 1369 c[3] - 17921 c[4] + 137723 c[5] - 619171 c[6] + 1500587 c[7] - 1501731 c[8], c[1] - 57 c[2] + 1369 c[3] - 17913 c[4] + 137403 c[5] - 614483 c[6] + 1470699 c[7] - 1431675 c[8], c[1] - 57 c[2] + 1369 c[3] - 17913 c[4] + 137419 c[5] - 614883 c[6] + 1474011 c[7] - 1440747 c[8], c[1] - 57 c[2] + 1369 c[3] - 17913 c[4] + 137435 c[5] - 615315 c[6] + 1477835 c[7] - 1451835 c[8] \}$$

Array[c, 8].g

$$49 c[1] - 2793 c[2] + 67081 c[3] - 879041 c[4] + 6778843 c[5] - 30714179 c[6] + 75549483 c[7] - 77608403 c[8]$$

```

cert =
  Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2793 c[2] + 67 081 c[3] - 879 041 c[4] +
    6 778 843 c[5] - 30 714 179 c[6] + 75 549 483 c[7] - 77 608 403 c[8] < 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 945 c[4] + 138 523 c[5] - 629 011 c[6] +
    1 553 547 c[7] - 1 607 067 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 937 c[4] +
    138 235 c[5] - 625 187 c[6] + 1 531 307 c[7] - 1 559 187 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 937 c[4] + 138 235 c[5] - 625 155 c[6] +
    1 530 795 c[7] - 1 557 171 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 937 c[4] +
    138 251 c[5] - 625 651 c[6] + 1 535 643 c[7] - 1 572 291 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 937 c[4] + 138 251 c[5] -
    625 619 c[6] + 1 535 131 c[7] - 1 570 275 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 937 c[4] + 138 251 c[5] - 625 587 c[6] +
    1 534 555 c[7] - 1 567 811 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 937 c[4] +
    138 251 c[5] - 625 587 c[6] + 1 534 619 c[7] - 1 568 259 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 937 c[4] + 138 267 c[5] - 626 019 c[6] +
    1 538 443 c[7] - 1 579 347 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 937 c[4] +
    138 267 c[5] - 625 987 c[6] + 1 537 867 c[7] - 1 576 883 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 929 c[4] + 137 947 c[5] - 621 363 c[6] +
    1 509 067 c[7] - 1 511 307 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 929 c[4] +
    137 963 c[5] - 621 795 c[6] + 1 512 891 c[7] - 1 522 395 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 929 c[4] + 137 963 c[5] - 621 763 c[6] +
    1 512 379 c[7] - 1 520 379 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 929 c[4] +
    137 963 c[5] - 621 731 c[6] + 1 511 867 c[7] - 1 518 363 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 929 c[4] + 137 979 c[5] - 622 195 c[6] +
    1 516 203 c[7] - 1 531 467 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 929 c[4] +
    137 979 c[5] - 622 163 c[6] + 1 515 691 c[7] - 1 529 451 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 929 c[4] + 137 995 c[5] - 622 627 c[6] +
    1 520 027 c[7] - 1 542 555 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 929 c[4] +
    137 995 c[5] - 622 595 c[6] + 1 519 515 c[7] - 1 540 539 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 921 c[4] + 137 675 c[5] - 617 939 c[6] +
    1 490 139 c[7] - 1 472 499 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 921 c[4] +
    137 691 c[5] - 618 339 c[6] + 1 493 451 c[7] - 1 481 571 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 921 c[4] + 137 691 c[5] - 618 307 c[6] +
    1 492 939 c[7] - 1 479 555 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 921 c[4] +
    137 707 c[5] - 618 739 c[6] + 1 496 763 c[7] - 1 490 643 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 921 c[4] + 137 723 c[5] - 619 203 c[6] +
    1 501 163 c[7] - 1 504 323 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 921 c[4] +
    137 723 c[5] - 619 171 c[6] + 1 500 587 c[7] - 1 501 731 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 913 c[4] + 137 403 c[5] - 614 483 c[6] +
    1 470 699 c[7] - 1 431 675 c[8] ≥ 0 && c[1] - 57 c[2] + 1369 c[3] - 17 913 c[4] +
    137 419 c[5] - 614 883 c[6] + 1 474 011 c[7] - 1 440 747 c[8] ≥ 0 &&
    c[1] - 57 c[2] + 1369 c[3] - 17 913 c[4] + 137 435 c[5] - 615 315 c[6] +
    1 477 835 c[7] - 1 451 835 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, -411 875 739, -126 767 583, -24 943 894, -4 253 740, -676 710}

```

```
GCD[0, 0, 0, -411 875 739, -126 767 583, -24 943 894, -4 253 740, -676 710]
```

```
1
```

```
cert.g
```

```
-131 309 434
```

```
{0, 0, 0, -411 875 739, -126 767 583, -24 943 894, -4 253 740, -676 710}.
```

```
Reverse[gpart[listdim17[[177]]]
```

```
-131 309 434
```

```
cert.Transpose[A]
```

```
{1 239 070, 32 149 206, 47 612 118, 1 225 894, 16 688 806, 1 224 998, 32 151 718,  
16 691 318, 1 227 510, 63 059 342, 47 598 942, 63 061 854, 78 524 766, 47 601 454,  
63 064 366, 32 141 054, 47 603 966, 93 971 990, 93 974 502, 109 437 414,  
93 977 014, 180 599 302, 78 516 614, 140 347 550, 140 350 062, 124 889 662}
```

```
chi = listdim17[[178]]
```

```
 $(-11 + x)^4 (-9 + x)^8 (5 + x)^{32} (73 - 18 x + x^2) (-580 + 217 x - 26 x^2 + x^3)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -59, 1465, -19 811, 157 259, -731 049, 1 837 499, -1 919 097},  
{1, -59, 1465, -19 811, 157 275, -731 481, 1 841 259, -1 929 609},  
{1, -59, 1465, -19 803, 156 955, -726 793, 1 811 563, -1 861 281},  
{1, -59, 1465, -19 803, 156 971, -727 225, 1 815 323, -1 871 793},  
{1, -59, 1465, -19 795, 156 651, -722 537, 1 785 627, -1 803 465},  
{1, -59, 1465, -19 795, 156 667, -722 969, 1 789 387, -1 813 977}};
```

```
A // MatrixForm
```

```

$$\begin{pmatrix} 1 & -59 & 1465 & -19\,811 & 157\,259 & -731\,049 & 1\,837\,499 & -1\,919\,097 \\ 1 & -59 & 1465 & -19\,811 & 157\,275 & -731\,481 & 1\,841\,259 & -1\,929\,609 \\ 1 & -59 & 1465 & -19\,803 & 156\,955 & -726\,793 & 1\,811\,563 & -1\,861\,281 \\ 1 & -59 & 1465 & -19\,803 & 156\,971 & -727\,225 & 1\,815\,323 & -1\,871\,793 \\ 1 & -59 & 1465 & -19\,795 & 156\,651 & -722\,537 & 1\,785\,627 & -1\,803\,465 \\ 1 & -59 & 1465 & -19\,795 & 156\,667 & -722\,969 & 1\,789\,387 & -1\,813\,977 \end{pmatrix}$$

```

```
Dimensions[A]
```

```
{6, 8}
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse
```

```
{49, -2891, 71 785, -970 867, 7 710 491, -35 887 033, 90 424 907, -94 873 225}
```

Array[c, 8].Transpose[A]

```
{c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 259 c[5] -
  731 049 c[6] + 1 837 499 c[7] - 1 919 097 c[8], c[1] - 59 c[2] + 1465 c[3] -
  19 811 c[4] + 157 275 c[5] - 731 481 c[6] + 1 841 259 c[7] - 1 929 609 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 793 c[6] +
  1 811 563 c[7] - 1 861 281 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 971 c[5] - 727 225 c[6] + 1 815 323 c[7] - 1 871 793 c[8],
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 651 c[5] - 722 537 c[6] +
  1 785 627 c[7] - 1 803 465 c[8], c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
  156 667 c[5] - 722 969 c[6] + 1 789 387 c[7] - 1 813 977 c[8]}
```

Array[c, 8].g

```
49 c[1] - 2891 c[2] + 71 785 c[3] - 970 867 c[4] +
  7 710 491 c[5] - 35 887 033 c[6] + 90 424 907 c[7] - 94 873 225 c[8]
```

cert =

```
Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2891 c[2] + 71 785 c[3] - 970 867 c[4] +
  7 710 491 c[5] - 35 887 033 c[6] + 90 424 907 c[7] - 94 873 225 c[8] < 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 259 c[5] - 731 049 c[6] +
  1 837 499 c[7] - 1 919 097 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
  157 275 c[5] - 731 481 c[6] + 1 841 259 c[7] - 1 929 609 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 793 c[6] +
  1 811 563 c[7] - 1 861 281 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
  156 971 c[5] - 727 225 c[6] + 1 815 323 c[7] - 1 871 793 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 651 c[5] -
  722 537 c[6] + 1 785 627 c[7] - 1 803 465 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 667 c[5] - 722 969 c[6] +
  1 789 387 c[7] - 1 813 977 c[8] ≥ 0, Array[c, 8], Integers]]
```

```
{0, 0, 0, 0, 0, 0, 2204, 2101}
```

```
GCD[0, 0, 0, 0, 0, 0, 2204, 2101]
```

```
1
```

cert.g

```
-32 150 697
```

```
{0, 0, 0, 0, 0, 0, 2204, 2101}.Reverse[gpart[listdim17[[178]]]]
```

```
-32 150 697
```

cert.Transpose[A]

```
{17 824 999, 4 026 327, 82 133 471, 68 334 799, 146 441 943, 132 643 271}
```



```
chi = listdim17[[179]]
```

$$(-11 + x)^2 (-9 + x)^{10} (5 + x)^{32} (-61936 + 36553x - 8256x^2 + 902x^3 - 48x^4 + x^5)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
A = {{1, -63, 1669, -24035, 202467, -992813, 2606103, -2796849},
      {1, -63, 1669, -24035, 202499, -993837, 2616951, -2834865},
      {1, -63, 1669, -24035, 202515, -994365, 2622695, -2855457},
      {1, -63, 1669, -24027, 202147, -988061, 2575063, -2721609},
      {1, -63, 1669, -24027, 202163, -988589, 2580807, -2742201},
      {1, -63, 1669, -24027, 202163, -988557, 2580167, -2739033},
      {1, -63, 1669, -24027, 202179, -989085, 2585911, -2759625},
      {1, -63, 1669, -24027, 202195, -989581, 2591015, -2777049},
      {1, -63, 1669, -24019, 201811, -982813, 2538919, -2628945},
      {1, -63, 1669, -24019, 201811, -982781, 2538279, -2625777},
      {1, -63, 1669, -24019, 201827, -983309, 2544023, -2646369},
      {1, -63, 1669, -24019, 201843, -983837, 2549767, -2666961},
      {1, -63, 1669, -24019, 201843, -983805, 2549127, -2663793},
      {1, -63, 1669, -24019, 201859, -984301, 2554231, -2681217},
      {1, -63, 1669, -24011, 201475, -977533, 2502135, -2533113},
      {1, -63, 1669, -24011, 201491, -978061, 2507879, -2553705},
      {1, -63, 1669, -24011, 201491, -978029, 2507239, -2550537},
      {1, -63, 1669, -24011, 201507, -978557, 2512983, -2571129},
      {1, -63, 1669, -24011, 201507, -978525, 2512343, -2567961},
      {1, -63, 1669, -24003, 201139, -972285, 2465991, -2440449},
      {1, -63, 1669, -24003, 201155, -972781, 2471095, -2457873},
      {1, -63, 1669, -24003, 201155, -972749, 2470455, -2454705},
      {1, -63, 1669, -24003, 201171, -973277, 2476199, -2475297},
      {1, -63, 1669, -24003, 201171, -973245, 2475559, -2472129},
      {1, -63, 1669, -23995, 200819, -967501, 2434311, -2362041},
      {1, -63, 1669, -23995, 200835, -967997, 2439415, -2379465},
      {1, -63, 1669, -23995, 200851, -968493, 2444519, -2396889},
      {1, -63, 1669, -23987, 200499, -962717, 2402631, -2283633},
      {1, -63, 1669, -23987, 200515, -963213, 2407735, -2301057}};
```

A // MatrixForm

```
( 1 -63 1669 -24035 202467 -992813 2606103 -2796849
 1 -63 1669 -24035 202499 -993837 2616951 -2834865
 1 -63 1669 -24035 202515 -994365 2622695 -2855457
 1 -63 1669 -24027 202147 -988061 2575063 -2721609
 1 -63 1669 -24027 202163 -988589 2580807 -2742201
 1 -63 1669 -24027 202163 -988557 2580167 -2739033
 1 -63 1669 -24027 202179 -989085 2585911 -2759625
 1 -63 1669 -24027 202195 -989581 2591015 -2777049
 1 -63 1669 -24019 201811 -982813 2538919 -2628945
 1 -63 1669 -24019 201811 -982781 2538279 -2625777
 1 -63 1669 -24019 201827 -983309 2544023 -2646369
 1 -63 1669 -24019 201843 -983837 2549767 -2666961
 1 -63 1669 -24019 201843 -983805 2549127 -2663793
 1 -63 1669 -24019 201859 -984301 2554231 -2681217
 1 -63 1669 -24011 201475 -977533 2502135 -2533113
 1 -63 1669 -24011 201491 -978061 2507879 -2553705
 1 -63 1669 -24011 201491 -978029 2507239 -2550537
 1 -63 1669 -24011 201507 -978557 2512983 -2571129
 1 -63 1669 -24011 201507 -978525 2512343 -2567961
 1 -63 1669 -24003 201139 -972285 2465991 -2440449
 1 -63 1669 -24003 201155 -972781 2471095 -2457873
 1 -63 1669 -24003 201155 -972749 2470455 -2454705
 1 -63 1669 -24003 201171 -973277 2476199 -2475297
 1 -63 1669 -24003 201171 -973245 2475559 -2472129
 1 -63 1669 -23995 200819 -967501 2434311 -2362041
 1 -63 1669 -23995 200835 -967997 2439415 -2379465
 1 -63 1669 -23995 200851 -968493 2444519 -2396889
 1 -63 1669 -23987 200499 -962717 2402631 -2283633
 1 -63 1669 -23987 200515 -963213 2407735 -2301057)
```

Dimensions[A]

```
{29, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -3087, 81781, -1177659, 9920323, -48668189, 128046679, -138480473}
```

Array[c, 8].Transpose[A]

```
{c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] -
  992 813 c[6] + 2 606 103 c[7] - 2 796 849 c[8], c[1] - 63 c[2] + 1669 c[3] -
  24 035 c[4] + 202 499 c[5] - 993 837 c[6] + 2 616 951 c[7] - 2 834 865 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 515 c[5] - 994 365 c[6] + 2 622 695 c[7] -
  2 855 457 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 147 c[5] -
  988 061 c[6] + 2 575 063 c[7] - 2 721 609 c[8], c[1] - 63 c[2] + 1669 c[3] -
  24 027 c[4] + 202 163 c[5] - 988 589 c[6] + 2 580 807 c[7] - 2 742 201 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 163 c[5] - 988 557 c[6] +
  2 580 167 c[7] - 2 739 033 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 179 c[5] - 989 085 c[6] + 2 585 911 c[7] - 2 759 625 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 195 c[5] - 989 581 c[6] +
  2 591 015 c[7] - 2 777 049 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 811 c[5] - 982 813 c[6] + 2 538 919 c[7] - 2 628 945 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 781 c[6] +
  2 538 279 c[7] - 2 625 777 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 827 c[5] - 983 309 c[6] + 2 544 023 c[7] - 2 646 369 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 837 c[6] +
  2 549 767 c[7] - 2 666 961 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 843 c[5] - 983 805 c[6] + 2 549 127 c[7] - 2 663 793 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 859 c[5] - 984 301 c[6] +
  2 554 231 c[7] - 2 681 217 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 475 c[5] - 977 533 c[6] + 2 502 135 c[7] - 2 533 113 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 061 c[6] +
  2 507 879 c[7] - 2 553 705 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 491 c[5] - 978 029 c[6] + 2 507 239 c[7] - 2 550 537 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 507 c[5] - 978 557 c[6] +
  2 512 983 c[7] - 2 571 129 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 507 c[5] - 978 525 c[6] + 2 512 343 c[7] - 2 567 961 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 139 c[5] - 972 285 c[6] +
  2 465 991 c[7] - 2 440 449 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 155 c[5] - 972 781 c[6] + 2 471 095 c[7] - 2 457 873 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 749 c[6] +
  2 470 455 c[7] - 2 454 705 c[8], c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 171 c[5] - 973 277 c[6] + 2 476 199 c[7] - 2 475 297 c[8],
c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 171 c[5] - 973 245 c[6] +
  2 475 559 c[7] - 2 472 129 c[8], c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
  200 819 c[5] - 967 501 c[6] + 2 434 311 c[7] - 2 362 041 c[8],
c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] + 200 835 c[5] - 967 997 c[6] +
  2 439 415 c[7] - 2 379 465 c[8], c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
  200 851 c[5] - 968 493 c[6] + 2 444 519 c[7] - 2 396 889 c[8],
c[1] - 63 c[2] + 1669 c[3] - 23 987 c[4] + 200 499 c[5] - 962 717 c[6] +
  2 402 631 c[7] - 2 283 633 c[8], c[1] - 63 c[2] + 1669 c[3] - 23 987 c[4] +
  200 515 c[5] - 963 213 c[6] + 2 407 735 c[7] - 2 301 057 c[8]}
```

Array[c, 8].g

$$49 c[1] - 3087 c[2] + 81781 c[3] - 1177659 c[4] + \\ 9920323 c[5] - 48668189 c[6] + 128046679 c[7] - 138480473 c[8]$$

cert =

```

Flatten[Array[c, 8] /. FindInstance[49 c[1] - 3087 c[2] + 81 781 c[3] - 1 177 659 c[4] +
  9 920 323 c[5] - 48 668 189 c[6] + 128 046 679 c[7] - 138 480 473 c[8] < 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 467 c[5] - 992 813 c[6] +
  2 606 103 c[7] - 2 796 849 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] +
  202 499 c[5] - 993 837 c[6] + 2 616 951 c[7] - 2 834 865 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 035 c[4] + 202 515 c[5] - 994 365 c[6] +
  2 622 695 c[7] - 2 855 457 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 147 c[5] - 988 061 c[6] + 2 575 063 c[7] - 2 721 609 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 163 c[5] - 988 589 c[6] +
  2 580 807 c[7] - 2 742 201 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 163 c[5] - 988 557 c[6] + 2 580 167 c[7] - 2 739 033 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] + 202 179 c[5] - 989 085 c[6] +
  2 585 911 c[7] - 2 759 625 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 027 c[4] +
  202 195 c[5] - 989 581 c[6] + 2 591 015 c[7] - 2 777 049 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 811 c[5] - 982 813 c[6] +
  2 538 919 c[7] - 2 628 945 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 811 c[5] - 982 781 c[6] + 2 538 279 c[7] - 2 625 777 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 827 c[5] - 983 309 c[6] +
  2 544 023 c[7] - 2 646 369 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 843 c[5] - 983 837 c[6] + 2 549 767 c[7] - 2 666 961 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] + 201 843 c[5] - 983 805 c[6] +
  2 549 127 c[7] - 2 663 793 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 019 c[4] +
  201 859 c[5] - 984 301 c[6] + 2 554 231 c[7] - 2 681 217 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 475 c[5] - 977 533 c[6] +
  2 502 135 c[7] - 2 533 113 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 491 c[5] - 978 061 c[6] + 2 507 879 c[7] - 2 553 705 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 491 c[5] - 978 029 c[6] +
  2 507 239 c[7] - 2 550 537 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] +
  201 507 c[5] - 978 557 c[6] + 2 512 983 c[7] - 2 571 129 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 011 c[4] + 201 507 c[5] - 978 525 c[6] +
  2 512 343 c[7] - 2 567 961 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 139 c[5] - 972 285 c[6] + 2 465 991 c[7] - 2 440 449 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 155 c[5] - 972 781 c[6] +
  2 471 095 c[7] - 2 457 873 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 155 c[5] - 972 749 c[6] + 2 470 455 c[7] - 2 454 705 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] + 201 171 c[5] - 973 277 c[6] +
  2 476 199 c[7] - 2 475 297 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 24 003 c[4] +
  201 171 c[5] - 973 245 c[6] + 2 475 559 c[7] - 2 472 129 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] + 200 819 c[5] - 967 501 c[6] +
  2 434 311 c[7] - 2 362 041 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] +
  200 835 c[5] - 967 997 c[6] + 2 439 415 c[7] - 2 379 465 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 23 995 c[4] + 200 851 c[5] - 968 493 c[6] +
  2 444 519 c[7] - 2 396 889 c[8] ≥ 0 && c[1] - 63 c[2] + 1669 c[3] - 23 987 c[4] +
  200 499 c[5] - 962 717 c[6] + 2 402 631 c[7] - 2 283 633 c[8] ≥ 0 &&
  c[1] - 63 c[2] + 1669 c[3] - 23 987 c[4] + 200 515 c[5] - 963 213 c[6] +
  2 407 735 c[7] - 2 301 057 c[8] ≥ 0, Array[c, 8], Integers]]

```

```
{0, 0, 0, 0, -2 336 823, -882 211, -189 036, -32 146}
```

```
GCD[0, 0, 0, 0, -2 336 823, -882 211, -189 036, -32 146]
```

```
1
```

```
cert.g
```

```
-265 994 336
```

```
{0, 0, 0, 0, -2 336 823, -882 211, -189 036, -32 146}.Reverse[gpart[listdim17[[179]]]]
```

```
-265 994 336
```

```
cert.Transpose[A]
```

```
{1 228 448, 1 233 984, 5 779 872, 5 757 536, 10 303 424, 1 217 184, 5 763 072, 1 222 720,  
14 826 976, 5 740 736, 10 286 624, 14 832 512, 5 746 272, 1 205 920, 14 810 176,  
19 356 064, 10 269 824, 14 815 712, 5 729 472, 23 879 616, 19 339 264, 10 253 024,  
14 798 912, 5 712 672, 19 322 464, 14 782 112, 10 241 760, 14 765 312, 10 224 960}
```

```
chi = listdim17[[180]]
```

```
 $(-11 + x)^4 (-9 + x)^8 (5 + x)^{32} (-41\,920 + 26\,193\,x - 6380\,x^2 + 758\,x^3 - 44\,x^4 + x^5)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```

A = {{1, -59, 1465, -19811, 157243, -730681, 1834891, -1913769},
      {1, -59, 1465, -19811, 157243, -730649, 1834251, -1910601},
      {1, -59, 1465, -19811, 157259, -731113, 1838715, -1924857},
      {1, -59, 1465, -19811, 157259, -731081, 1838075, -1921689},
      {1, -59, 1465, -19803, 156939, -726393, 1808251, -1852209},
      {1, -59, 1465, -19803, 156939, -726393, 1808315, -1852785},
      {1, -59, 1465, -19803, 156955, -726889, 1813355, -1869633},
      {1, -59, 1465, -19803, 156955, -726857, 1812715, -1866465},
      {1, -59, 1465, -19803, 156955, -726857, 1812779, -1867041},
      {1, -59, 1465, -19803, 156955, -726825, 1812139, -1863873},
      {1, -59, 1465, -19803, 156955, -726793, 1811499, -1860705},
      {1, -59, 1465, -19803, 156971, -727289, 1816603, -1878129},
      {1, -59, 1465, -19803, 156971, -727257, 1815963, -1874961},
      {1, -59, 1465, -19795, 156651, -722569, 1786139, -1805481},
      {1, -59, 1465, -19795, 156651, -722537, 1785563, -1802889},
      {1, -59, 1465, -19795, 156667, -723001, 1790027, -1817145},
      {1, -59, 1465, -19795, 156667, -722969, 1789387, -1813977},
      {1, -59, 1465, -19795, 156683, -723465, 1794491, -1831401},
      {1, -59, 1465, -19795, 156683, -723433, 1793851, -1828233},
      {1, -59, 1465, -19787, 156363, -718745, 1764027, -1758753},
      {1, -59, 1465, -19787, 156363, -718681, 1762811, -1752993},
      {1, -59, 1465, -19787, 156379, -719145, 1767275, -1767249},
      {1, -59, 1465, -19787, 156379, -719113, 1766635, -1764081},
      {1, -59, 1465, -19787, 156395, -719641, 1772379, -1784673},
      {1, -59, 1465, -19787, 156395, -719609, 1771739, -1781505},
      {1, -59, 1465, -19787, 156411, -720105, 1776843, -1798929},
      {1, -59, 1465, -19779, 156075, -714857, 1740699, -1706265},
      {1, -59, 1465, -19779, 156075, -714825, 1740059, -1703097},
      {1, -59, 1465, -19779, 156091, -715321, 1745163, -1720521},
      {1, -59, 1465, -19779, 156107, -715785, 1749627, -1734777},
      {1, -59, 1465, -19771, 155787, -711001, 1717947, -1656369}};

```

A // MatrixForm

```
( 1 -59 1465 -19811 157243 -730681 1834891 -1913769
 1 -59 1465 -19811 157243 -730649 1834251 -1910601
 1 -59 1465 -19811 157259 -731113 1838715 -1924857
 1 -59 1465 -19811 157259 -731081 1838075 -1921689
 1 -59 1465 -19803 156939 -726393 1808251 -1852209
 1 -59 1465 -19803 156939 -726393 1808315 -1852785
 1 -59 1465 -19803 156955 -726889 1813355 -1869633
 1 -59 1465 -19803 156955 -726857 1812715 -1866465
 1 -59 1465 -19803 156955 -726857 1812779 -1867041
 1 -59 1465 -19803 156955 -726825 1812139 -1863873
 1 -59 1465 -19803 156955 -726793 1811499 -1860705
 1 -59 1465 -19803 156971 -727289 1816603 -1878129
 1 -59 1465 -19803 156971 -727257 1815963 -1874961
 1 -59 1465 -19795 156651 -722569 1786139 -1805481
 1 -59 1465 -19795 156651 -722537 1785563 -1802889
 1 -59 1465 -19795 156667 -723001 1790027 -1817145
 1 -59 1465 -19795 156667 -722969 1789387 -1813977
 1 -59 1465 -19795 156683 -723465 1794491 -1831401
 1 -59 1465 -19795 156683 -723433 1793851 -1828233
 1 -59 1465 -19787 156363 -718745 1764027 -1758753
 1 -59 1465 -19787 156363 -718681 1762811 -1752993
 1 -59 1465 -19787 156379 -719145 1767275 -1767249
 1 -59 1465 -19787 156379 -719113 1766635 -1764081
 1 -59 1465 -19787 156395 -719641 1772379 -1784673
 1 -59 1465 -19787 156395 -719609 1771739 -1781505
 1 -59 1465 -19787 156411 -720105 1776843 -1798929
 1 -59 1465 -19779 156075 -714857 1740699 -1706265
 1 -59 1465 -19779 156075 -714825 1740059 -1703097
 1 -59 1465 -19779 156091 -715321 1745163 -1720521
 1 -59 1465 -19779 156107 -715785 1749627 -1734777
 1 -59 1465 -19771 155787 -711001 1717947 -1656369)
```

Dimensions[A]

```
{31, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -2891, 71785, -970683, 7703595, -35795097, 89909051, -93846625}
```

Array[c, 8].Transpose[A]

$\{c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157243 c[5] -$
 $730681 c[6] + 1834891 c[7] - 1913769 c[8], c[1] - 59 c[2] + 1465 c[3] -$
 $19811 c[4] + 157243 c[5] - 730649 c[6] + 1834251 c[7] - 1910601 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157259 c[5] - 731113 c[6] + 1838715 c[7] -$
 $1924857 c[8], c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157259 c[5] -$
 $731081 c[6] + 1838075 c[7] - 1921689 c[8], c[1] - 59 c[2] + 1465 c[3] -$
 $19803 c[4] + 156939 c[5] - 726393 c[6] + 1808251 c[7] - 1852209 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156939 c[5] - 726393 c[6] +$
 $1808315 c[7] - 1852785 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] +$
 $156955 c[5] - 726889 c[6] + 1813355 c[7] - 1869633 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156955 c[5] - 726857 c[6] +$
 $1812715 c[7] - 1866465 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] +$
 $156955 c[5] - 726857 c[6] + 1812779 c[7] - 1867041 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156955 c[5] - 726825 c[6] +$
 $1812139 c[7] - 1863873 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] +$
 $156955 c[5] - 726793 c[6] + 1811499 c[7] - 1860705 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156971 c[5] - 727289 c[6] +$
 $1816603 c[7] - 1878129 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] +$
 $156971 c[5] - 727257 c[6] + 1815963 c[7] - 1874961 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156651 c[5] - 722569 c[6] +$
 $1786139 c[7] - 1805481 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] +$
 $156651 c[5] - 722537 c[6] + 1785563 c[7] - 1802889 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156667 c[5] - 723001 c[6] +$
 $1790027 c[7] - 1817145 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] +$
 $156667 c[5] - 722969 c[6] + 1789387 c[7] - 1813977 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156683 c[5] - 723465 c[6] +$
 $1794491 c[7] - 1831401 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] +$
 $156683 c[5] - 723433 c[6] + 1793851 c[7] - 1828233 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156363 c[5] - 718745 c[6] +$
 $1764027 c[7] - 1758753 c[8], c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] +$
 $156363 c[5] - 718681 c[6] + 1762811 c[7] - 1752993 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156379 c[5] - 719145 c[6] +$
 $1767275 c[7] - 1767249 c[8], c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] +$
 $156379 c[5] - 719113 c[6] + 1766635 c[7] - 1764081 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156395 c[5] - 719641 c[6] +$
 $1772379 c[7] - 1784673 c[8], c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] +$
 $156395 c[5] - 719609 c[6] + 1771739 c[7] - 1781505 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156411 c[5] - 720105 c[6] +$
 $1776843 c[7] - 1798929 c[8], c[1] - 59 c[2] + 1465 c[3] - 19779 c[4] +$
 $156075 c[5] - 714857 c[6] + 1740699 c[7] - 1706265 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19779 c[4] + 156075 c[5] - 714825 c[6] +$
 $1740059 c[7] - 1703097 c[8], c[1] - 59 c[2] + 1465 c[3] - 19779 c[4] +$
 $156091 c[5] - 715321 c[6] + 1745163 c[7] - 1720521 c[8],$
 $c[1] - 59 c[2] + 1465 c[3] - 19779 c[4] + 156107 c[5] - 715785 c[6] +$
 $1749627 c[7] - 1734777 c[8], c[1] - 59 c[2] + 1465 c[3] - 19771 c[4] +$
 $155787 c[5] - 711001 c[6] + 1717947 c[7] - 1656369 c[8]\}$

Array[c, 8].g

49 c[1] - 2891 c[2] + 71 785 c[3] - 970 683 c[4] +
7 703 595 c[5] - 35 795 097 c[6] + 89 909 051 c[7] - 93 846 625 c[8]

cert =

```
Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2891 c[2] + 71 785 c[3] - 970 683 c[4] +
7 703 595 c[5] - 35 795 097 c[6] + 89 909 051 c[7] - 93 846 625 c[8] < 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 243 c[5] - 730 681 c[6] +
1 834 891 c[7] - 1 913 769 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 243 c[5] - 730 649 c[6] + 1 834 251 c[7] - 1 910 601 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 259 c[5] - 731 113 c[6] +
1 838 715 c[7] - 1 924 857 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] +
157 259 c[5] - 731 081 c[6] + 1 838 075 c[7] - 1 921 689 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 939 c[5] - 726 393 c[6] +
1 808 251 c[7] - 1 852 209 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 939 c[5] - 726 393 c[6] + 1 808 315 c[7] - 1 852 785 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 889 c[6] +
1 813 355 c[7] - 1 869 633 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 955 c[5] - 726 857 c[6] + 1 812 715 c[7] - 1 866 465 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 857 c[6] +
1 812 779 c[7] - 1 867 041 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 955 c[5] - 726 825 c[6] + 1 812 139 c[7] - 1 863 873 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 793 c[6] +
1 811 499 c[7] - 1 860 705 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
156 971 c[5] - 727 289 c[6] + 1 816 603 c[7] - 1 878 129 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 971 c[5] - 727 257 c[6] +
1 815 963 c[7] - 1 874 961 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
156 651 c[5] - 722 569 c[6] + 1 786 139 c[7] - 1 805 481 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 651 c[5] - 722 537 c[6] +
1 785 563 c[7] - 1 802 889 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
156 667 c[5] - 723 001 c[6] + 1 790 027 c[7] - 1 817 145 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 667 c[5] - 722 969 c[6] +
1 789 387 c[7] - 1 813 977 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
156 683 c[5] - 723 465 c[6] + 1 794 491 c[7] - 1 831 401 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 683 c[5] - 723 433 c[6] +
1 793 851 c[7] - 1 828 233 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
156 363 c[5] - 718 745 c[6] + 1 764 027 c[7] - 1 758 753 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 363 c[5] - 718 681 c[6] +
1 762 811 c[7] - 1 752 993 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
156 379 c[5] - 719 145 c[6] + 1 767 275 c[7] - 1 767 249 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 379 c[5] - 719 113 c[6] +
1 766 635 c[7] - 1 764 081 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
156 395 c[5] - 719 641 c[6] + 1 772 379 c[7] - 1 784 673 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 395 c[5] - 719 609 c[6] +
1 771 739 c[7] - 1 781 505 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
156 411 c[5] - 720 105 c[6] + 1 776 843 c[7] - 1 798 929 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] + 156 075 c[5] - 714 857 c[6] +
```

```

1 740 699 c[7] - 1 706 265 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] +
156 075 c[5] - 714 825 c[6] + 1 740 059 c[7] - 1 703 097 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] + 156 091 c[5] - 715 321 c[6] +
1 745 163 c[7] - 1 720 521 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] +
156 107 c[5] - 715 785 c[6] + 1 749 627 c[7] - 1 734 777 c[8] ≥ 0 &&
c[1] - 59 c[2] + 1465 c[3] - 19 771 c[4] + 155 787 c[5] - 711 001 c[6] +
1 717 947 c[7] - 1 656 369 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -8 943 902, -3 542 882, -788 607, -138 366}

```

```
GCD[0, 0, 0, 0, -8 943 902, -3 542 882, -788 607, -138 366]
```

```
1
```

```
cert.g
```

```
-118 745 343
```

```
{0, 0, 0, 0, -8 943 902, -3 542 882, -788 607, -138 366}.
```

```
Reverse[gpart[listdim17[[180]]]]
```

```
-118 745 343
```

```
cert.Transpose[A]
```

```

{143 255 073, 96 247 841, 49 246 705, 2 239 473, 161 002 785, 190 230 753,
161 008 881, 114 001 649, 143 229 617, 96 222 385, 49 215 153, 49 221 249,
2 214 017, 160 977 329, 143 198 065, 96 196 929, 49 189 697, 49 195 793,
2 188 561, 160 951 873, 96 165 377, 49 164 241, 2 157 009, 49 170 337,
2 163 105, 2 169 201, 96 139 921, 49 132 689, 49 138 785, 2 137 649, 49 107 233}

```

```
chi = listdim17[[181]]
```

```
 $(-11 + x)^5 (-9 + x)^8 (-7 + x) (5 + x)^{32} (-544 + 213 x - 26 x^2 + x^3)$ 
```

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {174 699, -151 216, 52 715, -9504, 937, -48, 1},
  {175 707, -151 472, 52 731, -9504, 937, -48, 1},
  {169 731, -149 368, 52 499, -9496, 937, -48, 1},
  {169 443, -149 336, 52 499, -9496, 937, -48, 1},
  {169 155, -149 304, 52 499, -9496, 937, -48, 1},
  {171 027, -149 656, 52 515, -9496, 937, -48, 1},
  {170 739, -149 624, 52 515, -9496, 937, -48, 1},
  {170 451, -149 592, 52 515, -9496, 937, -48, 1},
  {170 163, -149 560, 52 515, -9496, 937, -48, 1},
  {171 747, -149 880, 52 531, -9496, 937, -48, 1},
  {171 459, -149 848, 52 531, -9496, 937, -48, 1},
  {171 171, -149 816, 52 531, -9496, 937, -48, 1},
  {162 891, -147 168, 52 267, -9488, 937, -48, 1},
  {162 603, -147 136, 52 267, -9488, 937, -48, 1},
  {163 899, -147 424, 52 283, -9488, 937, -48, 1},
  {163 611, -147 392, 52 283, -9488, 937, -48, 1},
  {165 195, -147 712, 52 299, -9488, 937, -48, 1},
  {164 907, -147 680, 52 299, -9488, 937, -48, 1},
  {164 619, -147 648, 52 299, -9488, 937, -48, 1},
  {166 491, -148 000, 52 315, -9488, 937, -48, 1},
  {166 203, -147 968, 52 315, -9488, 937, -48, 1},
  {165 915, -147 936, 52 315, -9488, 937, -48, 1},
  {165 627, -147 904, 52 315, -9488, 937, -48, 1},
  {167 787, -148 288, 52 331, -9488, 937, -48, 1},
  {167 499, -148 256, 52 331, -9488, 937, -48, 1},
  {167 211, -148 224, 52 331, -9488, 937, -48, 1},
  {157 059, -145 224, 52 051, -9480, 937, -48, 1},
  {158 355, -145 512, 52 067, -9480, 937, -48, 1},
  {158 067, -145 480, 52 067, -9480, 937, -48, 1},
  {159 363, -145 768, 52 083, -9480, 937, -48, 1},
  {159 075, -145 736, 52 083, -9480, 937, -48, 1},
  {160 659, -146 056, 52 099, -9480, 937, -48, 1},
  {160 371, -146 024, 52 099, -9480, 937, -48, 1},
  {160 083, -145 992, 52 099, -9480, 937, -48, 1},
  {161 955, -146 344, 52 115, -9480, 937, -48, 1},
  {161 667, -146 312, 52 115, -9480, 937, -48, 1},
  {163 251, -146 632, 52 131, -9480, 937, -48, 1},
  {152 523, -143 568, 51 851, -9472, 937, -48, 1},
  {153 531, -143 824, 51 867, -9472, 937, -48, 1},
  {154 827, -144 112, 51 883, -9472, 937, -48, 1},
  {154 539, -144 080, 51 883, -9472, 937, -48, 1},
  {156 123, -144 400, 51 899, -9472, 937, -48, 1},
  {148 995, -142 168, 51 667, -9464, 937, -48, 1} }
```

```

A = {{174 699, -151 216, 52 715, -9504, 937, -48, 1},
      {175 707, -151 472, 52 731, -9504, 937, -48, 1}, {169 731, -149 368, 52 499,
      -9496, 937, -48, 1}, {169 443, -149 336, 52 499, -9496, 937, -48, 1},
      {169 155, -149 304, 52 499, -9496, 937, -48, 1}, {171 027, -149 656, 52 515,
      -9496, 937, -48, 1}, {170 739, -149 624, 52 515, -9496, 937, -48, 1},
      {170 451, -149 592, 52 515, -9496, 937, -48, 1}, {170 163, -149 560, 52 515,
      -9496, 937, -48, 1}, {171 747, -149 880, 52 531, -9496, 937, -48, 1},
      {171 459, -149 848, 52 531, -9496, 937, -48, 1}, {171 171, -149 816, 52 531,
      -9496, 937, -48, 1}, {162 891, -147 168, 52 267, -9488, 937, -48, 1},
      {162 603, -147 136, 52 267, -9488, 937, -48, 1}, {163 899, -147 424, 52 283,
      -9488, 937, -48, 1}, {163 611, -147 392, 52 283, -9488, 937, -48, 1},
      {165 195, -147 712, 52 299, -9488, 937, -48, 1}, {164 907, -147 680, 52 299,
      -9488, 937, -48, 1}, {164 619, -147 648, 52 299, -9488, 937, -48, 1},
      {166 491, -148 000, 52 315, -9488, 937, -48, 1}, {166 203, -147 968, 52 315,
      -9488, 937, -48, 1}, {165 915, -147 936, 52 315, -9488, 937, -48, 1},
      {165 627, -147 904, 52 315, -9488, 937, -48, 1}, {167 787, -148 288, 52 331,
      -9488, 937, -48, 1}, {167 499, -148 256, 52 331, -9488, 937, -48, 1},
      {167 211, -148 224, 52 331, -9488, 937, -48, 1}, {157 059, -145 224, 52 051,
      -9480, 937, -48, 1}, {158 355, -145 512, 52 067, -9480, 937, -48, 1},
      {158 067, -145 480, 52 067, -9480, 937, -48, 1}, {159 363, -145 768, 52 083,
      -9480, 937, -48, 1}, {159 075, -145 736, 52 083, -9480, 937, -48, 1},
      {160 659, -146 056, 52 099, -9480, 937, -48, 1}, {160 371, -146 024, 52 099,
      -9480, 937, -48, 1}, {160 083, -145 992, 52 099, -9480, 937, -48, 1},
      {161 955, -146 344, 52 115, -9480, 937, -48, 1}, {161 667, -146 312, 52 115,
      -9480, 937, -48, 1}, {163 251, -146 632, 52 131, -9480, 937, -48, 1},
      {152 523, -143 568, 51 851, -9472, 937, -48, 1}, {153 531, -143 824, 51 867,
      -9472, 937, -48, 1}, {154 827, -144 112, 51 883, -9472, 937, -48, 1},
      {154 539, -144 080, 51 883, -9472, 937, -48, 1}, {156 123, -144 400, 51 899,
      -9472, 937, -48, 1}, {148 995, -142 168, 51 667, -9464, 937, -48, 1}};

```

A // MatrixForm

```
( 174 699 -151 216 52 715 -9504 937 -48 1 )
( 175 707 -151 472 52 731 -9504 937 -48 1 )
( 169 731 -149 368 52 499 -9496 937 -48 1 )
( 169 443 -149 336 52 499 -9496 937 -48 1 )
( 169 155 -149 304 52 499 -9496 937 -48 1 )
( 171 027 -149 656 52 515 -9496 937 -48 1 )
( 170 739 -149 624 52 515 -9496 937 -48 1 )
( 170 451 -149 592 52 515 -9496 937 -48 1 )
( 170 163 -149 560 52 515 -9496 937 -48 1 )
( 171 747 -149 880 52 531 -9496 937 -48 1 )
( 171 459 -149 848 52 531 -9496 937 -48 1 )
( 171 171 -149 816 52 531 -9496 937 -48 1 )
( 162 891 -147 168 52 267 -9488 937 -48 1 )
( 162 603 -147 136 52 267 -9488 937 -48 1 )
( 163 899 -147 424 52 283 -9488 937 -48 1 )
( 163 611 -147 392 52 283 -9488 937 -48 1 )
( 165 195 -147 712 52 299 -9488 937 -48 1 )
( 164 907 -147 680 52 299 -9488 937 -48 1 )
( 164 619 -147 648 52 299 -9488 937 -48 1 )
( 166 491 -148 000 52 315 -9488 937 -48 1 )
( 166 203 -147 968 52 315 -9488 937 -48 1 )
( 165 915 -147 936 52 315 -9488 937 -48 1 )
( 165 627 -147 904 52 315 -9488 937 -48 1 )
( 167 787 -148 288 52 331 -9488 937 -48 1 )
( 167 499 -148 256 52 331 -9488 937 -48 1 )
( 167 211 -148 224 52 331 -9488 937 -48 1 )
( 157 059 -145 224 52 051 -9480 937 -48 1 )
( 158 355 -145 512 52 067 -9480 937 -48 1 )
( 158 067 -145 480 52 067 -9480 937 -48 1 )
( 159 363 -145 768 52 083 -9480 937 -48 1 )
( 159 075 -145 736 52 083 -9480 937 -48 1 )
( 160 659 -146 056 52 099 -9480 937 -48 1 )
( 160 371 -146 024 52 099 -9480 937 -48 1 )
( 160 083 -145 992 52 099 -9480 937 -48 1 )
( 161 955 -146 344 52 115 -9480 937 -48 1 )
( 161 667 -146 312 52 115 -9480 937 -48 1 )
( 163 251 -146 632 52 131 -9480 937 -48 1 )
( 152 523 -143 568 51 851 -9472 937 -48 1 )
( 153 531 -143 824 51 867 -9472 937 -48 1 )
( 154 827 -144 112 51 883 -9472 937 -48 1 )
( 154 539 -144 080 51 883 -9472 937 -48 1 )
( 156 123 -144 400 51 899 -9472 937 -48 1 )
( 148 995 -142 168 51 667 -9464 937 -48 1 )
```

Dimensions[A]

```
{43, 7}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{8 524 099, -7 396 584, 2 581 555, -465 640, 45 913, -2352, 49}
```

Array[c, 7].Transpose[A]

```
{ 174 699 c[1] - 151 216 c[2] + 52 715 c[3] - 9504 c[4] + 937 c[5] - 48 c[6] + c[7],
  175 707 c[1] - 151 472 c[2] + 52 731 c[3] - 9504 c[4] + 937 c[5] - 48 c[6] + c[7],
  169 731 c[1] - 149 368 c[2] + 52 499 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  169 443 c[1] - 149 336 c[2] + 52 499 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  169 155 c[1] - 149 304 c[2] + 52 499 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  171 027 c[1] - 149 656 c[2] + 52 515 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  170 739 c[1] - 149 624 c[2] + 52 515 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  170 451 c[1] - 149 592 c[2] + 52 515 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  170 163 c[1] - 149 560 c[2] + 52 515 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  171 747 c[1] - 149 880 c[2] + 52 531 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  171 459 c[1] - 149 848 c[2] + 52 531 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  171 171 c[1] - 149 816 c[2] + 52 531 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7],
  162 891 c[1] - 147 168 c[2] + 52 267 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  162 603 c[1] - 147 136 c[2] + 52 267 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  163 899 c[1] - 147 424 c[2] + 52 283 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  163 611 c[1] - 147 392 c[2] + 52 283 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  165 195 c[1] - 147 712 c[2] + 52 299 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  164 907 c[1] - 147 680 c[2] + 52 299 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  164 619 c[1] - 147 648 c[2] + 52 299 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  166 491 c[1] - 148 000 c[2] + 52 315 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  166 203 c[1] - 147 968 c[2] + 52 315 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  165 915 c[1] - 147 936 c[2] + 52 315 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  165 627 c[1] - 147 904 c[2] + 52 315 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  167 787 c[1] - 148 288 c[2] + 52 331 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  167 499 c[1] - 148 256 c[2] + 52 331 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  167 211 c[1] - 148 224 c[2] + 52 331 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7],
  157 059 c[1] - 145 224 c[2] + 52 051 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  158 355 c[1] - 145 512 c[2] + 52 067 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  158 067 c[1] - 145 480 c[2] + 52 067 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  159 363 c[1] - 145 768 c[2] + 52 083 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  159 075 c[1] - 145 736 c[2] + 52 083 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  160 659 c[1] - 146 056 c[2] + 52 099 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  160 371 c[1] - 146 024 c[2] + 52 099 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  160 083 c[1] - 145 992 c[2] + 52 099 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  161 955 c[1] - 146 344 c[2] + 52 115 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  161 667 c[1] - 146 312 c[2] + 52 115 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  163 251 c[1] - 146 632 c[2] + 52 131 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7],
  152 523 c[1] - 143 568 c[2] + 51 851 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7],
  153 531 c[1] - 143 824 c[2] + 51 867 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7],
  154 827 c[1] - 144 112 c[2] + 51 883 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7],
  154 539 c[1] - 144 080 c[2] + 51 883 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7],
  156 123 c[1] - 144 400 c[2] + 51 899 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7],
  148 995 c[1] - 142 168 c[2] + 51 667 c[3] - 9464 c[4] + 937 c[5] - 48 c[6] + c[7]}
```

Array[c, 7].g

$$8\,524\,099\,c[1] - 7\,396\,584\,c[2] + 2\,581\,555\,c[3] - \\ 465\,640\,c[4] + 45\,913\,c[5] - 2\,352\,c[6] + 49\,c[7]$$

cert =

```

Flatten[Array[c, 7] /. FindInstance[8 524 099 c[1] - 7 396 584 c[2] + 2 581 555 c[3] -
  465 640 c[4] + 45 913 c[5] - 2352 c[6] + 49 c[7] < 0 &&
  174 699 c[1] - 151 216 c[2] + 52 715 c[3] - 9504 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  175 707 c[1] - 151 472 c[2] + 52 731 c[3] - 9504 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  169 731 c[1] - 149 368 c[2] + 52 499 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  169 443 c[1] - 149 336 c[2] + 52 499 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  169 155 c[1] - 149 304 c[2] + 52 499 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  171 027 c[1] - 149 656 c[2] + 52 515 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  170 739 c[1] - 149 624 c[2] + 52 515 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  170 451 c[1] - 149 592 c[2] + 52 515 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  170 163 c[1] - 149 560 c[2] + 52 515 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  171 747 c[1] - 149 880 c[2] + 52 531 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  171 459 c[1] - 149 848 c[2] + 52 531 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  171 171 c[1] - 149 816 c[2] + 52 531 c[3] - 9496 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  162 891 c[1] - 147 168 c[2] + 52 267 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  162 603 c[1] - 147 136 c[2] + 52 267 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  163 899 c[1] - 147 424 c[2] + 52 283 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  163 611 c[1] - 147 392 c[2] + 52 283 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  165 195 c[1] - 147 712 c[2] + 52 299 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  164 907 c[1] - 147 680 c[2] + 52 299 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  164 619 c[1] - 147 648 c[2] + 52 299 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  166 491 c[1] - 148 000 c[2] + 52 315 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  166 203 c[1] - 147 968 c[2] + 52 315 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  165 915 c[1] - 147 936 c[2] + 52 315 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  165 627 c[1] - 147 904 c[2] + 52 315 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  167 787 c[1] - 148 288 c[2] + 52 331 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  167 499 c[1] - 148 256 c[2] + 52 331 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  167 211 c[1] - 148 224 c[2] + 52 331 c[3] - 9488 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  157 059 c[1] - 145 224 c[2] + 52 051 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  158 355 c[1] - 145 512 c[2] + 52 067 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  158 067 c[1] - 145 480 c[2] + 52 067 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  159 363 c[1] - 145 768 c[2] + 52 083 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  159 075 c[1] - 145 736 c[2] + 52 083 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  160 659 c[1] - 146 056 c[2] + 52 099 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  160 371 c[1] - 146 024 c[2] + 52 099 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  160 083 c[1] - 145 992 c[2] + 52 099 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  161 955 c[1] - 146 344 c[2] + 52 115 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  161 667 c[1] - 146 312 c[2] + 52 115 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  163 251 c[1] - 146 632 c[2] + 52 131 c[3] - 9480 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  152 523 c[1] - 143 568 c[2] + 51 851 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  153 531 c[1] - 143 824 c[2] + 51 867 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  154 827 c[1] - 144 112 c[2] + 51 883 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  154 539 c[1] - 144 080 c[2] + 51 883 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  156 123 c[1] - 144 400 c[2] + 51 899 c[3] - 9472 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0 &&
  148 995 c[1] - 142 168 c[2] + 51 667 c[3] - 9464 c[4] + 937 c[5] - 48 c[6] + c[7] ≥ 0,
Array[c, 7], Integers]]

```

```
{-32 642, -242 376, -1 513 122, -5 136 334, 0, 0, 0}
```

```
GCD[-32 642, -242 376, -1 513 122, -5 136 334, 0, 0, 0]
```

```
2
```

```
cert = cert / 2
```

```
{-16 321, -121 188, -756 561, -2 568 167, 0, 0, 0}
```

```
Reverse[cert]
```

```
{0, 0, 0, -2 568 167, -756 561, -121 188, -16 321}
```

```
cert.g
```

```
-7 148 462
```

```
{-16 321, -121 188, -756 561, -2 568 167, 0, 0, 0}.gpart[listdim17[[181]]]
```

```
-7 148 462
```

```
cert.Transpose[A]
```

```
{48 282, 2 515 866, 47 426, 869 858, 1 692 290, 1 692 578, 2 515 010, 3 337 442,
 4 159 874, 4 982 594, 5 805 026, 6 627 458, 46 282, 868 714, 2 513 866,
 3 336 298, 4 159 018, 4 981 450, 5 803 882, 5 804 170, 6 626 602, 7 449 034,
 8 271 466, 7 449 322, 8 271 754, 9 094 186, 2 512 722, 4 157 874, 4 980 306,
 6 625 458, 7 447 890, 8 270 610, 9 093 042, 9 915 474, 9 915 762, 10 738 194,
 11 560 914, 6 624 314, 9 091 898, 10 737 050, 11 559 482, 12 382 202, 13 203 490}
```

```
chi = listdim17[[182]]
```

```
 $(-11 + x)^6 (-9 + x)^7 (-7 + x)^2 (5 + x)^{32} (64 - 17x + x^2)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-20 591, 15 201, -4314, 590, -39, 1},
 {-20 559, 15 201, -4314, 590, -39, 1}, {-19 975, 15 057, -4306, 590, -39, 1},
 {-19 943, 15 057, -4306, 590, -39, 1}, {-20 119, 15 073, -4306, 590, -39, 1},
 {-19 359, 14 913, -4298, 590, -39, 1}, {-19 327, 14 913, -4298, 590, -39, 1},
 {-19 503, 14 929, -4298, 590, -39, 1}, {-18 711, 14 769, -4290, 590, -39, 1}}
```

```
A = {{-20 591, 15 201, -4314, 590, -39, 1},
```

```
  {-20 559, 15 201, -4314, 590, -39, 1}, {-19 975, 15 057, -4306, 590, -39, 1},
  {-19 943, 15 057, -4306, 590, -39, 1}, {-20 119, 15 073, -4306, 590, -39, 1},
  {-19 359, 14 913, -4298, 590, -39, 1}, {-19 327, 14 913, -4298, 590, -39, 1},
  {-19 503, 14 929, -4298, 590, -39, 1}, {-18 711, 14 769, -4290, 590, -39, 1}};
```

A // MatrixForm

$$\begin{pmatrix} -20591 & 15201 & -4314 & 590 & -39 & 1 \\ -20559 & 15201 & -4314 & 590 & -39 & 1 \\ -19975 & 15057 & -4306 & 590 & -39 & 1 \\ -19943 & 15057 & -4306 & 590 & -39 & 1 \\ -20119 & 15073 & -4306 & 590 & -39 & 1 \\ -19359 & 14913 & -4298 & 590 & -39 & 1 \\ -19327 & 14913 & -4298 & 590 & -39 & 1 \\ -19503 & 14929 & -4298 & 590 & -39 & 1 \\ -18711 & 14769 & -4290 & 590 & -39 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1003559, 743745, -211330, 28910, -1911, 49}

Array[c, 6].Transpose[A]

{-20591 c[1] + 15201 c[2] - 4314 c[3] + 590 c[4] - 39 c[5] + c[6],
-20559 c[1] + 15201 c[2] - 4314 c[3] + 590 c[4] - 39 c[5] + c[6],
-19975 c[1] + 15057 c[2] - 4306 c[3] + 590 c[4] - 39 c[5] + c[6],
-19943 c[1] + 15057 c[2] - 4306 c[3] + 590 c[4] - 39 c[5] + c[6],
-20119 c[1] + 15073 c[2] - 4306 c[3] + 590 c[4] - 39 c[5] + c[6],
-19359 c[1] + 14913 c[2] - 4298 c[3] + 590 c[4] - 39 c[5] + c[6],
-19327 c[1] + 14913 c[2] - 4298 c[3] + 590 c[4] - 39 c[5] + c[6],
-19503 c[1] + 14929 c[2] - 4298 c[3] + 590 c[4] - 39 c[5] + c[6],
-18711 c[1] + 14769 c[2] - 4290 c[3] + 590 c[4] - 39 c[5] + c[6]}

Array[c, 6].g

-1003559 c[1] + 743745 c[2] - 211330 c[3] + 28910 c[4] - 1911 c[5] + 49 c[6]

cert = Flatten[Array[c, 6] /. FindInstance[

-1003559 c[1] + 743745 c[2] - 211330 c[3] + 28910 c[4] - 1911 c[5] + 49 c[6] < 0 &&
-20591 c[1] + 15201 c[2] - 4314 c[3] + 590 c[4] - 39 c[5] + c[6] ≥ 0 &&
-20559 c[1] + 15201 c[2] - 4314 c[3] + 590 c[4] - 39 c[5] + c[6] ≥ 0 &&
-19975 c[1] + 15057 c[2] - 4306 c[3] + 590 c[4] - 39 c[5] + c[6] ≥ 0 &&
-19943 c[1] + 15057 c[2] - 4306 c[3] + 590 c[4] - 39 c[5] + c[6] ≥ 0 &&
-20119 c[1] + 15073 c[2] - 4306 c[3] + 590 c[4] - 39 c[5] + c[6] ≥ 0 &&
-19359 c[1] + 14913 c[2] - 4298 c[3] + 590 c[4] - 39 c[5] + c[6] ≥ 0 &&
-19327 c[1] + 14913 c[2] - 4298 c[3] + 590 c[4] - 39 c[5] + c[6] ≥ 0 &&
-19503 c[1] + 14929 c[2] - 4298 c[3] + 590 c[4] - 39 c[5] + c[6] ≥ 0 &&
-18711 c[1] + 14769 c[2] - 4290 c[3] + 590 c[4] - 39 c[5] + c[6] ≥ 0,

Array[c, 6], Integers]]

{-1, 20725, 373032, 0, 0, 1294235800}

GCD[-1, 20725, 373032, 0, 0, 1294235800]

1

Reverse[cert]

{1294235800, 0, 0, 373032, 20725, -1}

cert.g

-179 676

{-1, 20 725, 373 032, 0, 0, 1 294 235 800}.gpart[listdim17[[182]]]

-179 676

cert.Transpose[A]

{37 068, 37 036, 36 308, 36 276, 368 052, 35 548, 35 516, 367 292, 34 756}

chi = listdim17[[183]]

$(-11 + x)^4 (-9 + x)^8 (5 + x)^{32} (95 - 20x + x^2) (-436 + 183x - 24x^2 + x^3)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

A = {{1, -59, 1465, -19 811, 157 259, -731 145, 1 839 355, -1 928 025},
 {1, -59, 1465, -19 803, 156 939, -726 393, 1 808 315, -1 852 785},
 {1, -59, 1465, -19 803, 156 955, -726 857, 1 812 779, -1 867 041},
 {1, -59, 1465, -19 803, 156 971, -727 321, 1 817 243, -1 881 297},
 {1, -59, 1465, -19 803, 156 971, -727 289, 1 816 603, -1 878 129},
 {1, -59, 1465, -19 803, 156 987, -727 753, 1 821 067, -1 892 385},
 {1, -59, 1465, -19 795, 156 619, -721 641, 1 777 275, -1 777 545},
 {1, -59, 1465, -19 795, 156 635, -722 105, 1 781 739, -1 791 801},
 {1, -59, 1465, -19 795, 156 651, -722 537, 1 785 563, -1 802 889},
 {1, -59, 1465, -19 795, 156 667, -723 001, 1 790 027, -1 817 145},
 {1, -59, 1465, -19 795, 156 683, -723 465, 1 794 491, -1 831 401},
 {1, -59, 1465, -19 795, 156 683, -723 433, 1 793 851, -1 828 233},
 {1, -59, 1465, -19 795, 156 699, -723 897, 1 798 315, -1 842 489},
 {1, -59, 1465, -19 787, 156 331, -717 785, 1 754 523, -1 727 649},
 {1, -59, 1465, -19 787, 156 363, -718 681, 1 762 811, -1 752 993},
 {1, -59, 1465, -19 787, 156 379, -719 145, 1 767 275, -1 767 249},
 {1, -59, 1465, -19 787, 156 379, -719 113, 1 766 635, -1 764 081},
 {1, -59, 1465, -19 787, 156 395, -719 609, 1 771 739, -1 781 505},
 {1, -59, 1465, -19 779, 156 059, -714 361, 1 735 595, -1 688 841},
 {1, -59, 1465, -19 779, 156 075, -714 825, 1 740 059, -1 703 097},
 {1, -59, 1465, -19 779, 156 091, -715 289, 1 744 523, -1 717 353},
 {1, -59, 1465, -19 771, 155 739, -709 609, 1 704 555, -1 613 601},
 {1, -59, 1465, -19 771, 155 771, -710 505, 1 712 843, -1 638 945}};

A // MatrixForm

```
( 1 -59 1465 -19811 157259 -731145 1839355 -1928025
 1 -59 1465 -19803 156939 -726393 1808315 -1852785
 1 -59 1465 -19803 156955 -726857 1812779 -1867041
 1 -59 1465 -19803 156971 -727321 1817243 -1881297
 1 -59 1465 -19803 156971 -727289 1816603 -1878129
 1 -59 1465 -19803 156987 -727753 1821067 -1892385
 1 -59 1465 -19795 156619 -721641 1777275 -1777545
 1 -59 1465 -19795 156635 -722105 1781739 -1791801
 1 -59 1465 -19795 156651 -722537 1785563 -1802889
 1 -59 1465 -19795 156667 -723001 1790027 -1817145
 1 -59 1465 -19795 156683 -723465 1794491 -1831401
 1 -59 1465 -19795 156683 -723433 1793851 -1828233
 1 -59 1465 -19795 156699 -723897 1798315 -1842489
 1 -59 1465 -19787 156331 -717785 1754523 -1727649
 1 -59 1465 -19787 156363 -718681 1762811 -1752993
 1 -59 1465 -19787 156379 -719145 1767275 -1767249
 1 -59 1465 -19787 156379 -719113 1766635 -1764081
 1 -59 1465 -19787 156395 -719609 1771739 -1781505
 1 -59 1465 -19779 156059 -714361 1735595 -1688841
 1 -59 1465 -19779 156075 -714825 1740059 -1703097
 1 -59 1465 -19779 156091 -715289 1744523 -1717353
 1 -59 1465 -19771 155739 -709609 1704555 -1613601
 1 -59 1465 -19771 155771 -710505 1712843 -1638945)
```

Dimensions[A]

```
{23, 8}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x] // Reverse

```
{49, -2891, 71785, -970499, 7696699, -35699641, 89336875, -92616185}
```

Array[c, 8].Transpose[A]

$$\{c[1] - 59 c[2] + 1465 c[3] - 19811 c[4] + 157259 c[5] - 731145 c[6] + 1839355 c[7] - 1928025 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156939 c[5] - 726393 c[6] + 1808315 c[7] - 1852785 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156955 c[5] - 726857 c[6] + 1812779 c[7] - 1867041 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156971 c[5] - 727321 c[6] + 1817243 c[7] - 1881297 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156971 c[5] - 727289 c[6] + 1816603 c[7] - 1878129 c[8], c[1] - 59 c[2] + 1465 c[3] - 19803 c[4] + 156987 c[5] - 727753 c[6] + 1821067 c[7] - 1892385 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156619 c[5] - 721641 c[6] + 1777275 c[7] - 1777545 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156635 c[5] - 722105 c[6] + 1781739 c[7] - 1791801 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156651 c[5] - 722537 c[6] + 1785563 c[7] - 1802889 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156667 c[5] - 723001 c[6] + 1790027 c[7] - 1817145 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156683 c[5] - 723465 c[6] + 1794491 c[7] - 1831401 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156683 c[5] - 723433 c[6] + 1793851 c[7] - 1828233 c[8], c[1] - 59 c[2] + 1465 c[3] - 19795 c[4] + 156699 c[5] - 723897 c[6] + 1798315 c[7] - 1842489 c[8], c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156331 c[5] - 717785 c[6] + 1754523 c[7] - 1727649 c[8], c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156363 c[5] - 718681 c[6] + 1762811 c[7] - 1752993 c[8], c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156379 c[5] - 719145 c[6] + 1767275 c[7] - 1767249 c[8], c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156379 c[5] - 719113 c[6] + 1766635 c[7] - 1764081 c[8], c[1] - 59 c[2] + 1465 c[3] - 19787 c[4] + 156395 c[5] - 719609 c[6] + 1771739 c[7] - 1781505 c[8], c[1] - 59 c[2] + 1465 c[3] - 19779 c[4] + 156059 c[5] - 714361 c[6] + 1735595 c[7] - 1688841 c[8], c[1] - 59 c[2] + 1465 c[3] - 19779 c[4] + 156075 c[5] - 714825 c[6] + 1740059 c[7] - 1703097 c[8], c[1] - 59 c[2] + 1465 c[3] - 19779 c[4] + 156091 c[5] - 715289 c[6] + 1744523 c[7] - 1717353 c[8], c[1] - 59 c[2] + 1465 c[3] - 19771 c[4] + 155739 c[5] - 709609 c[6] + 1704555 c[7] - 1613601 c[8], c[1] - 59 c[2] + 1465 c[3] - 19771 c[4] + 155771 c[5] - 710505 c[6] + 1712843 c[7] - 1638945 c[8]\}$$

Array[c, 8].g

$$49 c[1] - 2891 c[2] + 71785 c[3] - 970499 c[4] + 7696699 c[5] - 35699641 c[6] + 89336875 c[7] - 92616185 c[8]$$

```

cert =
  Flatten[Array[c, 8] /. FindInstance[49 c[1] - 2891 c[2] + 71 785 c[3] - 970 499 c[4] +
    7 696 699 c[5] - 35 699 641 c[6] + 89 336 875 c[7] - 92 616 185 c[8] < 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 811 c[4] + 157 259 c[5] - 731 145 c[6] +
    1 839 355 c[7] - 1 928 025 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
    156 939 c[5] - 726 393 c[6] + 1 808 315 c[7] - 1 852 785 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 955 c[5] - 726 857 c[6] +
    1 812 779 c[7] - 1 867 041 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
    156 971 c[5] - 727 321 c[6] + 1 817 243 c[7] - 1 881 297 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] + 156 971 c[5] - 727 289 c[6] +
    1 816 603 c[7] - 1 878 129 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 803 c[4] +
    156 987 c[5] - 727 753 c[6] + 1 821 067 c[7] - 1 892 385 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 619 c[5] - 721 641 c[6] +
    1 777 275 c[7] - 1 777 545 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
    156 635 c[5] - 722 105 c[6] + 1 781 739 c[7] - 1 791 801 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 651 c[5] - 722 537 c[6] +
    1 785 563 c[7] - 1 802 889 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
    156 667 c[5] - 723 001 c[6] + 1 790 027 c[7] - 1 817 145 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 683 c[5] - 723 465 c[6] +
    1 794 491 c[7] - 1 831 401 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] +
    156 683 c[5] - 723 433 c[6] + 1 793 851 c[7] - 1 828 233 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 795 c[4] + 156 699 c[5] - 723 897 c[6] +
    1 798 315 c[7] - 1 842 489 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
    156 331 c[5] - 717 785 c[6] + 1 754 523 c[7] - 1 727 649 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 363 c[5] - 718 681 c[6] +
    1 762 811 c[7] - 1 752 993 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
    156 379 c[5] - 719 145 c[6] + 1 767 275 c[7] - 1 767 249 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] + 156 379 c[5] - 719 113 c[6] +
    1 766 635 c[7] - 1 764 081 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 787 c[4] +
    156 395 c[5] - 719 609 c[6] + 1 771 739 c[7] - 1 781 505 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] + 156 059 c[5] - 714 361 c[6] +
    1 735 595 c[7] - 1 688 841 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] +
    156 075 c[5] - 714 825 c[6] + 1 740 059 c[7] - 1 703 097 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 779 c[4] + 156 091 c[5] - 715 289 c[6] +
    1 744 523 c[7] - 1 717 353 c[8] ≥ 0 && c[1] - 59 c[2] + 1465 c[3] - 19 771 c[4] +
    155 739 c[5] - 709 609 c[6] + 1 704 555 c[7] - 1 613 601 c[8] ≥ 0 &&
    c[1] - 59 c[2] + 1465 c[3] - 19 771 c[4] + 155 771 c[5] - 710 505 c[6] +
    1 712 843 c[7] - 1 638 945 c[8] ≥ 0, Array[c, 8], Integers]]
{0, 0, 0, 0, -1 467 454, -617 730, -151 051, -29 543}
GCD[0, 0, 0, 0, -1 467 454, -617 730, -151 051, -29 543]
1
cert.g
-76 851 586

```

```
{0, 0, 0, 0, -1467454, -617730, -151051, -29543}.Reverse[gpart[listdim17[[183]]]]
-76851586
```

```
cert.Transpose[A]
```

```
{3082734, 3022774, 13043574, 23064374, 6377430, 16398230, 2962814, 12983614,
6317470, 16338270, 26359070, 9672126, 19692926, 6257510, 9612166, 19632966,
2946022, 29653766, 2886062, 12906862, 22927662, 2826102, 6180758}
```

```
chi = listdim17[[184]]
```

```
(-12 + x) (-11 + x)^4 (-9 + x)^8 (5 + x)^32 (59 - 16 x + x^2)^2
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-32747, 22337, -5786, 718, -43, 1},
{-32923, 22353, -5786, 718, -43, 1}, {-33099, 22369, -5786, 718, -43, 1},
{-31779, 22161, -5778, 718, -43, 1}, {-31955, 22177, -5778, 718, -43, 1},
{-32131, 22193, -5778, 718, -43, 1}, {-30987, 22001, -5770, 718, -43, 1},
{-31163, 22017, -5770, 718, -43, 1}, {-30195, 21841, -5762, 718, -43, 1},
{-30371, 21857, -5762, 718, -43, 1}, {-29403, 21681, -5754, 718, -43, 1}}
```

```
A = {{-32747, 22337, -5786, 718, -43, 1},
{-32923, 22353, -5786, 718, -43, 1}, {-33099, 22369, -5786, 718, -43, 1},
{-31779, 22161, -5778, 718, -43, 1}, {-31955, 22177, -5778, 718, -43, 1},
{-32131, 22193, -5778, 718, -43, 1}, {-30987, 22001, -5770, 718, -43, 1},
{-31163, 22017, -5770, 718, -43, 1}, {-30195, 21841, -5762, 718, -43, 1},
{-30371, 21857, -5762, 718, -43, 1}, {-29403, 21681, -5754, 718, -43, 1}};
```

```
A // MatrixForm
```

```
(-32747 22337 -5786 718 -43 1)
(-32923 22353 -5786 718 -43 1)
(-33099 22369 -5786 718 -43 1)
(-31779 22161 -5778 718 -43 1)
(-31955 22177 -5778 718 -43 1)
(-32131 22193 -5778 718 -43 1)
(-30987 22001 -5770 718 -43 1)
(-31163 22017 -5770 718 -43 1)
(-30195 21841 -5762 718 -43 1)
(-30371 21857 -5762 718 -43 1)
(-29403 21681 -5754 718 -43 1)
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1584699, 1090017, -283274, 35182, -2107, 49}
```


Array[c, 6].Transpose[A]

```
{ -32 747 c[1] + 22 337 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -32 923 c[1] + 22 353 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -33 099 c[1] + 22 369 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -31 779 c[1] + 22 161 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -31 955 c[1] + 22 177 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -32 131 c[1] + 22 193 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -30 987 c[1] + 22 001 c[2] - 5770 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -31 163 c[1] + 22 017 c[2] - 5770 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -30 195 c[1] + 21 841 c[2] - 5762 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -30 371 c[1] + 21 857 c[2] - 5762 c[3] + 718 c[4] - 43 c[5] + c[6] ,
  -29 403 c[1] + 21 681 c[2] - 5754 c[3] + 718 c[4] - 43 c[5] + c[6] }
```

Array[c, 6].g

```
-1 584 699 c[1] + 1 090 017 c[2] - 283 274 c[3] + 35 182 c[4] - 2107 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```
-1 584 699 c[1] + 1 090 017 c[2] - 283 274 c[3] + 35 182 c[4] - 2107 c[5] + 49 c[6] < 0 &&
  -32 747 c[1] + 22 337 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32 923 c[1] + 22 353 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -33 099 c[1] + 22 369 c[2] - 5786 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31 779 c[1] + 22 161 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31 955 c[1] + 22 177 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -32 131 c[1] + 22 193 c[2] - 5778 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30 987 c[1] + 22 001 c[2] - 5770 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -31 163 c[1] + 22 017 c[2] - 5770 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30 195 c[1] + 21 841 c[2] - 5762 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -30 371 c[1] + 21 857 c[2] - 5762 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0 &&
  -29 403 c[1] + 21 681 c[2] - 5754 c[3] + 718 c[4] - 43 c[5] + c[6] ≥ 0,
```

Array[c, 6], Integers]]

```
{5850, 64 353, 707 880, 0, 0, 2 849 927 244}
```

GCD[5850, 64 353, 707 880, 0, 0, 2 849 927 244]

3

cert = cert / 3

```
{1950, 21 451, 235 960, 0, 0, 949 975 748}
```

Reverse[cert]

```
{949 975 748, 0, 0, 235 960, 21 451, 1950}
```

cert.g

```
-729 771
```

{1950, 21 451, 235 960, 0, 0, 949 975 748}.gpart[listdim17[[184]]]

```
-729 771
```

```
cert.Transpose[A]
```

```
{5525, 5541, 5557, 5429, 5445, 5461, 5349, 5365, 5269, 5285, 5189}
```

```
chi = listdim17[[185]]
```

```
 $(-11 + x)^7 (-9 + x)^6 (-7 + x)^2 (5 + x)^{32} (52 - 15x + x^2)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-16821, 12777, -3750, 534, -37, 1}, {-16317, 12649, -3742, 534, -37, 1},  
{-16461, 12665, -3742, 534, -37, 1}, {-15813, 12521, -3734, 534, -37, 1}}
```

```
A = {{-16821, 12777, -3750, 534, -37, 1}, {-16317, 12649, -3742, 534, -37, 1},  
{-16461, 12665, -3742, 534, -37, 1}, {-15813, 12521, -3734, 534, -37, 1}};
```

```
A // MatrixForm
```

```

$$\begin{pmatrix} -16821 & 12777 & -3750 & 534 & -37 & 1 \\ -16317 & 12649 & -3742 & 534 & -37 & 1 \\ -16461 & 12665 & -3742 & 534 & -37 & 1 \\ -15813 & 12521 & -3734 & 534 & -37 & 1 \end{pmatrix}$$

```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-814917, 622953, -183510, 26166, -1813, 49}
```

```
Array[c, 6].Transpose[A]
```

```
{-16821 c[1] + 12777 c[2] - 3750 c[3] + 534 c[4] - 37 c[5] + c[6],  
-16317 c[1] + 12649 c[2] - 3742 c[3] + 534 c[4] - 37 c[5] + c[6],  
-16461 c[1] + 12665 c[2] - 3742 c[3] + 534 c[4] - 37 c[5] + c[6],  
-15813 c[1] + 12521 c[2] - 3734 c[3] + 534 c[4] - 37 c[5] + c[6]}
```

```
Array[c, 6].g
```

```
-814917 c[1] + 622953 c[2] - 183510 c[3] + 26166 c[4] - 1813 c[5] + 49 c[6]
```

```
cert = Flatten[Array[c, 6] /. FindInstance[
```

```
-814917 c[1] + 622953 c[2] - 183510 c[3] + 26166 c[4] - 1813 c[5] + 49 c[6] < 0 &&  
-16821 c[1] + 12777 c[2] - 3750 c[3] + 534 c[4] - 37 c[5] + c[6] ≥ 0 &&  
-16317 c[1] + 12649 c[2] - 3742 c[3] + 534 c[4] - 37 c[5] + c[6] ≥ 0 &&  
-16461 c[1] + 12665 c[2] - 3742 c[3] + 534 c[4] - 37 c[5] + c[6] ≥ 0 &&  
-15813 c[1] + 12521 c[2] - 3734 c[3] + 534 c[4] - 37 c[5] + c[6] ≥ 0,
```

```
Array[c, 6], Integers]]
```

```
{2893, 11067, 24726, 0, 0, 0}
```

```
GCD[2893, 11067, 24726, 0, 0, 0]
```

```
1
```

Reverse[cert]

{0, 0, 0, 24 726, 11 067, 2893}

cert.g

-802 290

{2893, 11 067, 24 726, 0, 0, 0}.gpart[listdim17[[185]]]

-802 290

cert.Transpose[A]

{17 406, 256 710, 17 190, 496 014}

chi = listdim17[[186]]

$(-11 + x)^4 (-9 + x)^{11} (5 + x)^{32} (56 - 17 x + x^2)$

CoefficientList[feasibleinterlacingpolylist[chi], x]

{ {2553, -1632, 358, -32, 1}, {2569, -1632, 358, -32, 1},
 {2585, -1632, 358, -32, 1}, {2449, -1624, 358, -32, 1}, {2465, -1624, 358, -32, 1},
 {2481, -1624, 358, -32, 1}, {2497, -1624, 358, -32, 1}, {2345, -1616, 358, -32, 1},
 {2361, -1616, 358, -32, 1}, {2377, -1616, 358, -32, 1}, {2393, -1616, 358, -32, 1},
 {2409, -1616, 358, -32, 1}, {2257, -1608, 358, -32, 1}, {2273, -1608, 358, -32, 1},
 {2289, -1608, 358, -32, 1}, {2305, -1608, 358, -32, 1}, {2321, -1608, 358, -32, 1},
 {2169, -1600, 358, -32, 1}, {2185, -1600, 358, -32, 1}, {2201, -1600, 358, -32, 1},
 {2217, -1600, 358, -32, 1}, {2233, -1600, 358, -32, 1}, {2097, -1592, 358, -32, 1},
 {2113, -1592, 358, -32, 1}, {2129, -1592, 358, -32, 1}, {2145, -1592, 358, -32, 1},
 {2025, -1584, 358, -32, 1}, {2041, -1584, 358, -32, 1}, {2057, -1584, 358, -32, 1},
 {1953, -1576, 358, -32, 1}, {1969, -1576, 358, -32, 1}, {1881, -1568, 358, -32, 1} }

```
A = {{2553, -1632, 358, -32, 1}, {2569, -1632, 358, -32, 1},
      {2585, -1632, 358, -32, 1}, {2449, -1624, 358, -32, 1},
      {2465, -1624, 358, -32, 1}, {2481, -1624, 358, -32, 1},
      {2497, -1624, 358, -32, 1}, {2345, -1616, 358, -32, 1},
      {2361, -1616, 358, -32, 1}, {2377, -1616, 358, -32, 1},
      {2393, -1616, 358, -32, 1}, {2409, -1616, 358, -32, 1},
      {2257, -1608, 358, -32, 1}, {2273, -1608, 358, -32, 1},
      {2289, -1608, 358, -32, 1}, {2305, -1608, 358, -32, 1},
      {2321, -1608, 358, -32, 1}, {2169, -1600, 358, -32, 1},
      {2185, -1600, 358, -32, 1}, {2201, -1600, 358, -32, 1},
      {2217, -1600, 358, -32, 1}, {2233, -1600, 358, -32, 1},
      {2097, -1592, 358, -32, 1}, {2113, -1592, 358, -32, 1},
      {2129, -1592, 358, -32, 1}, {2145, -1592, 358, -32, 1},
      {2025, -1584, 358, -32, 1}, {2041, -1584, 358, -32, 1},
      {2057, -1584, 358, -32, 1}, {1953, -1576, 358, -32, 1},
      {1969, -1576, 358, -32, 1}, {1881, -1568, 358, -32, 1}};
```

```
A // MatrixForm
```

```
( 2553 -1632 358 -32 1 )
( 2569 -1632 358 -32 1 )
( 2585 -1632 358 -32 1 )
( 2449 -1624 358 -32 1 )
( 2465 -1624 358 -32 1 )
( 2481 -1624 358 -32 1 )
( 2497 -1624 358 -32 1 )
( 2345 -1616 358 -32 1 )
( 2361 -1616 358 -32 1 )
( 2377 -1616 358 -32 1 )
( 2393 -1616 358 -32 1 )
( 2409 -1616 358 -32 1 )
( 2257 -1608 358 -32 1 )
( 2273 -1608 358 -32 1 )
( 2289 -1608 358 -32 1 )
( 2305 -1608 358 -32 1 )
( 2321 -1608 358 -32 1 )
( 2169 -1600 358 -32 1 )
( 2185 -1600 358 -32 1 )
( 2201 -1600 358 -32 1 )
( 2217 -1600 358 -32 1 )
( 2233 -1600 358 -32 1 )
( 2097 -1592 358 -32 1 )
( 2113 -1592 358 -32 1 )
( 2129 -1592 358 -32 1 )
( 2145 -1592 358 -32 1 )
( 2025 -1584 358 -32 1 )
( 2041 -1584 358 -32 1 )
( 2057 -1584 358 -32 1 )
( 1953 -1576 358 -32 1 )
( 1969 -1576 358 -32 1 )
( 1881 -1568 358 -32 1 )
```

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{125 033, -79 936, 17 542, -1568, 49}
```

```
Array[c, 5].Transpose[A]
```

```
{2553 c[1] - 1632 c[2] + 358 c[3] - 32 c[4] + c[5],
 2569 c[1] - 1632 c[2] + 358 c[3] - 32 c[4] + c[5],
 2585 c[1] - 1632 c[2] + 358 c[3] - 32 c[4] + c[5],
 2449 c[1] - 1624 c[2] + 358 c[3] - 32 c[4] + c[5],
 2465 c[1] - 1624 c[2] + 358 c[3] - 32 c[4] + c[5],
 2481 c[1] - 1624 c[2] + 358 c[3] - 32 c[4] + c[5],
 2497 c[1] - 1624 c[2] + 358 c[3] - 32 c[4] + c[5],
 2345 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5],
 2361 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5],
 2377 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5],
 2393 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5],
 2409 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5],
 2257 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5],
 2273 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5],
 2289 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5],
 2305 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5],
 2321 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5],
 2169 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5],
 2185 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5],
 2201 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5],
 2217 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5],
 2233 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5],
 2097 c[1] - 1592 c[2] + 358 c[3] - 32 c[4] + c[5],
 2113 c[1] - 1592 c[2] + 358 c[3] - 32 c[4] + c[5],
 2129 c[1] - 1592 c[2] + 358 c[3] - 32 c[4] + c[5],
 2145 c[1] - 1592 c[2] + 358 c[3] - 32 c[4] + c[5],
 2025 c[1] - 1584 c[2] + 358 c[3] - 32 c[4] + c[5],
 2041 c[1] - 1584 c[2] + 358 c[3] - 32 c[4] + c[5],
 2057 c[1] - 1584 c[2] + 358 c[3] - 32 c[4] + c[5],
 1953 c[1] - 1576 c[2] + 358 c[3] - 32 c[4] + c[5],
 1969 c[1] - 1576 c[2] + 358 c[3] - 32 c[4] + c[5],
 1881 c[1] - 1568 c[2] + 358 c[3] - 32 c[4] + c[5]}
```

```
Array[c, 5].g
```

```
125 033 c[1] - 79 936 c[2] + 17 542 c[3] - 1568 c[4] + 49 c[5]
```

```

cert = Flatten[Array[c, 5] /.
  FindInstance[125 033 c[1] - 79 936 c[2] + 17 542 c[3] - 1568 c[4] + 49 c[5] < 0 &&
    2553 c[1] - 1632 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2569 c[1] - 1632 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2585 c[1] - 1632 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2449 c[1] - 1624 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2465 c[1] - 1624 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2481 c[1] - 1624 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2497 c[1] - 1624 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2345 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2361 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2377 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2393 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2409 c[1] - 1616 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2257 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2273 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2289 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2305 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2321 c[1] - 1608 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2169 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2185 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2201 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2217 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2233 c[1] - 1600 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2097 c[1] - 1592 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2113 c[1] - 1592 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2129 c[1] - 1592 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2145 c[1] - 1592 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2025 c[1] - 1584 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2041 c[1] - 1584 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    2057 c[1] - 1584 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    1953 c[1] - 1576 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    1969 c[1] - 1576 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0 &&
    1881 c[1] - 1568 c[2] + 358 c[3] - 32 c[4] + c[5] ≥ 0, Array[c, 5], Integers]]
{c[1], c[2], c[3], c[4], c[5]}

GCD[]

Reverse[cert]

cert.g

cert.Transpose[A]

```

chi = listdim17[[187]]

$$(-11 + x)^4 (-9 + x)^9 (5 + x)^{32} (4568 - 2385 x + 443 x^2 - 35 x^3 + x^4)$$

CoefficientList[feasibleinterlacingpolylist[chi], x]

```
{ {209 033, -178 690, 60 959, -10 668, 1015, -50, 1},
  {208 681, -178 658, 60 959, -10 668, 1015, -50, 1},
  {210 265, -178 978, 60 975, -10 668, 1015, -50, 1},
  {209 913, -178 946, 60 975, -10 668, 1015, -50, 1},
  {200 673, -176 170, 60 711, -10 660, 1015, -50, 1},
  {200 321, -176 138, 60 711, -10 660, 1015, -50, 1},
  {202 257, -176 490, 60 727, -10 660, 1015, -50, 1},
  {201 905, -176 458, 60 727, -10 660, 1015, -50, 1},
  {201 553, -176 426, 60 727, -10 660, 1015, -50, 1},
  {203 841, -176 810, 60 743, -10 660, 1015, -50, 1},
  {203 489, -176 778, 60 743, -10 660, 1015, -50, 1},
  {203 137, -176 746, 60 743, -10 660, 1015, -50, 1},
  {205 425, -177 130, 60 759, -10 660, 1015, -50, 1},
  {205 073, -177 098, 60 759, -10 660, 1015, -50, 1},
  {204 721, -177 066, 60 759, -10 660, 1015, -50, 1},
  {206 657, -177 418, 60 775, -10 660, 1015, -50, 1},
  {191 961, -173 618, 60 463, -10 652, 1015, -50, 1},
  {193 545, -173 938, 60 479, -10 652, 1015, -50, 1},
  {193 193, -173 906, 60 479, -10 652, 1015, -50, 1},
  {195 129, -174 258, 60 495, -10 652, 1015, -50, 1},
  {194 777, -174 226, 60 495, -10 652, 1015, -50, 1},
  {196 713, -174 578, 60 511, -10 652, 1015, -50, 1},
  {196 361, -174 546, 60 511, -10 652, 1015, -50, 1},
  {196 009, -174 514, 60 511, -10 652, 1015, -50, 1},
  {198 297, -174 898, 60 527, -10 652, 1015, -50, 1},
  {197 945, -174 866, 60 527, -10 652, 1015, -50, 1},
  {199 881, -175 218, 60 543, -10 652, 1015, -50, 1},
  {201 465, -175 538, 60 559, -10 652, 1015, -50, 1},
  {186 417, -171 706, 60 247, -10 644, 1015, -50, 1},
  {188 001, -172 026, 60 263, -10 644, 1015, -50, 1},
  {187 649, -171 994, 60 263, -10 644, 1015, -50, 1},
  {189 585, -172 346, 60 279, -10 644, 1015, -50, 1},
  {189 233, -172 314, 60 279, -10 644, 1015, -50, 1},
  {191 169, -172 666, 60 295, -10 644, 1015, -50, 1},
  {190 817, -172 634, 60 295, -10 644, 1015, -50, 1},
  {192 753, -172 986, 60 311, -10 644, 1015, -50, 1},
  {180 873, -169 794, 60 031, -10 636, 1015, -50, 1},
  {182 457, -170 114, 60 047, -10 636, 1015, -50, 1},
  {182 105, -170 082, 60 047, -10 636, 1015, -50, 1},
  {184 041, -170 434, 60 063, -10 636, 1015, -50, 1},
  {173 745, -167 562, 59 799, -10 628, 1015, -50, 1},
  {175 329, -167 882, 59 815, -10 628, 1015, -50, 1} }
```

```

A = {{209 033, -178 690, 60 959, -10 668, 1015, -50, 1},
      {208 681, -178 658, 60 959, -10 668, 1015, -50, 1},
      {210 265, -178 978, 60 975, -10 668, 1015, -50, 1},
      {209 913, -178 946, 60 975, -10 668, 1015, -50, 1},
      {200 673, -176 170, 60 711, -10 660, 1015, -50, 1},
      {200 321, -176 138, 60 711, -10 660, 1015, -50, 1},
      {202 257, -176 490, 60 727, -10 660, 1015, -50, 1},
      {201 905, -176 458, 60 727, -10 660, 1015, -50, 1},
      {201 553, -176 426, 60 727, -10 660, 1015, -50, 1},
      {203 841, -176 810, 60 743, -10 660, 1015, -50, 1},
      {203 489, -176 778, 60 743, -10 660, 1015, -50, 1},
      {203 137, -176 746, 60 743, -10 660, 1015, -50, 1},
      {205 425, -177 130, 60 759, -10 660, 1015, -50, 1},
      {205 073, -177 098, 60 759, -10 660, 1015, -50, 1},
      {204 721, -177 066, 60 759, -10 660, 1015, -50, 1},
      {206 657, -177 418, 60 775, -10 660, 1015, -50, 1},
      {191 961, -173 618, 60 463, -10 652, 1015, -50, 1},
      {193 545, -173 938, 60 479, -10 652, 1015, -50, 1},
      {193 193, -173 906, 60 479, -10 652, 1015, -50, 1},
      {195 129, -174 258, 60 495, -10 652, 1015, -50, 1},
      {194 777, -174 226, 60 495, -10 652, 1015, -50, 1},
      {196 713, -174 578, 60 511, -10 652, 1015, -50, 1},
      {196 361, -174 546, 60 511, -10 652, 1015, -50, 1},
      {196 009, -174 514, 60 511, -10 652, 1015, -50, 1},
      {198 297, -174 898, 60 527, -10 652, 1015, -50, 1},
      {197 945, -174 866, 60 527, -10 652, 1015, -50, 1},
      {199 881, -175 218, 60 543, -10 652, 1015, -50, 1},
      {201 465, -175 538, 60 559, -10 652, 1015, -50, 1},
      {186 417, -171 706, 60 247, -10 644, 1015, -50, 1},
      {188 001, -172 026, 60 263, -10 644, 1015, -50, 1},
      {187 649, -171 994, 60 263, -10 644, 1015, -50, 1},
      {189 585, -172 346, 60 279, -10 644, 1015, -50, 1},
      {189 233, -172 314, 60 279, -10 644, 1015, -50, 1},
      {191 169, -172 666, 60 295, -10 644, 1015, -50, 1},
      {190 817, -172 634, 60 295, -10 644, 1015, -50, 1},
      {192 753, -172 986, 60 311, -10 644, 1015, -50, 1},
      {180 873, -169 794, 60 031, -10 636, 1015, -50, 1},
      {182 457, -170 114, 60 047, -10 636, 1015, -50, 1},
      {182 105, -170 082, 60 047, -10 636, 1015, -50, 1},
      {184 041, -170 434, 60 063, -10 636, 1015, -50, 1},
      {173 745, -167 562, 59 799, -10 628, 1015, -50, 1},
      {175 329, -167 882, 59 815, -10 628, 1015, -50, 1}};

```


A // MatrixForm

```
( 209 033 -178 690 60 959 -10 668 1015 -50 1 )
 208 681 -178 658 60 959 -10 668 1015 -50 1
 210 265 -178 978 60 975 -10 668 1015 -50 1
 209 913 -178 946 60 975 -10 668 1015 -50 1
 200 673 -176 170 60 711 -10 660 1015 -50 1
 200 321 -176 138 60 711 -10 660 1015 -50 1
 202 257 -176 490 60 727 -10 660 1015 -50 1
 201 905 -176 458 60 727 -10 660 1015 -50 1
 201 553 -176 426 60 727 -10 660 1015 -50 1
 203 841 -176 810 60 743 -10 660 1015 -50 1
 203 489 -176 778 60 743 -10 660 1015 -50 1
 203 137 -176 746 60 743 -10 660 1015 -50 1
 205 425 -177 130 60 759 -10 660 1015 -50 1
 205 073 -177 098 60 759 -10 660 1015 -50 1
 204 721 -177 066 60 759 -10 660 1015 -50 1
 206 657 -177 418 60 775 -10 660 1015 -50 1
 191 961 -173 618 60 463 -10 652 1015 -50 1
 193 545 -173 938 60 479 -10 652 1015 -50 1
 193 193 -173 906 60 479 -10 652 1015 -50 1
 195 129 -174 258 60 495 -10 652 1015 -50 1
 194 777 -174 226 60 495 -10 652 1015 -50 1
 196 713 -174 578 60 511 -10 652 1015 -50 1
 196 361 -174 546 60 511 -10 652 1015 -50 1
 196 009 -174 514 60 511 -10 652 1015 -50 1
 198 297 -174 898 60 527 -10 652 1015 -50 1
 197 945 -174 866 60 527 -10 652 1015 -50 1
 199 881 -175 218 60 543 -10 652 1015 -50 1
 201 465 -175 538 60 559 -10 652 1015 -50 1
 186 417 -171 706 60 247 -10 644 1015 -50 1
 188 001 -172 026 60 263 -10 644 1015 -50 1
 187 649 -171 994 60 263 -10 644 1015 -50 1
 189 585 -172 346 60 279 -10 644 1015 -50 1
 189 233 -172 314 60 279 -10 644 1015 -50 1
 191 169 -172 666 60 295 -10 644 1015 -50 1
 190 817 -172 634 60 295 -10 644 1015 -50 1
 192 753 -172 986 60 311 -10 644 1015 -50 1
 180 873 -169 794 60 031 -10 636 1015 -50 1
 182 457 -170 114 60 047 -10 636 1015 -50 1
 182 105 -170 082 60 047 -10 636 1015 -50 1
 184 041 -170 434 60 063 -10 636 1015 -50 1
 173 745 -167 562 59 799 -10 628 1015 -50 1
 175 329 -167 882 59 815 -10 628 1015 -50 1 )
```

Dimensions[A]

```
{42, 7}
```

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

```
{10 207 449, -8 748 130, 2 986 223, -522 700, 49 735, -2450, 49}
```

Array[c, 7].Transpose[A]

```
{ 209 033 c[1] - 178 690 c[2] + 60 959 c[3] - 10 668 c[4] + 1015 c[5] - 50 c[6] + c[7],
  208 681 c[1] - 178 658 c[2] + 60 959 c[3] - 10 668 c[4] + 1015 c[5] - 50 c[6] + c[7],
  210 265 c[1] - 178 978 c[2] + 60 975 c[3] - 10 668 c[4] + 1015 c[5] - 50 c[6] + c[7],
  209 913 c[1] - 178 946 c[2] + 60 975 c[3] - 10 668 c[4] + 1015 c[5] - 50 c[6] + c[7],
  200 673 c[1] - 176 170 c[2] + 60 711 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  200 321 c[1] - 176 138 c[2] + 60 711 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  202 257 c[1] - 176 490 c[2] + 60 727 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  201 905 c[1] - 176 458 c[2] + 60 727 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  201 553 c[1] - 176 426 c[2] + 60 727 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  203 841 c[1] - 176 810 c[2] + 60 743 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  203 489 c[1] - 176 778 c[2] + 60 743 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  203 137 c[1] - 176 746 c[2] + 60 743 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  205 425 c[1] - 177 130 c[2] + 60 759 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  205 073 c[1] - 177 098 c[2] + 60 759 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  204 721 c[1] - 177 066 c[2] + 60 759 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  206 657 c[1] - 177 418 c[2] + 60 775 c[3] - 10 660 c[4] + 1015 c[5] - 50 c[6] + c[7],
  191 961 c[1] - 173 618 c[2] + 60 463 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  193 545 c[1] - 173 938 c[2] + 60 479 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  193 193 c[1] - 173 906 c[2] + 60 479 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  195 129 c[1] - 174 258 c[2] + 60 495 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  194 777 c[1] - 174 226 c[2] + 60 495 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  196 713 c[1] - 174 578 c[2] + 60 511 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  196 361 c[1] - 174 546 c[2] + 60 511 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  196 009 c[1] - 174 514 c[2] + 60 511 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  198 297 c[1] - 174 898 c[2] + 60 527 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  197 945 c[1] - 174 866 c[2] + 60 527 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  199 881 c[1] - 175 218 c[2] + 60 543 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  201 465 c[1] - 175 538 c[2] + 60 559 c[3] - 10 652 c[4] + 1015 c[5] - 50 c[6] + c[7],
  186 417 c[1] - 171 706 c[2] + 60 247 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7],
  188 001 c[1] - 172 026 c[2] + 60 263 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7],
  187 649 c[1] - 171 994 c[2] + 60 263 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7],
  189 585 c[1] - 172 346 c[2] + 60 279 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7],
  189 233 c[1] - 172 314 c[2] + 60 279 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7],
  191 169 c[1] - 172 666 c[2] + 60 295 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7],
  190 817 c[1] - 172 634 c[2] + 60 295 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7],
  192 753 c[1] - 172 986 c[2] + 60 311 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7],
  180 873 c[1] - 169 794 c[2] + 60 031 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7],
  182 457 c[1] - 170 114 c[2] + 60 047 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7],
  182 105 c[1] - 170 082 c[2] + 60 047 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7],
  184 041 c[1] - 170 434 c[2] + 60 063 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7],
  173 745 c[1] - 167 562 c[2] + 59 799 c[3] - 10 628 c[4] + 1015 c[5] - 50 c[6] + c[7],
  175 329 c[1] - 167 882 c[2] + 59 815 c[3] - 10 628 c[4] + 1015 c[5] - 50 c[6] + c[7]}
```

Array[c, 7].g

$10\,207\,449\,c[1] - 8\,748\,130\,c[2] + 2\,986\,223\,c[3] -$
 $522\,700\,c[4] + 49\,735\,c[5] - 2450\,c[6] + 49\,c[7]$

cert =

Flatten[Array[c, 7] /. FindInstance[$10\,207\,449\,c[1] - 8\,748\,130\,c[2] + 2\,986\,223\,c[3] -$
 $522\,700\,c[4] + 49\,735\,c[5] - 2450\,c[6] + 49\,c[7] < 0 \&\& 209\,033\,c[1] -$
 $178\,690\,c[2] + 60\,959\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $208\,681\,c[1] - 178\,658\,c[2] + 60\,959\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 210\,265\,c[1] - 178\,978\,c[2] + 60\,975\,c[3] - 10\,668\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 209\,913\,c[1] - 178\,946\,c[2] +$
 $60\,975\,c[3] - 10\,668\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $200\,673\,c[1] - 176\,170\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 200\,321\,c[1] - 176\,138\,c[2] + 60\,711\,c[3] - 10\,660\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 202\,257\,c[1] - 176\,490\,c[2] +$
 $60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $201\,905\,c[1] - 176\,458\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 201\,553\,c[1] - 176\,426\,c[2] + 60\,727\,c[3] - 10\,660\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 203\,841\,c[1] - 176\,810\,c[2] +$
 $60\,743\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $203\,489\,c[1] - 176\,778\,c[2] + 60\,743\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 203\,137\,c[1] - 176\,746\,c[2] + 60\,743\,c[3] - 10\,660\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 205\,425\,c[1] - 177\,130\,c[2] +$
 $60\,759\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $205\,073\,c[1] - 177\,098\,c[2] + 60\,759\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 204\,721\,c[1] - 177\,066\,c[2] + 60\,759\,c[3] - 10\,660\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 206\,657\,c[1] - 177\,418\,c[2] +$
 $60\,775\,c[3] - 10\,660\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $191\,961\,c[1] - 173\,618\,c[2] + 60\,463\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 193\,545\,c[1] - 173\,938\,c[2] + 60\,479\,c[3] - 10\,652\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 193\,193\,c[1] - 173\,906\,c[2] +$
 $60\,479\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $195\,129\,c[1] - 174\,258\,c[2] + 60\,495\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 194\,777\,c[1] - 174\,226\,c[2] + 60\,495\,c[3] - 10\,652\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 196\,713\,c[1] - 174\,578\,c[2] +$
 $60\,511\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $196\,361\,c[1] - 174\,546\,c[2] + 60\,511\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 196\,009\,c[1] - 174\,514\,c[2] + 60\,511\,c[3] - 10\,652\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 198\,297\,c[1] - 174\,898\,c[2] +$
 $60\,527\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $197\,945\,c[1] - 174\,866\,c[2] + 60\,527\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 199\,881\,c[1] - 175\,218\,c[2] + 60\,543\,c[3] - 10\,652\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 201\,465\,c[1] - 175\,538\,c[2] +$
 $60\,559\,c[3] - 10\,652\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\&$
 $186\,417\,c[1] - 171\,706\,c[2] + 60\,247\,c[3] - 10\,644\,c[4] + 1015\,c[5] - 50\,c[6] + c[7] \geq$
 $0 \&\& 188\,001\,c[1] - 172\,026\,c[2] + 60\,263\,c[3] - 10\,644\,c[4] +$
 $1015\,c[5] - 50\,c[6] + c[7] \geq 0 \&\& 187\,649\,c[1] - 171\,994\,c[2] +$

```

60 263 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
189 585 c[1] - 172 346 c[2] + 60 279 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 189 233 c[1] - 172 314 c[2] + 60 279 c[3] - 10 644 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 191 169 c[1] - 172 666 c[2] +
60 295 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
190 817 c[1] - 172 634 c[2] + 60 295 c[3] - 10 644 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 192 753 c[1] - 172 986 c[2] + 60 311 c[3] - 10 644 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 180 873 c[1] - 169 794 c[2] +
60 031 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
182 457 c[1] - 170 114 c[2] + 60 047 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 182 105 c[1] - 170 082 c[2] + 60 047 c[3] - 10 636 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0 && 184 041 c[1] - 170 434 c[2] +
60 063 c[3] - 10 636 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥ 0 &&
173 745 c[1] - 167 562 c[2] + 59 799 c[3] - 10 628 c[4] + 1015 c[5] - 50 c[6] + c[7] ≥
0 && 175 329 c[1] - 167 882 c[2] + 59 815 c[3] - 10 628 c[4] +
1015 c[5] - 50 c[6] + c[7] ≥ 0, Array[c, 7], Integers]]

```

```
{16 654, 97 821, 478 465, 1 421 580, 0, 0, 0}
```

```
GCD[16 654, 97 821, 478 465, 1 421 580, 0, 0, 0]
```

```
1
```

```
Reverse[cert]
```

```
{0, 0, 0, 1 421 580, 478 465, 97 821, 16 654}
```

```
cert.g
```

```
-12 647 389
```

```
{16 654, 97 821, 478 465, 1 421 580, 0, 0, 0}.gpart[listdim17[[187]]]
```

```
-12 647 389
```

```
cert.Transpose[A]
```

```
{2 933 587, 201 651, 2 934 307, 202 371, 2 928 387, 196 451, 5 661 043,
2 929 107, 197 171, 8 393 699, 5 661 763, 2 929 827, 11 126 355, 8 394 419,
5 662 483, 11 127 075, 191 251, 2 923 907, 191 971, 5 656 563, 2 924 627,
8 389 219, 5 657 283, 2 925 347, 11 121 875, 8 389 939, 13 854 531, 16 587 187,
2 919 427, 5 652 083, 2 920 147, 8 384 739, 5 652 803, 11 117 395, 8 385 459,
13 850 051, 5 647 603, 8 380 259, 5 648 323, 11 112 915, 5 643 123, 8 375 779}
```

```
chi = listdim17[[188]]
```

```
 $(-11 + x)^6 (-9 + x)^6 (-8 + x) (5 + x)^{32} (59 - 16 x + x^2)^2$ 
```

```

CoefficientList[feasibleinterlacingpolylist[chi], x]
{{-21483, 15725, -4398, 594, -39, 1}, {-21627, 15741, -4398, 594, -39, 1},
{-21771, 15757, -4398, 594, -39, 1}, {-20979, 15597, -4390, 594, -39, 1}}

A = {{-21483, 15725, -4398, 594, -39, 1}, {-21627, 15741, -4398, 594, -39, 1},
{-21771, 15757, -4398, 594, -39, 1}, {-20979, 15597, -4390, 594, -39, 1}};

A // MatrixForm

$$\begin{pmatrix} -21483 & 15725 & -4398 & 594 & -39 & 1 \\ -21627 & 15741 & -4398 & 594 & -39 & 1 \\ -21771 & 15757 & -4398 & 594 & -39 & 1 \\ -20979 & 15597 & -4390 & 594 & -39 & 1 \end{pmatrix}$$


g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
{-1056171, 770701, -215470, 29106, -1911, 49}

Array[c, 6].Transpose[A]
{-21483 c[1] + 15725 c[2] - 4398 c[3] + 594 c[4] - 39 c[5] + c[6],
-21627 c[1] + 15741 c[2] - 4398 c[3] + 594 c[4] - 39 c[5] + c[6],
-21771 c[1] + 15757 c[2] - 4398 c[3] + 594 c[4] - 39 c[5] + c[6],
-20979 c[1] + 15597 c[2] - 4390 c[3] + 594 c[4] - 39 c[5] + c[6]}

Array[c, 6].g
-1056171 c[1] + 770701 c[2] - 215470 c[3] + 29106 c[4] - 1911 c[5] + 49 c[6]

cert = Flatten[Array[c, 6] /. FindInstance[
-1056171 c[1] + 770701 c[2] - 215470 c[3] + 29106 c[4] - 1911 c[5] + 49 c[6] < 0 &&
-21483 c[1] + 15725 c[2] - 4398 c[3] + 594 c[4] - 39 c[5] + c[6] ≥ 0 &&
-21627 c[1] + 15741 c[2] - 4398 c[3] + 594 c[4] - 39 c[5] + c[6] ≥ 0 &&
-21771 c[1] + 15757 c[2] - 4398 c[3] + 594 c[4] - 39 c[5] + c[6] ≥ 0 &&
-20979 c[1] + 15597 c[2] - 4390 c[3] + 594 c[4] - 39 c[5] + c[6] ≥ 0,
Array[c, 6], Integers]]
{-3086, -27768, -249920, 0, 0, -728766126}

GCD[-3086, -27768, -249920, 0, 0, -728766126]
2

cert = cert / 2
{-1543, -13884, -124960, 0, 0, -364383063}

Reverse[cert]
{-364383063, 0, 0, -124960, -13884, -1543}

cert.g
-379718

{-1543, -13884, -124960, 0, 0, -364383063}.gpart[listdim17[[188]]]
-379718

```

```
cert.Transpose[A]
```

```
{13 386, 13 434, 13 482, 13 186}
```

```
chi = listdim17[[189]]
```

```
 $(-11 + x)^4 (-9 + x)^{10} (5 + x)^{32} (-500 + 209 x - 26 x^2 + x^3)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{ {-23 121, 17 257, -4854, 646, -41, 1}, {-23 265, 17 273, -4854, 646, -41, 1},
  {-22 185, 17 081, -4846, 646, -41, 1}, {-22 329, 17 097, -4846, 646, -41, 1},
  {-22 473, 17 113, -4846, 646, -41, 1}, {-21 393, 16 921, -4838, 646, -41, 1},
  {-21 537, 16 937, -4838, 646, -41, 1}, {-21 681, 16 953, -4838, 646, -41, 1},
  {-20 457, 16 745, -4830, 646, -41, 1}, {-20 601, 16 761, -4830, 646, -41, 1},
  {-20 745, 16 777, -4830, 646, -41, 1}, {-20 889, 16 793, -4830, 646, -41, 1},
  {-19 665, 16 585, -4822, 646, -41, 1}, {-19 809, 16 601, -4822, 646, -41, 1},
  {-19 953, 16 617, -4822, 646, -41, 1}, {-20 097, 16 633, -4822, 646, -41, 1},
  {-19 017, 16 441, -4814, 646, -41, 1}, {-19 161, 16 457, -4814, 646, -41, 1},
  {-19 305, 16 473, -4814, 646, -41, 1}, {-18 369, 16 297, -4806, 646, -41, 1},
  {-18 513, 16 313, -4806, 646, -41, 1}, {-17 577, 16 137, -4798, 646, -41, 1},
  {-17 721, 16 153, -4798, 646, -41, 1}, {-16 929, 15 993, -4790, 646, -41, 1}}
```

```
A = { {-23 121, 17 257, -4854, 646, -41, 1}, {-23 265, 17 273, -4854, 646, -41, 1},
  {-22 185, 17 081, -4846, 646, -41, 1}, {-22 329, 17 097, -4846, 646, -41, 1},
  {-22 473, 17 113, -4846, 646, -41, 1}, {-21 393, 16 921, -4838, 646, -41, 1},
  {-21 537, 16 937, -4838, 646, -41, 1}, {-21 681, 16 953, -4838, 646, -41, 1},
  {-20 457, 16 745, -4830, 646, -41, 1}, {-20 601, 16 761, -4830, 646, -41, 1},
  {-20 745, 16 777, -4830, 646, -41, 1}, {-20 889, 16 793, -4830, 646, -41, 1},
  {-19 665, 16 585, -4822, 646, -41, 1}, {-19 809, 16 601, -4822, 646, -41, 1},
  {-19 953, 16 617, -4822, 646, -41, 1}, {-20 097, 16 633, -4822, 646, -41, 1},
  {-19 017, 16 441, -4814, 646, -41, 1}, {-19 161, 16 457, -4814, 646, -41, 1},
  {-19 305, 16 473, -4814, 646, -41, 1}, {-18 369, 16 297, -4806, 646, -41, 1},
  {-18 513, 16 313, -4806, 646, -41, 1}, {-17 577, 16 137, -4798, 646, -41, 1},
  {-17 721, 16 153, -4798, 646, -41, 1}, {-16 929, 15 993, -4790, 646, -41, 1}};
```

A // MatrixForm

$$\begin{pmatrix} -23121 & 17257 & -4854 & 646 & -41 & 1 \\ -23265 & 17273 & -4854 & 646 & -41 & 1 \\ -22185 & 17081 & -4846 & 646 & -41 & 1 \\ -22329 & 17097 & -4846 & 646 & -41 & 1 \\ -22473 & 17113 & -4846 & 646 & -41 & 1 \\ -21393 & 16921 & -4838 & 646 & -41 & 1 \\ -21537 & 16937 & -4838 & 646 & -41 & 1 \\ -21681 & 16953 & -4838 & 646 & -41 & 1 \\ -20457 & 16745 & -4830 & 646 & -41 & 1 \\ -20601 & 16761 & -4830 & 646 & -41 & 1 \\ -20745 & 16777 & -4830 & 646 & -41 & 1 \\ -20889 & 16793 & -4830 & 646 & -41 & 1 \\ -19665 & 16585 & -4822 & 646 & -41 & 1 \\ -19809 & 16601 & -4822 & 646 & -41 & 1 \\ -19953 & 16617 & -4822 & 646 & -41 & 1 \\ -20097 & 16633 & -4822 & 646 & -41 & 1 \\ -19017 & 16441 & -4814 & 646 & -41 & 1 \\ -19161 & 16457 & -4814 & 646 & -41 & 1 \\ -19305 & 16473 & -4814 & 646 & -41 & 1 \\ -18369 & 16297 & -4806 & 646 & -41 & 1 \\ -18513 & 16313 & -4806 & 646 & -41 & 1 \\ -17577 & 16137 & -4798 & 646 & -41 & 1 \\ -17721 & 16153 & -4798 & 646 & -41 & 1 \\ -16929 & 15993 & -4790 & 646 & -41 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-1115545, 841593, -237630, 31654, -2009, 49}

Array[c, 6].Transpose[A]

```
{ -23 121 c[1] + 17 257 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
  -23 265 c[1] + 17 273 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6],
  -22 185 c[1] + 17 081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
  -22 329 c[1] + 17 097 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
  -22 473 c[1] + 17 113 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6],
  -21 393 c[1] + 16 921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
  -21 537 c[1] + 16 937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
  -21 681 c[1] + 16 953 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6],
  -20 457 c[1] + 16 745 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
  -20 601 c[1] + 16 761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
  -20 745 c[1] + 16 777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
  -20 889 c[1] + 16 793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6],
  -19 665 c[1] + 16 585 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6],
  -19 809 c[1] + 16 601 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6],
  -19 953 c[1] + 16 617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6],
  -20 097 c[1] + 16 633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6],
  -19 017 c[1] + 16 441 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6],
  -19 161 c[1] + 16 457 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6],
  -19 305 c[1] + 16 473 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6],
  -18 369 c[1] + 16 297 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6],
  -18 513 c[1] + 16 313 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6],
  -17 577 c[1] + 16 137 c[2] - 4798 c[3] + 646 c[4] - 41 c[5] + c[6],
  -17 721 c[1] + 16 153 c[2] - 4798 c[3] + 646 c[4] - 41 c[5] + c[6],
  -16 929 c[1] + 15 993 c[2] - 4790 c[3] + 646 c[4] - 41 c[5] + c[6] }
```

Array[c, 6].g

```
-1 115 545 c[1] + 841 593 c[2] - 237 630 c[3] + 31 654 c[4] - 2009 c[5] + 49 c[6]
```



```

cert = Flatten[Array[c, 6] /. FindInstance[
  -1115545 c[1] + 841593 c[2] - 237630 c[3] + 31654 c[4] - 2009 c[5] + 49 c[6] < 0 &&
  -23121 c[1] + 17257 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -23265 c[1] + 17273 c[2] - 4854 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -22185 c[1] + 17081 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -22329 c[1] + 17097 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -22473 c[1] + 17113 c[2] - 4846 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -21393 c[1] + 16921 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -21537 c[1] + 16937 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -21681 c[1] + 16953 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -20457 c[1] + 16745 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -20601 c[1] + 16761 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -20745 c[1] + 16777 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -20889 c[1] + 16793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -19665 c[1] + 16585 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -19809 c[1] + 16601 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -19953 c[1] + 16617 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -20097 c[1] + 16633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -19017 c[1] + 16441 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -19161 c[1] + 16457 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -19305 c[1] + 16473 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -18369 c[1] + 16297 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -18513 c[1] + 16313 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -17577 c[1] + 16137 c[2] - 4798 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -17721 c[1] + 16153 c[2] - 4798 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -16929 c[1] + 15993 c[2] - 4790 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0,
  Array[c, 6], Integers]]
{1989, 17908, 161166, 0, 0, 519279994}

GCD[1989, 17908, 161166, 0, 0, 519279994]
1

Reverse[cert]
{519279994, 0, 0, 161166, 17908, 1989}

cert.g
-728435

{1989, 17908, 161166, 0, 0, 519279994}.gpart[listdim17[[189]]]
-728435

cert.Transpose[A]
{30917, 31029, 30141, 30253, 30365, 29477, 29589,
 29701, 28701, 28813, 28925, 29037, 28037, 28149, 28261,
 28373, 27485, 27597, 27709, 26933, 27045, 26269, 26381, 25717}

```

```
chi = listdim17[[190]]
```

$$(-11 + x)^5 (-9 + x)^9 (5 + x)^{32} (-412 + 179x - 24x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-18467, 14389, -4214, 586, -39, 1}, {-18643, 14405, -4214, 586, -39, 1},
{-18611, 14405, -4214, 586, -39, 1}, {-18579, 14405, -4214, 586, -39, 1},
{-18787, 14421, -4214, 586, -39, 1}, {-18755, 14421, -4214, 586, -39, 1},
{-17707, 14229, -4206, 586, -39, 1}, {-17883, 14245, -4206, 586, -39, 1},
{-17851, 14245, -4206, 586, -39, 1}, {-17819, 14245, -4206, 586, -39, 1},
{-18027, 14261, -4206, 586, -39, 1}, {-17995, 14261, -4206, 586, -39, 1},
{-17963, 14261, -4206, 586, -39, 1}, {-18171, 14277, -4206, 586, -39, 1},
{-18139, 14277, -4206, 586, -39, 1}, {-18315, 14293, -4206, 586, -39, 1},
{-17091, 14085, -4198, 586, -39, 1}, {-17059, 14085, -4198, 586, -39, 1},
{-17235, 14101, -4198, 586, -39, 1}, {-17203, 14101, -4198, 586, -39, 1},
{-17379, 14117, -4198, 586, -39, 1}, {-17347, 14117, -4198, 586, -39, 1},
{-17523, 14133, -4198, 586, -39, 1}, {-16299, 13925, -4190, 586, -39, 1},
{-16443, 13941, -4190, 586, -39, 1}, {-16587, 13957, -4190, 586, -39, 1},
{-16555, 13957, -4190, 586, -39, 1}, {-16731, 13973, -4190, 586, -39, 1},
{-15795, 13797, -4182, 586, -39, 1}, {-15939, 13813, -4182, 586, -39, 1}}
```

```
A = {{-18467, 14389, -4214, 586, -39, 1}, {-18643, 14405, -4214, 586, -39, 1},
{-18611, 14405, -4214, 586, -39, 1}, {-18579, 14405, -4214, 586, -39, 1},
{-18787, 14421, -4214, 586, -39, 1}, {-18755, 14421, -4214, 586, -39, 1},
{-17707, 14229, -4206, 586, -39, 1}, {-17883, 14245, -4206, 586, -39, 1},
{-17851, 14245, -4206, 586, -39, 1}, {-17819, 14245, -4206, 586, -39, 1},
{-18027, 14261, -4206, 586, -39, 1}, {-17995, 14261, -4206, 586, -39, 1},
{-17963, 14261, -4206, 586, -39, 1}, {-18171, 14277, -4206, 586, -39, 1},
{-18139, 14277, -4206, 586, -39, 1}, {-18315, 14293, -4206, 586, -39, 1},
{-17091, 14085, -4198, 586, -39, 1}, {-17059, 14085, -4198, 586, -39, 1},
{-17235, 14101, -4198, 586, -39, 1}, {-17203, 14101, -4198, 586, -39, 1},
{-17379, 14117, -4198, 586, -39, 1}, {-17347, 14117, -4198, 586, -39, 1},
{-17523, 14133, -4198, 586, -39, 1}, {-16299, 13925, -4190, 586, -39, 1},
{-16443, 13941, -4190, 586, -39, 1}, {-16587, 13957, -4190, 586, -39, 1},
{-16555, 13957, -4190, 586, -39, 1}, {-16731, 13973, -4190, 586, -39, 1},
{-15795, 13797, -4182, 586, -39, 1}, {-15939, 13813, -4182, 586, -39, 1}};
```

A // MatrixForm

$$\begin{pmatrix} -18467 & 14389 & -4214 & 586 & -39 & 1 \\ -18643 & 14405 & -4214 & 586 & -39 & 1 \\ -18611 & 14405 & -4214 & 586 & -39 & 1 \\ -18579 & 14405 & -4214 & 586 & -39 & 1 \\ -18787 & 14421 & -4214 & 586 & -39 & 1 \\ -18755 & 14421 & -4214 & 586 & -39 & 1 \\ -17707 & 14229 & -4206 & 586 & -39 & 1 \\ -17883 & 14245 & -4206 & 586 & -39 & 1 \\ -17851 & 14245 & -4206 & 586 & -39 & 1 \\ -17819 & 14245 & -4206 & 586 & -39 & 1 \\ -18027 & 14261 & -4206 & 586 & -39 & 1 \\ -17995 & 14261 & -4206 & 586 & -39 & 1 \\ -17963 & 14261 & -4206 & 586 & -39 & 1 \\ -18171 & 14277 & -4206 & 586 & -39 & 1 \\ -18139 & 14277 & -4206 & 586 & -39 & 1 \\ -18315 & 14293 & -4206 & 586 & -39 & 1 \\ -17091 & 14085 & -4198 & 586 & -39 & 1 \\ -17059 & 14085 & -4198 & 586 & -39 & 1 \\ -17235 & 14101 & -4198 & 586 & -39 & 1 \\ -17203 & 14101 & -4198 & 586 & -39 & 1 \\ -17379 & 14117 & -4198 & 586 & -39 & 1 \\ -17347 & 14117 & -4198 & 586 & -39 & 1 \\ -17523 & 14133 & -4198 & 586 & -39 & 1 \\ -16299 & 13925 & -4190 & 586 & -39 & 1 \\ -16443 & 13941 & -4190 & 586 & -39 & 1 \\ -16587 & 13957 & -4190 & 586 & -39 & 1 \\ -16555 & 13957 & -4190 & 586 & -39 & 1 \\ -16731 & 13973 & -4190 & 586 & -39 & 1 \\ -15795 & 13797 & -4182 & 586 & -39 & 1 \\ -15939 & 13813 & -4182 & 586 & -39 & 1 \end{pmatrix}$$

g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]

{-919971, 708421, -206662, 28714, -1911, 49}

Array[c, 6].Transpose[A]

```
{ -18 467 c[1] + 14 389 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -18 643 c[1] + 14 405 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -18 611 c[1] + 14 405 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -18 579 c[1] + 14 405 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -18 787 c[1] + 14 421 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -18 755 c[1] + 14 421 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 707 c[1] + 14 229 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 883 c[1] + 14 245 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 851 c[1] + 14 245 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 819 c[1] + 14 245 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -18 027 c[1] + 14 261 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 995 c[1] + 14 261 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 963 c[1] + 14 261 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -18 171 c[1] + 14 277 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -18 139 c[1] + 14 277 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -18 315 c[1] + 14 293 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 091 c[1] + 14 085 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 059 c[1] + 14 085 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 235 c[1] + 14 101 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 203 c[1] + 14 101 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 379 c[1] + 14 117 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 347 c[1] + 14 117 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -17 523 c[1] + 14 133 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -16 299 c[1] + 13 925 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -16 443 c[1] + 13 941 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -16 587 c[1] + 13 957 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -16 555 c[1] + 13 957 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -16 731 c[1] + 13 973 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -15 795 c[1] + 13 797 c[2] - 4182 c[3] + 586 c[4] - 39 c[5] + c[6] ,
  -15 939 c[1] + 13 813 c[2] - 4182 c[3] + 586 c[4] - 39 c[5] + c[6] }
```

Array[c, 6].g

```
-919 971 c[1] + 708 421 c[2] - 206 662 c[3] + 28 714 c[4] - 1911 c[5] + 49 c[6]
```

```

cert = Flatten[Array[c, 6] /. FindInstance[
  -919 971 c[1] + 708 421 c[2] - 206 662 c[3] + 28 714 c[4] - 1911 c[5] + 49 c[6] < 0 &&
  -18 467 c[1] + 14 389 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -18 643 c[1] + 14 405 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -18 611 c[1] + 14 405 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -18 579 c[1] + 14 405 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -18 787 c[1] + 14 421 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -18 755 c[1] + 14 421 c[2] - 4214 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 707 c[1] + 14 229 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 883 c[1] + 14 245 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 851 c[1] + 14 245 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 819 c[1] + 14 245 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -18 027 c[1] + 14 261 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 995 c[1] + 14 261 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 963 c[1] + 14 261 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -18 171 c[1] + 14 277 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -18 139 c[1] + 14 277 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -18 315 c[1] + 14 293 c[2] - 4206 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 091 c[1] + 14 085 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 059 c[1] + 14 085 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 235 c[1] + 14 101 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 203 c[1] + 14 101 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 379 c[1] + 14 117 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 347 c[1] + 14 117 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -17 523 c[1] + 14 133 c[2] - 4198 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -16 299 c[1] + 13 925 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -16 443 c[1] + 13 941 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -16 587 c[1] + 13 957 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -16 555 c[1] + 13 957 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -16 731 c[1] + 13 973 c[2] - 4190 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -15 795 c[1] + 13 797 c[2] - 4182 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0 &&
  -15 939 c[1] + 13 813 c[2] - 4182 c[3] + 586 c[4] - 39 c[5] + c[6] ≥ 0,
  Array[c, 6], Integers]]
{-145, -1591, -4803, 0, 0, 0}

GCD[-145, -1591, -4803, 0, 0, 0]
1

Reverse[cert]
{0, 0, 0, -4803, -1591, -145}

cert.g
-1 104 430

{-145, -1591, -4803, 0, 0, 0}.gpart[listdim17[[190]]]
-1 104 430

```

```
cert.Transpose[A]
```

```
{24 658, 24 722, 20 082, 15 442, 20 146, 15 506, 130 594, 130 658, 126 018, 121 378,
 126 082, 121 442, 116 802, 121 506, 116 866, 116 930, 231 954, 227 314, 227 378, 222 738,
 222 802, 218 162, 218 226, 333 250, 328 674, 324 098, 319 458, 319 522, 425 394, 420 818}
```

```
chi = listdim17[[191]]
```

```
 $(-11 + x)^6 (-9 + x)^8 (-5 + x) (5 + x)^{32} (68 - 17 x + x^2)$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-15 785, 12 237, -3666, 530, -37, 1}, {-15 169, 12 093, -3658, 530, -37, 1},
 {-15 345, 12 109, -3658, 530, -37, 1}, {-15 313, 12 109, -3658, 530, -37, 1},
 {-14 697, 11 965, -3650, 530, -37, 1}, {-14 841, 11 981, -3650, 530, -37, 1}}
```

```
A = {{-15 785, 12 237, -3666, 530, -37, 1}, {-15 169, 12 093, -3658, 530, -37, 1},
      {-15 345, 12 109, -3658, 530, -37, 1}, {-15 313, 12 109, -3658, 530, -37, 1},
      {-14 697, 11 965, -3650, 530, -37, 1}, {-14 841, 11 981, -3650, 530, -37, 1}};
```

```
A // MatrixForm
```

$$\begin{pmatrix} -15\,785 & 12\,237 & -3666 & 530 & -37 & 1 \\ -15\,169 & 12\,093 & -3658 & 530 & -37 & 1 \\ -15\,345 & 12\,109 & -3658 & 530 & -37 & 1 \\ -15\,313 & 12\,109 & -3658 & 530 & -37 & 1 \\ -14\,697 & 11\,965 & -3650 & 530 & -37 & 1 \\ -14\,841 & 11\,981 & -3650 & 530 & -37 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-759 985, 596 221, -179 418, 25 970, -1813, 49}
```

```
Array[c, 6].Transpose[A]
```

```
{-15 785 c[1] + 12 237 c[2] - 3666 c[3] + 530 c[4] - 37 c[5] + c[6],
 -15 169 c[1] + 12 093 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6],
 -15 345 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6],
 -15 313 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6],
 -14 697 c[1] + 11 965 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6],
 -14 841 c[1] + 11 981 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6]}
```

```
Array[c, 6].g
```

```
-759 985 c[1] + 596 221 c[2] - 179 418 c[3] + 25 970 c[4] - 1813 c[5] + 49 c[6]
```

```

cert = Flatten[Array[c, 6] /. FindInstance[
  -759 985 c[1] + 596 221 c[2] - 179 418 c[3] + 25 970 c[4] - 1813 c[5] + 49 c[6] < 0 &&
  -15 785 c[1] + 12 237 c[2] - 3666 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -15 169 c[1] + 12 093 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -15 345 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -15 313 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -14 697 c[1] + 11 965 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -14 841 c[1] + 11 981 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0,
  Array[c, 6], Integers]]
{-1192, -10 724, -101 292, 0, 0, -258 901 820}

GCD[-1192, -10 724, -101 292, 0, 0, -258 901 820]
4

cert = cert / 4
{-298, -2681, -25 323, 0, 0, -64 725 455}

Reverse[cert]
{-64 725 455, 0, 0, -25 323, -2681, -298}

cert.g
-138 252

{-298, -2681, -25 323, 0, 0, -64 725 455}.gpart[listdim17[[191]]]
-138 252

cert.Transpose[A]
{5196, 5108, 14 660, 5124, 5036, 5052}

```

```

chi = listdim17[[192]]
(-11 + x)6 (-9 + x)8 (-7 + x) (5 + x)32 (48 - 15 x + x2)

```

```

CoefficientList[feasibleinterlacingpolylist[chi], x]
{{-15 785, 12 237, -3666, 530, -37, 1}, {-15 169, 12 093, -3658, 530, -37, 1},
{-15 345, 12 109, -3658, 530, -37, 1}, {-15 313, 12 109, -3658, 530, -37, 1},
{-15 281, 12 109, -3658, 530, -37, 1}, {-14 553, 11 949, -3650, 530, -37, 1},
{-14 697, 11 965, -3650, 530, -37, 1}, {-14 665, 11 965, -3650, 530, -37, 1},
{-14 841, 11 981, -3650, 530, -37, 1}, {-14 985, 11 997, -3650, 530, -37, 1},
{-14 049, 11 821, -3642, 530, -37, 1}, {-14 193, 11 837, -3642, 530, -37, 1}}

```

```
A = {{-15 785, 12 237, -3666, 530, -37, 1}, {-15 169, 12 093, -3658, 530, -37, 1},
      {-15 345, 12 109, -3658, 530, -37, 1}, {-15 313, 12 109, -3658, 530, -37, 1},
      {-15 281, 12 109, -3658, 530, -37, 1}, {-14 553, 11 949, -3650, 530, -37, 1},
      {-14 697, 11 965, -3650, 530, -37, 1}, {-14 665, 11 965, -3650, 530, -37, 1},
      {-14 841, 11 981, -3650, 530, -37, 1}, {-14 985, 11 997, -3650, 530, -37, 1},
      {-14 049, 11 821, -3642, 530, -37, 1}, {-14 193, 11 837, -3642, 530, -37, 1}};
```

```
A // MatrixForm
```

$$\begin{pmatrix} -15\,785 & 12\,237 & -3666 & 530 & -37 & 1 \\ -15\,169 & 12\,093 & -3658 & 530 & -37 & 1 \\ -15\,345 & 12\,109 & -3658 & 530 & -37 & 1 \\ -15\,313 & 12\,109 & -3658 & 530 & -37 & 1 \\ -15\,281 & 12\,109 & -3658 & 530 & -37 & 1 \\ -14\,553 & 11\,949 & -3650 & 530 & -37 & 1 \\ -14\,697 & 11\,965 & -3650 & 530 & -37 & 1 \\ -14\,665 & 11\,965 & -3650 & 530 & -37 & 1 \\ -14\,841 & 11\,981 & -3650 & 530 & -37 & 1 \\ -14\,985 & 11\,997 & -3650 & 530 & -37 & 1 \\ -14\,049 & 11\,821 & -3642 & 530 & -37 & 1 \\ -14\,193 & 11\,837 & -3642 & 530 & -37 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-750 153, 593 373, -179 234, 25 970, -1813, 49}
```

```
Array[c, 6].Transpose[A]
```

```
{-15 785 c[1] + 12 237 c[2] - 3666 c[3] + 530 c[4] - 37 c[5] + c[6],
 -15 169 c[1] + 12 093 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6],
 -15 345 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6],
 -15 313 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6],
 -15 281 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6],
 -14 553 c[1] + 11 949 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6],
 -14 697 c[1] + 11 965 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6],
 -14 665 c[1] + 11 965 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6],
 -14 841 c[1] + 11 981 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6],
 -14 985 c[1] + 11 997 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6],
 -14 049 c[1] + 11 821 c[2] - 3642 c[3] + 530 c[4] - 37 c[5] + c[6],
 -14 193 c[1] + 11 837 c[2] - 3642 c[3] + 530 c[4] - 37 c[5] + c[6]}
```

```
Array[c, 6].g
```

```
-750 153 c[1] + 593 373 c[2] - 179 234 c[3] + 25 970 c[4] - 1813 c[5] + 49 c[6]
```



```

cert = Flatten[Array[c, 6] /. FindInstance[
  -750 153 c[1] + 593 373 c[2] - 179 234 c[3] + 25 970 c[4] - 1813 c[5] + 49 c[6] < 0 &&
  -15 785 c[1] + 12 237 c[2] - 3666 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -15 169 c[1] + 12 093 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -15 345 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -15 313 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -15 281 c[1] + 12 109 c[2] - 3658 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -14 553 c[1] + 11 949 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -14 697 c[1] + 11 965 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -14 665 c[1] + 11 965 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -14 841 c[1] + 11 981 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -14 985 c[1] + 11 997 c[2] - 3650 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -14 049 c[1] + 11 821 c[2] - 3642 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0 &&
  -14 193 c[1] + 11 837 c[2] - 3642 c[3] + 530 c[4] - 37 c[5] + c[6] ≥ 0,
  Array[c, 6], Integers]]
{-8077, -104 988, -1 171 021, 0, 0, -3 135 702 600}

GCD[-8077, -104 988, -1 171 021, 0, 0, -3 135 702 600]
1

Reverse[cert]
{-3 135 702 600, 0, 0, -1 171 021, -104 988, -8077}

cert.g
-708 229

{-8077, -104 988, -1 171 021, 0, 0, -3 135 702 600}.gpart[listdim17[[192]]]
-708 229

cert.Transpose[A]
{17 675, 792 347, 534 091, 275 627, 17 163, 1 567 019,
 1 050 299, 791 835, 533 579, 16 859, 1 566 507, 1 049 787}

```

```
chi = listdim17[[193]]
```

$$(-11 + x)^4 (-9 + x)^{10} (5 + x)^{32} (-488 + 209 x - 26 x^2 + x^3)$$

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-21857, 16969, -4838, 646, -41, 1}, {-22033, 16985, -4838, 646, -41, 1},
{-22209, 17001, -4838, 646, -41, 1}, {-20889, 16793, -4830, 646, -41, 1},
{-21065, 16809, -4830, 646, -41, 1}, {-21241, 16825, -4830, 646, -41, 1},
{-20097, 16633, -4822, 646, -41, 1}, {-20273, 16649, -4822, 646, -41, 1},
{-20449, 16665, -4822, 646, -41, 1}, {-19305, 16473, -4814, 646, -41, 1},
{-19481, 16489, -4814, 646, -41, 1}, {-18513, 16313, -4806, 646, -41, 1},
{-18689, 16329, -4806, 646, -41, 1}, {-17721, 16153, -4798, 646, -41, 1}}
```

```
A = {{-21857, 16969, -4838, 646, -41, 1}, {-22033, 16985, -4838, 646, -41, 1},
{-22209, 17001, -4838, 646, -41, 1}, {-20889, 16793, -4830, 646, -41, 1},
{-21065, 16809, -4830, 646, -41, 1}, {-21241, 16825, -4830, 646, -41, 1},
{-20097, 16633, -4822, 646, -41, 1}, {-20273, 16649, -4822, 646, -41, 1},
{-20449, 16665, -4822, 646, -41, 1}, {-19305, 16473, -4814, 646, -41, 1},
{-19481, 16489, -4814, 646, -41, 1}, {-18513, 16313, -4806, 646, -41, 1},
{-18689, 16329, -4806, 646, -41, 1}, {-17721, 16153, -4798, 646, -41, 1}};
```

```
A // MatrixForm
```

$$\begin{pmatrix} -21857 & 16969 & -4838 & 646 & -41 & 1 \\ -22033 & 16985 & -4838 & 646 & -41 & 1 \\ -22209 & 17001 & -4838 & 646 & -41 & 1 \\ -20889 & 16793 & -4830 & 646 & -41 & 1 \\ -21065 & 16809 & -4830 & 646 & -41 & 1 \\ -21241 & 16825 & -4830 & 646 & -41 & 1 \\ -20097 & 16633 & -4822 & 646 & -41 & 1 \\ -20273 & 16649 & -4822 & 646 & -41 & 1 \\ -20449 & 16665 & -4822 & 646 & -41 & 1 \\ -19305 & 16473 & -4814 & 646 & -41 & 1 \\ -19481 & 16489 & -4814 & 646 & -41 & 1 \\ -18513 & 16313 & -4806 & 646 & -41 & 1 \\ -18689 & 16329 & -4806 & 646 & -41 & 1 \\ -17721 & 16153 & -4798 & 646 & -41 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-1086289, 833001, -237078, 31654, -2009, 49}
```

Array[c, 6].Transpose[A]

```
{ -21 857 c[1] + 16 969 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -22 033 c[1] + 16 985 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -22 209 c[1] + 17 001 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -20 889 c[1] + 16 793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -21 065 c[1] + 16 809 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -21 241 c[1] + 16 825 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -20 097 c[1] + 16 633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -20 273 c[1] + 16 649 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -20 449 c[1] + 16 665 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -19 305 c[1] + 16 473 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -19 481 c[1] + 16 489 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -18 513 c[1] + 16 313 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -18 689 c[1] + 16 329 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] ,
  -17 721 c[1] + 16 153 c[2] - 4798 c[3] + 646 c[4] - 41 c[5] + c[6] }
```

Array[c, 6].g

```
-1 086 289 c[1] + 833 001 c[2] - 237 078 c[3] + 31 654 c[4] - 2009 c[5] + 49 c[6]
```

cert = Flatten[Array[c, 6] /. FindInstance[

```
-1 086 289 c[1] + 833 001 c[2] - 237 078 c[3] + 31 654 c[4] - 2009 c[5] + 49 c[6] < 0 &&
  -21 857 c[1] + 16 969 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -22 033 c[1] + 16 985 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -22 209 c[1] + 17 001 c[2] - 4838 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -20 889 c[1] + 16 793 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -21 065 c[1] + 16 809 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -21 241 c[1] + 16 825 c[2] - 4830 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -20 097 c[1] + 16 633 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -20 273 c[1] + 16 649 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -20 449 c[1] + 16 665 c[2] - 4822 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -19 305 c[1] + 16 473 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -19 481 c[1] + 16 489 c[2] - 4814 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -18 513 c[1] + 16 313 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -18 689 c[1] + 16 329 c[2] - 4806 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0 &&
  -17 721 c[1] + 16 153 c[2] - 4798 c[3] + 646 c[4] - 41 c[5] + c[6] ≥ 0,
```

Array[c, 6], Integers]]

```
{-2492, -27 407, -84 876, 0, 0, 0}
```

GCD[-2492, -27 407, -84 876, 0, 0, 0]

1

Reverse[cert]

```
{0, 0, 0, -84 876, -27 407, -2492}
```

cert.g

```
-793 891
```

```
{-2492, -27407, -84876, 0, 0, 0}.gpart[listdim17[[193]]]
-793891
```

```
cert.Transpose[A]
```

```
{28349, 28429, 28509, 1760717, 1760797, 1760877, 3493165,
 3493245, 3493325, 5225613, 5225693, 6958061, 6958141, 8690509}
```

```
chi = listdim17[[194]]
```

```
 $(-11 + x)^6 (-9 + x)^{10} (-4 + x) (5 + x)^{32}$ 
```

```
CoefficientList[feasibleinterlacingpolylist[chi], x]
```

```
{{-153, 107, -19, 1}, {-161, 107, -19, 1},
 {-169, 107, -19, 1}, {-177, 107, -19, 1}, {-185, 107, -19, 1}}
```

```
A = {{-153, 107, -19, 1}, {-161, 107, -19, 1},
      {-169, 107, -19, 1}, {-177, 107, -19, 1}, {-185, 107, -19, 1}};
```

```
A // MatrixForm
```

$$\begin{pmatrix} -153 & 107 & -19 & 1 \\ -161 & 107 & -19 & 1 \\ -169 & 107 & -19 & 1 \\ -177 & 107 & -19 & 1 \\ -185 & 107 & -19 & 1 \end{pmatrix}$$

```
g = CoefficientList[D[chi, x] / mu[chi] // Factor, x]
```

```
{-8897, 5243, -931, 49}
```

```
Array[c, 4].Transpose[A]
```

```
{-153 c[1] + 107 c[2] - 19 c[3] + c[4],
 -161 c[1] + 107 c[2] - 19 c[3] + c[4], -169 c[1] + 107 c[2] - 19 c[3] + c[4],
 -177 c[1] + 107 c[2] - 19 c[3] + c[4], -185 c[1] + 107 c[2] - 19 c[3] + c[4]}
```

```
Array[c, 4].g
```

```
-8897 c[1] + 5243 c[2] - 931 c[3] + 49 c[4]
```

```
cert =
```

```
Flatten[Array[c, 4] /. FindInstance[-8897 c[1] + 5243 c[2] - 931 c[3] + 49 c[4] < 0 &&
  -153 c[1] + 107 c[2] - 19 c[3] + c[4] ≥ 0 &&
  -161 c[1] + 107 c[2] - 19 c[3] + c[4] ≥ 0 && -169 c[1] + 107 c[2] - 19 c[3] + c[4] ≥
  0 && -177 c[1] + 107 c[2] - 19 c[3] + c[4] ≥ 0 &&
  -185 c[1] + 107 c[2] - 19 c[3] + c[4] ≥ 0, Array[c, 4], Integers]]
```

```
{c[1], c[2], c[3], c[4]}
```

```
GCD[]
```

Reverse[cert]

cert.g

cert.Transpose[A]