Global optimal solution found.	
Objective value:	551595.0
Objective bound:	551595.0
Infeasibilities:	0.000000
Extended solver steps:	0
Total solver iterations:	190
Elapsed runtime seconds:	0.31
Model Class:	PILP

0

Total variables: Nonlinear variables: Integer variables:	984 0 984
Total constraints: Nonlinear constraints:	1052 0
Total nonzeros:	3950

Nonlinear nonzeros:

Variable	Value	Reduced Cost
Y11	0.000000	172185.0
Y21	0.000000	196787.5
Y31	0.000000	57214.50
Y41	0.000000	121580.5
Y51	0.000000	206454.5
Y61	0.000000	193276.5
Y71	0.000000	110286.5
Y81	0.000000	114067.0
Y91	0.000000	130953.0
Y101	0.000000	42730.00
Y111	0.00000	63496.00
Y121	0.000000	51797.50
Y131	0.000000	179243.5
Y141	0.000000	92105.00
Y151	0.000000	112507.5
Y161	0.000000	15305.50
Y171	0.000000	87898.00
Y181 Y191	0.000000	27522.00 69289.50
Y201	0.000000	42726.50
Y211	0.000000	134008.0
Y221	0.000000	195935.0
Y231	0.000000	174947.0
Y241	0.000000	61038.00
Y251	0.000000	84162.00
Y261	0.000000	0.000000
Y271	0.000000	205786.5
Y281	0.000000	195358.0
Y291	0.000000	86758.50
Y301	0.000000	87993.00
Y311	0.000000	134913.0
Y321	0.000000	60016.50
Y331	0.000000	110287.0
Y341	0.000000	114067.0
Y351	0.000000	206454.5
Y361	0.000000	193276.5
Y371	0.000000	196787.5
Y381	0.00000	57214.50
Y391	0.000000	121580.5
Y401	0.000000	205077.0
Y411	0.000000	78475.50
Y421 Y431	0.000000	51797.50 179243.5
Y431 Y441	0.000000	92105.00
Y451	0.000000	112507.5
1431	0.00000	112307.5

Y461	0.000000	15305.50
Y471	0.000000	87898.00
Y481	0.000000	27522.00
Y491	0.000000	69289.50
Y501	0.000000	42726.50
Y12	1.000000	28713.50
Y22	1.000000	0.000000
Y32	0.000000	140198.5
Y42 Y52 Y62 Y72 Y82	0.000000 0.000000 0.000000 0.000000	98577.00 27956.00 77265.50 99599.50 110313.0
Y92	0.000000	66776.00
Y102	0.000000	170189.0
Y112	0.000000	327728.0
Y122	0.000000	145307.5
Y132	1.000000	18380.50
Y142	0.000000	105407.0
Y152	0.000000	97162.00
Y162	0.000000	208480.5
Y172 Y182 Y192 Y202 Y212	0.000000 0.000000 0.000000 0.000000	187938.5 174719.0 144737.5 170188.5 342660.0
Y222	0.00000	16062.50
Y232	0.000000	75726.00
Y242	0.000000	142955.0
Y252	0.000000	142527.5
Y262 Y272 Y282 Y292 Y302	0.000000 0.000000 1.000000 0.000000	196787.5 27633.50 8970.500 118795.0 108976.0
Y312	0.00000	190215.5
Y322	0.000000	155516.5
Y332	0.000000	99600.00
Y342	0.000000	110313.0
Y352	0.000000	27956.00
Y362	0.000000	77265.50
Y372	1.000000	0.000000
Y382	0.000000	140198.5
Y392	0.000000	98577.00
Y402	0.000000	24550.00
Y412	0.000000	268167.5
Y422	0.000000	145307.5
Y432	1.000000	18380.50
Y442 Y452 Y462 Y472 Y482	0.000000 0.000000 0.000000 0.000000	105407.0 97162.00 208480.5 187938.5 174719.0
Y492	0.000000	144737.5
Y502	0.000000	170188.5
Y13	0.000000	116817.0
Y23	0.000000	140198.5
Y33	1.000000	0.000000
Y43	0.000000	78818.50
Y53	0.000000	149245.5
Y63	0.000000	139443.0
Y73	0.000000	64748.00
Y83	0.000000	75790.50
Y93	0.000000	73885.00
Y103	0.000000	47274.00
Y113	0.000000	206888.5
Y123 Y133	1.000000	13263.00 122403.5

Y264       0.000000       114067.0         Y274       0.000000       131548.0         Y284       0.000000       104692.5         Y294       0.000000       31271.50         Y304       0.000000       52050.00         Y314       0.000000       66828.00	Y143 Y153 Y163 Y173 Y183 Y193 Y203 Y213 Y223 Y223 Y2253 Y2273 Y2283 Y2273 Y2283 Y2273 Y233 Y243 Y253 Y243 Y253 Y273 Y283 Y244 Y3403 Y3403 Y3413 Y3423 Y3423 Y343 Y343 Y343 Y343 Y343 Y	0.000000           0.000000 <t< th=""><th>34969.50 66333.00 68282.00 95865.50 35059.00 46607.00 47270.50 254128.5 138782.5 121091.0 31986.00 62200.00 57214.50 148577.0 139333.5 44539.00 33180.50 79704.50 47375.50 64749.50 75790.50 149245.5 139443.0 140198.5 0.0000000 78818.50 147863.0 153667.5 13263.00 122403.5 34969.50 66333.00 68282.00 95865.50 35059.00 46607.00 47270.50 81608.50 110313.0 75790.50 11767.50 132152.5 152025.0 18089.00 0.000000 70482.00 74493.00 218446.5 69670.00 98636.00 63955.50 19081.50 129066.5 77839.50 104714.5 45600.50 74494.50 211345.0 118013.5 53547.50 35586.00</th></t<>	34969.50 66333.00 68282.00 95865.50 35059.00 46607.00 47270.50 254128.5 138782.5 121091.0 31986.00 62200.00 57214.50 148577.0 139333.5 44539.00 33180.50 79704.50 47375.50 64749.50 75790.50 149245.5 139443.0 140198.5 0.0000000 78818.50 147863.0 153667.5 13263.00 122403.5 34969.50 66333.00 68282.00 95865.50 35059.00 46607.00 47270.50 81608.50 110313.0 75790.50 11767.50 132152.5 152025.0 18089.00 0.000000 70482.00 74493.00 218446.5 69670.00 98636.00 63955.50 19081.50 129066.5 77839.50 104714.5 45600.50 74494.50 211345.0 118013.5 53547.50 35586.00
	Y214 Y224 Y234 Y244 Y254 Y264 Y274 Y284 Y294 Y304	0.000000 0.000000 0.000000 0.000000 0.000000	211345.0 118013.5 137094.5 53547.50 35586.00 114067.0 131548.0 104692.5 31271.50 52050.00

Y505 Y16 Y26 Y36 Y46 Y56 Y66 Y76 Y86 Y90 Y106 Y116 Y126 Y136 Y146 Y156 Y146 Y156 Y166 Y176 Y186 Y196 Y206 Y216	0.000000 0.000000 0.000000 0.000000 1.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000	74699.00 52541.00 27956.00 149245.5 120686.5 0.000000 54660.50 119162.5 132152.5 76225.00 184825.5 278975.5 156497.5 33533.00 114506.0 116871.0 216683.5 208488.0 182188.5 161658.0 184824.0 296120.5
Y226 Y236 Y246 Y256 Y266 Y276 Y286 Y396 Y316 Y316 Y346 Y356 Y356 Y376 Y386 Y376 Y386 Y396 Y406 Y416 Y426 Y436 Y446 Y456	1.000000 0.000000 0.000000 0.000000 0.000000 1.000000 0.000000 0.000000 0.000000 0.000000 0.000000 1.000000 1.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000 0.000000	14387.50 58583.00 157600.5 161871.0 206454.5 671.5000 36880.50 135527.0 120993.0 192550.5 171844.5 119163.5 132152.5 0.000000 54660.50 27956.00 149245.5 120686.5 3406.500 257504.0 156497.5 33533.00 114506.0 116871.0
Y466 Y476 Y486 Y496 Y506 Y17 Y27 Y37 Y47 Y57 Y67 Y77 Y87 Y107 Y117 Y117 Y127 Y117 Y127 Y147 Y157 Y167 Y177	0.000000 0.000000 0.000000 0.000000 0.000000	216683.5 208488.0 182188.5 161658.0 184824.0 89679.00 77265.50 139443.0 142389.0 54660.50 0.000000 135166.5 152025.0 82037.00 183538.0 255528.5 150287.5 70131.00 109731.5 133495.5 200003.5 219805.0

1306       0.000000       84302.00         Y318       0.000000       184382.5         Y328       0.000000       127833.5         Y338       0.000000       71177.00         Y348       0.000000       81608.50         Y358       0.000000       52541.00	Y187 Y197 Y207 Y217 Y227 Y237 Y247 Y257 Y267 Y267 Y277 Y287 Y297 Y307 Y317 Y327 Y337 Y347 Y357 Y367 Y377 Y367 Y377 Y387 Y367 Y377 Y387 Y367 Y377 Y387 Y397 Y407 Y417 Y427 Y437 Y447 Y457 Y467 Y477 Y487 Y497 Y507 Y18 Y28 Y38 Y48 Y58 Y68 Y78 Y88 Y108 Y118 Y128 Y18 Y188 Y188 Y188 Y188 Y188	0.000000 0.000000 0.000000 0.000000 0.000000	166256.0 167266.5 183535.5 294430.0 61373.50 18380.50 158558.0 173084.0 193276.5 54496.00 85602.50 143315.5 120927.5 224859.5 175284.0 135168.0 152025.0 54660.50 0.000000 77265.50 139443.0 142389.0 57134.00 200784.5 150287.5 70131.00 109731.5 133495.5 200003.5 219805.0 166256.0 167266.5 183535.5 0.0000000 28713.50 116817.0 69881.00 52541.00 89679.00 71176.50 81608.50 47117.00 143128.0 343815.0 120392.0 20608.00 83048.00 68715.50 143128.0 343815.0 120392.0 16892.5 143128.0 352599.00 38170.50 82165.00 11610.5 172185.0 24043.00 91424.00 91424.00 91424.00 91424.00 91424.00
	Y268 Y278 Y288 Y298 Y308 Y318 Y328 Y338 Y348	0.000000 0.000000 0.000000 0.000000 0.000000	172185.0 52015.50 24043.00 91224.00 84302.00 184382.5 127833.5 71177.00 81608.50

Y410 Y510 Y610 Y710 Y810 Y910 Y1010 Y1110 Y1210 Y1310 Y1410 Y1510 Y1610 Y1710 Y1810 Y1910 Y2210 Y2210 Y2210 Y2210 Y2310 Y2410 Y2510 Y2510 Y2510 Y2610 Y2710 Y2810 Y3010 Y3110 Y3510 Y3111 Y311 Y3111 Y	0.000000           0.000000 <t< th=""><th>0.000000 120686.5 142389.0 14655.00 11767.50 62096.50 83567.50 105908.5 74525.50 87154.50 61576.50 13971.50 136308.5 89604.00 109949.5 54685.00 83568.50 77160.00 106493.5 128045.5 60550.50 46538.00 121580.5 120089.0 92925.00 35681.00 65812.50 14653.00 11767.50 120686.5 142389.0 98577.00 78818.50 0.000000 117838.0 105908.5 74525.50 87154.50 61576.50 13971.50 136308.5 74525.50 87154.50 61576.50 13971.50 136308.5 74525.50 87154.50 61576.50 13971.50 136308.5 89604.00 109949.5 54685.00 83568.50 76225.00 82037.00 53315.50 70682.00 0.000000 109086.0 119826.5 80346.00 48680.00 38919.00 51794.00 142064.0 138825.5 108052.5 8797.50 109084.0</th></t<>	0.000000 120686.5 142389.0 14655.00 11767.50 62096.50 83567.50 105908.5 74525.50 87154.50 61576.50 13971.50 136308.5 89604.00 109949.5 54685.00 83568.50 77160.00 106493.5 128045.5 60550.50 46538.00 121580.5 120089.0 92925.00 35681.00 65812.50 14653.00 11767.50 120686.5 142389.0 98577.00 78818.50 0.000000 117838.0 105908.5 74525.50 87154.50 61576.50 13971.50 136308.5 74525.50 87154.50 61576.50 13971.50 136308.5 74525.50 87154.50 61576.50 13971.50 136308.5 89604.00 109949.5 54685.00 83568.50 76225.00 82037.00 53315.50 70682.00 0.000000 109086.0 119826.5 80346.00 48680.00 38919.00 51794.00 142064.0 138825.5 108052.5 8797.50 109084.0
Y1711 Y1811 Y1911	0.000000 0.000000 0.000000	138825.5 108052.5 87997.50

Y4812 Y4912 Y5012 Y513 Y613 Y713 Y813 Y1013 Y1113 Y1213 Y1313 Y1413 Y1513 Y1613 Y1713 Y1813 Y1913 Y2213 Y2213 Y2213 Y2213 Y2213 Y2213 Y2213 Y2313 Y2213 Y2313 Y2413 Y2513 Y2613 Y2714 Y271	0.000000 1.000000 1.000000 0.000000 0.000000 0.000000 0.000000	47262.00 28940.00 4.500000 195927.5 186813.0 95112.50 98054.50 119826.5 26522.50 0.0000000 39495.00 167448.0 81539.00 97399.50 31683.50 74559.00 28145.50 53014.00 26519.00 163783.00 16379.00 1646.5 194346.0 0.000000 39495.00 167448.0 81539.00 97399.50 31683.50 74559.00 28145.50 53014.00 26519.00 156497.5 150287.5 61444.50 69670.00 80346.00 34441.00 39495.00 156497.5 150287.5 61444.50 69670.00 80346.00 34441.00 39495.00 0.000000 128019.5 42379.00 63387.00 64819.00 80346.00 334441.00 39495.00 0.000000 128019.5 42379.00 63387.00 64819.00 82664.50 35436.00
Y1514 Y1614 Y1714	0.00000 0.00000 0.00000	63387.00 64819.00 82664.50

Y4115       0.000000       167448.0         Y4215       0.000000       128019.5         Y4315       0.000000       0.000000         Y4415       0.000000       87499.50         Y4515       0.000000       83682.50	Y2414 Y2514 Y2614 Y2714 Y2814 Y2914 Y3014 Y3114 Y3214 Y3314 Y3414 Y3514 Y3614 Y3714 Y3814 Y3914 Y4014 Y4114 Y4214 Y4414 Y4514 Y4514 Y4614 Y4715 Y1015 Y1015 Y1015 Y1115 Y1015 Y115 Y115 Y	0.000000 0.000000 0.000000 0.000000 0.000000	20232.00 51158.50 51797.50 155826.0 143641.0 38912.50 36335.50 20193.50 34381.00 61445.50 69670.00 156497.5 150287.5 145307.5 13263.00 74525.50 154881.5 39495.00 0.000000 128019.5 42379.00 63387.00 64819.00 82664.50 35436.00 34854.50 34437.50 33533.00 70131.00 86021.00 98636.00 48680.00 154131.5 167448.0 128019.5 0.000000 87499.50 83682.50 190660.5 175253.5 156728.5 129673.5 156728.5 129673.5 154130.5 154130.5 15421.5 0.000000 87499.50 83682.50 190660.5 175253.5 156728.5 129673.5 156728.5 129673.5 156728.5 129673.5 154130.5 154130.5 158211.5 167448.0 128019.5 0.000000 87499.50 83682.50 190660.5 175253.5 156728.5 129673.5 154130.
	Y3715 Y3815 Y3915 Y4015 Y4115 Y4215 Y4315 Y4415	0.000000 0.000000 0.000000 0.000000 0.000000	18380.50 122403.5 87154.50 30713.50 167448.0 128019.5 0.000000 87499.50

0.000000 1.000000 0.000000 0.000000 0.000000 0.000000	63955.50 38919.00 74029.50 81539.00 42379.00 87499.50 0.000000 47608.00 103166.5 112694.5 69327.00 59074.00 74027.00 88485.50 103834.5 91810.50 48940.50 68681.00 92105.00 113836.0 104907.5 39642.00 13401.00 48907.50 63955.50 114506.0 109731.5 105407.0 34969.50 61576.50 113036.5 81539.00 42379.00 87499.50 0.000000 47608.00 103166.5 112694.5 69327.00 59074.00 74027.00 116871.0 133495.5 2498.500 19081.50 51794.00 77141.00
0.00000 0.000000 0.000000	2498.500 19081.50 51794.00
	1.000000 0.000000 0.000000 0.000000 0.000000

Y2217 Y2317 Y2417 Y2517 Y2617 Y2717 Y2817 Y2917 Y3017 Y3117 Y3217 Y3317 Y3417 Y3517 Y3617 Y3717 Y3617 Y3717 Y4617 Y4717 Y4217 Y4517 Y4617 Y4717 Y4817 Y4917 Y5017 Y5018 Y618 Y718 Y818 Y918 Y1018 Y118 Y11	0.000000         0.000000	103076.5 118258.5 51901.00 45387.00 112507.5 116242.0 92604.50 25795.00 37379.50 51903.50 60389.00 2498.500 19081.50 116871.0 133495.5 97162.00 66333.00 13971.50 114261.0 97399.50 63387.00 83682.50 47608.00 0.000000 126821.0 91617.50 98726.00 49177.00 77141.50 216683.5 200003.5 124655.0 129066.5 142064.0 57981.00 31683.50 64819.00 190660.5 103166.5 126821.0 0.000000 101267.0 34583.00 845137.50 81851.50 206748.5 103166.5 126821.0 0.000000 101267.0 34583.00 845137.50 81851.50 206748.5 103166.5 126821.0 0.000000 101267.0 34583.00 845137.50 81851.50 206748.5 103166.5 126821.0 0.000000 101267.0 34583.00 84513.00 57981.00 31683.50 64819.00 101267.0 34583.00 84513.00 57981.00 31683.50 64819.00 101267.0 34583.00 84513.00 57981.00 31683.50 64819.00 101267.0 34583.00
Y3418 Y3518 Y3618	0.000000 0.000000 0.000000	129066.5 216683.5 200003.5

Y1620 Y1720 Y1820 Y1920 Y2020 Y2120 Y2220 Y2320 Y2420 Y2520 Y2620 Y2720 Y2820 Y3020 Y3120 Y33220 Y33220 Y3420 Y3420 Y3420 Y3420 Y4420 Y412	0.000000         1.000000         1.000000         0.000000         1.000000         1.000000         1.000000         1.000000         0.000000         1.000000         1.000000         1.000000         1.000000         1.000000         1.000000         1.000000         1.000000         1.000000         1.000000         1.000000         1.000000	34583.00 99539.50 0.000000 64844.00 47258.00 74737.50 172454.0 147981.5 52200.50 81502.00 27522.00 181527.5 174157.0 74299.50 68135.00 52173.50 59162.50 96831.50 104714.5 182188.5 166256.0 174719.0 35059.00 109949.5 181041.0 28145.50 35436.00 156728.5 69327.00 98726.00 34583.00 99539.50 0.000000 64844.00 47258.00 0.000000
X20  Row 1 2 3 4 5 6 7 8 9 10 11	1.000000  Slack or Surplus 551595.0 0.000000 0.000000 0.000000 0.000000 0.000000	0.000000  Dual Price -1.000000 0.000000 0.000000 0.000000 0.000000

12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 33 33 33 33 33 33 33 33 33 34 44 45 46 47 48 49 55 55 55 55 55 55 55 55 55 55 55 55 55	0.000000           0.000000 <t< th=""><th>0.000000 0.000000 0.000000 0.000000 0.000000</th></t<>	0.000000 0.000000 0.000000 0.000000 0.000000
72	1.000000	0.00000
73	0.000000	0.000000
74	0.000000	0.000000

80 81 82 83 84 85 86 87 88 90 91 92 93 94 95 96 97 98 99 100 1102 1103 1104 1105 1107 1108 1109 1110 1111 1121 1121 1121 1121 1121	0.000000 0.000000 0.000000 0.000000 1.000000 0.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 0.000000 0.000000 0.000000 0.000000	0.000000 0.000000 0.000000 0.000000 0.000000
136	0.000000	0.000000
137	1.000000	0.000000
138	0.000000	0.000000
139	1.000000	0.000000

284 285 287 289 291 293 301 293 301 293 303 304 307 308 309 311 313 314 315 317 318 319 321 323 324 325 327 328 329 331 331 331 331 331 331 331 331 331 33	1.000000 0.000000 0.000000 0.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 0.000000 0.000000 0.000000 0.000000	0.000000 0.000000 0.000000 0.000000 0.000000
345 346	0.00000 0.00000	0.000000

420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 4445 446 447 448 449 451 452 453 454 457 458 460 461 462 463 464 467 468 469 470 471 472 473 474 475 477 478 479 480 481 482 483 487 488 489 480 461 462 463 466 467 468 469 470 471 472 473 474 475 477 478 479 480 481 482 483 485 487 487 488 489 480 461 462 463 466 467 468 469 470 471 472 473 474 475 477 478 479 480 481 482 483 485 487 488 489 480 481 485 486 467 468 469 470 471 472 473 474 475 477 478 479 480 481 482 483 483 485 486 487 487 487 478 479 470 471 472 473 474 475 477 478 479 480 481 482 483 483 485 486 487 487 478 479 479 480 481 482 483 483 485 485 487 487 478 479 479 470 471 472 473 474 475 477 478 479 480 481 482 483 483 485 485 485 487 477 478 479 488 488 488 489 480 481 482 483 483 484 485 487 478 479 480 481 482 483 483 483 483 483 484 485 485 485 485 485 485 485	0.000000 0.000000 0.000000 0.000000 0.000000	0.000000 0.000000 0.000000 0.000000 0.000000
481 482	0.000000 0.000000	0.000000

488 489 491 493 494 495 500 500 500 500 500 500 500 5	1.000000 0.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 0.000000 0.000000 0.000000 0.000000	0.000000 0.000000
539 540 541 542 543 544	1.000000 0.000000 0.000000 0.000000 0.000000	0.000000 0.000000 0.000000 0.000000 0.000000

557 557 557 557 5560 55667 55667 5577 5777 57	0.000000         1.000000         1.000000         1.000000         0.000000         0.000000         0.000000         0.000000         0.000000         0.000000         0.000000         1.000000         0.00000         1.000000	0.000000 0.000000 0.000000 0.000000 0.000000
619	1.000000	0.000000

692 693 694 695 697 699 7001 702 703 704 705 707 708 709 7110 712 713 714 715 717 718 719 720 721 722 723 733 735 737 738 739 740 741 742 743 744 745 747 748 749 751 752 753 755 755 757 755 757 755 757 755 757	1.000000 0.000000 1.000000 1.000000 0.000000 1.000000 1.000000 0.000000 0.000000 0.000000 0.000000	0.000000 0.000000 0.000000 0.000000 0.000000

760 761 762 763 764 765 766 767 767 777 777 777 777 777 777	0.000000 0.000000 0.000000 0.000000 1.000000 0.000000 0.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 0.000000 0.000000 0.000000 0.000000	0.000000 0.000000 0.000000 0.000000 0.000000
816	0.000000	0.000000
817	0.000000	0.000000
818	1.000000	0.000000
819	1.000000	0.000000

964 965 966 967 968 969 970 971 972 973 974 975 977 978 979 981 982 983 984 985 987 988 989 9991 9992 9993 9994 9995 9997 9998 1000 1001 1002 1003 1004 1015 1016 1017 1018 1019 1021 1022 1023 1024 1027 1028	1.000000 0.000000 0.000000 0.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 1.000000 0.000000 0.000000 0.000000 0.000000	0.000000 0.000000 0.000000 0.000000 0.000000
1026 1027	0.00000 0.00000	0.000000