

Displacements

Node 1
DX= -0.001375 millimeters DY= -3.843850 millimeters Dt= 0.126301 milliradians (X,Y)=(0.000,0.000)

Node 2
DX= -0.043440 millimeters DY= -3.801795 millimeters Dt= 0.113260 milliradians (X,Y)=(0.350,0.350)

Node 3
DX= -0.126680 millimeters DY= -3.807362 millimeters Dt= 0.077836 milliradians (X,Y)=(0.350,1.220)

Node 4
DX= -0.178011 millimeters DY= -3.812866 millimeters Dt= 0.041286 milliradians (X,Y)=(0.350,2.080)

Node 5
DX= -0.197284 millimeters DY= -3.818433 millimeters Dt= 0.002758 milliradians (X,Y)=(0.350,2.950)

Node 6
DX= -0.182358 millimeters DY= -3.824001 millimeters Dt= -0.037330 milliradians (X,Y)=(0.350,3.820)

Node 7
DX= -0.132664 millimeters DY= -3.829504 millimeters Dt= -0.078492 milliradians (X,Y)=(0.350,4.680)

Node 8
DX= -0.045700 millimeters DY= -3.835072 millimeters Dt= -0.121684 milliradians (X,Y)=(0.350,5.550)

Node 9
DX= 0.000000 millimeters DY= -3.788517 millimeters Dt= -0.139384 milliradians (X,Y)=(0.000,5.900)

Node 10
DX= 0.000000 millimeters DY= -3.837312 millimeters Dt= -0.139501 milliradians (X,Y)=(0.350,5.900)

Node 11
DX= -0.000137 millimeters DY= -3.960339 millimeters Dt= -0.161794 milliradians (X,Y)=(1.150,5.900)

Node 12
DX= -0.000275 millimeters DY= -4.087259 millimeters Dt= -0.150625 milliradians (X,Y)=(1.950,5.900)

Node 13
DX= -0.000412 millimeters DY= -4.194647 millimeters Dt= -0.114359 milliradians (X,Y)=(2.750,5.900)

Node 14
DX= -0.000550 millimeters DY= -4.265772 millimeters Dt= -0.061362 milliradians (X,Y)=(3.550,5.900)

Node 15
DX= -0.000687 millimeters DY= -4.290596 millimeters Dt= -0.000000 milliradians (X,Y)=(4.350,5.900)

Node 16
DX= -0.000825 millimeters DY= -4.265772 millimeters Dt= 0.061362 milliradians (X,Y)=(5.150,5.900)

Node 17
DX= -0.000962 millimeters DY= -4.194647 millimeters Dt= 0.114359 milliradians (X,Y)=(5.950,5.900)

Node 18
DX= -0.001100 millimeters DY= -4.087259 millimeters Dt= 0.150625 milliradians (X,Y)=(6.750,5.900)

Node 19
DX= -0.001237 millimeters DY= -3.960339 millimeters Dt= 0.161794 milliradians (X,Y)=(7.550,5.900)

Node 20
DX= -0.001375 millimeters DY= -3.837312 millimeters Dt= 0.139501 milliradians (X,Y)=(8.350,5.900)

Node 21
DX= -0.001375 millimeters DY= -3.788517 millimeters Dt= 0.139384 milliradians (X,Y)=(8.700,5.900)

Node 22
DX= 0.044325 millimeters DY= -3.835072 millimeters Dt= 0.121684 milliradians (X,Y)=(8.350,5.550)

Node 23
DX= 0.131289 millimeters DY= -3.829504 millimeters Dt= 0.078492 milliradians (X,Y)=(8.350,4.680)

Node 24
DX= 0.180983 millimeters DY= -3.824001 millimeters Dt= 0.037330 milliradians (X,Y)=(8.350,3.820)

Node 25
DX= 0.195909 millimeters DY= -3.818433 millimeters Dt= -0.002758 milliradians (X,Y)=(8.350,2.950)

Node 26
DX= 0.176637 millimeters DY= -3.812866 millimeters Dt= -0.041286 milliradians (X,Y)=(8.350,2.080)

Node 27
DX= 0.125305 millimeters DY= -3.807362 millimeters Dt= -0.077836 milliradians (X,Y)=(8.350,1.220)

Node 28
DX= 0.042065 millimeters DY= -3.801795 millimeters Dt= -0.113260 milliradians (X,Y)=(8.350,0.350)

Node 29
DX= 0.000000 millimeters DY= -3.843850 millimeters Dt= -0.126301 milliradians (X,Y)=(8.700,0.000)

Node 30
DX= -0.001375 millimeters DY= -3.799555 millimeters Dt= 0.127070 milliradians (X,Y)=(0.350,0.000)

Node 31
DX= -0.001237 millimeters DY= -3.688402 millimeters Dt= 0.145284 milliradians (X,Y)=(1.150,0.000)

Node 32
DX= -0.001100 millimeters DY= -3.574915 millimeters Dt= 0.134193 milliradians (X,Y)=(1.950,0.000)

Node 33
DX= -0.000962 millimeters DY= -3.479483 millimeters Dt= 0.101392 milliradians (X,Y)=(2.750,0.000)

Node 34
DX= -0.000825 millimeters DY= -3.416510 millimeters Dt= 0.054257 milliradians (X,Y)=(3.550,0.000)

Node 35
DX= -0.000687 millimeters DY= -3.394571 millimeters Dt= -0.000000 milliradians (X,Y)=(4.350,0.000)

Node 36
DX= -0.000550 millimeters DY= -3.416510 millimeters Dt= -0.054257 milliradians (X,Y)=(5.150,0.000)

Node 37
DX= -0.000412 millimeters DY= -3.479483 millimeters Dt= -0.101392 milliradians (X,Y)=(5.950,0.000)

Node 38
DX= -0.000275 millimeters DY= -3.574915 millimeters Dt= -0.134193 milliradians (X,Y)=(6.750,0.000)

Node 39
DX= -0.000137 millimeters DY= -3.688402 millimeters Dt= -0.145284 milliradians (X,Y)=(7.550,0.000)

Node 40
DX= -0.000000 millimeters DY= -3.799555 millimeters Dt= -0.127070 milliradians (X,Y)=(8.350,0.000)
Node 1SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 30SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 31SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 32SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 33SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 34SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 35SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 36SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 37SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 38SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 39SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 40SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Node 29SPRING
DX= 0.000000 millimeters DY= 0.000000 millimeters Dt= 0.000000 milliradians
Forces
Counterclockwise notation
Free body notation
Beam :1 connects nodes 1 and 30
Beam forces
N1= 0.00 kN Q1= 23.06 kN M1= 0.00 kNm
N30= 0.00 kN Q30= 23.06 kN M30= 8.07 kNm
Beam :2 connects nodes 30 and 2
Beam forces
N30= -141.00 kN Q30= -3.79 kN M30= -71.79 kNm
N2= -141.00 kN Q2= -3.79 kN M2= -73.11 kNm
Beam :3 connects nodes 2 and 3
Beam forces
N2= -141.00 kN Q2= -3.79 kN M2= -73.11 kNm
N3= -141.00 kN Q3= -3.79 kN M3= -76.41 kNm
Beam :4 connects nodes 3 and 4
Beam forces
N3= -141.00 kN Q3= -3.79 kN M3= -76.41 kNm
N4= -141.00 kN Q4= -3.79 kN M4= -79.66 kNm
Beam :5 connects nodes 4 and 5
Beam forces
N4= -141.00 kN Q4= -3.79 kN M4= -79.66 kNm
N5= -141.00 kN Q5= -3.79 kN M5= -82.96 kNm
Beam :6 connects nodes 5 and 6
Beam forces
N5= -141.00 kN Q5= -3.79 kN M5= -82.96 kNm
N6= -141.00 kN Q6= -3.79 kN M6= -86.25 kNm
Beam :7 connects nodes 6 and 7
Beam forces
N6= -141.00 kN Q6= -3.79 kN M6= -86.25 kNm
N7= -141.00 kN Q7= -3.79 kN M7= -89.51 kNm
Beam :8 connects nodes 7 and 8
Beam forces
N7= -141.00 kN Q7= -3.79 kN M7= -89.51 kNm
N8= -141.00 kN Q8= -3.79 kN M8= -92.80 kNm
Beam :9 connects nodes 8 and 10
Beam forces
N8= -141.00 kN Q8= -3.79 kN M8= -92.80 kNm
N10= -141.00 kN Q10= -3.79 kN M10= -94.13 kNm
Beam :10 connects nodes 9 and 10
Beam forces
N9= -0.00 kN Q9= 0.00 kN M9= 0.00 kNm
N10= -0.00 kN Q10= -10.50 kN M10= -1.84 kNm
Beam :11 connects nodes 10 and 11
Beam forces
N10= -3.79 kN Q10= 120.00 kN M10= -95.97 kNm
N11= -3.79 kN Q11= 96.00 kN M11= -9.57 kNm
Beam :12 connects nodes 11 and 12
Beam forces
N11= -3.79 kN Q11= 96.00 kN M11= -9.57 kNm
N12= -3.79 kN Q12= 72.00 kN M12= 57.63 kNm

Beam :13 connects nodes 12 and 13
 Beam forces
 N12= -3.79 kN Q12= 72.00 kN M12= 57.63 kNm
 N13= -3.79 kN Q13= 48.00 kN M13= 105.63 kNm
 Beam :14 connects nodes 13 and 14
 Beam forces
 N13= -3.79 kN Q13= 48.00 kN M13= 105.63 kNm
 N14= -3.79 kN Q14= 24.00 kN M14= 134.43 kNm
 Beam :15 connects nodes 14 and 15
 Beam forces
 N14= -3.79 kN Q14= 24.00 kN M14= 134.43 kNm
 N15= -3.79 kN Q15= -0.00 kN M15= 144.03 kNm
 Beam :16 connects nodes 15 and 16
 Beam forces
 N15= -3.79 kN Q15= 0.00 kN M15= 144.03 kNm
 N16= -3.79 kN Q16= -24.00 kN M16= 134.43 kNm
 Beam :17 connects nodes 16 and 17
 Beam forces
 N16= -3.79 kN Q16= -24.00 kN M16= 134.43 kNm
 N17= -3.79 kN Q17= -48.00 kN M17= 105.63 kNm
 Beam :18 connects nodes 17 and 18
 Beam forces
 N17= -3.79 kN Q17= -48.00 kN M17= 105.63 kNm
 N18= -3.79 kN Q18= -72.00 kN M18= 57.63 kNm
 Beam :19 connects nodes 18 and 19
 Beam forces
 N18= -3.79 kN Q18= -72.00 kN M18= 57.63 kNm
 N19= -3.79 kN Q19= -96.00 kN M19= -9.57 kNm
 Beam :20 connects nodes 19 and 20
 Beam forces
 N19= -3.79 kN Q19= -96.00 kN M19= -9.57 kNm
 N20= -3.79 kN Q20= -120.00 kN M20= -95.97 kNm
 Beam :21 connects nodes 20 and 21
 Beam forces
 N20= -0.00 kN Q20= 10.50 kN M20= -1.84 kNm
 N21= 0.00 kN Q21= 0.00 kN M21= 0.00 kNm
 Beam :22 connects nodes 20 and 22
 Beam forces
 N20= -141.00 kN Q20= 3.79 kN M20= -94.13 kNm
 N22= -141.00 kN Q22= 3.79 kN M22= -92.80 kNm
 Beam :23 connects nodes 22 and 23
 Beam forces
 N22= -141.00 kN Q22= 3.79 kN M22= -92.80 kNm
 N23= -141.00 kN Q23= 3.79 kN M23= -89.51 kNm
 Beam :24 connects nodes 23 and 24
 Beam forces
 N23= -141.00 kN Q23= 3.79 kN M23= -89.51 kNm
 N24= -141.00 kN Q24= 3.79 kN M24= -86.25 kNm
 Beam :25 connects nodes 24 and 25
 Beam forces
 N24= -141.00 kN Q24= 3.79 kN M24= -86.25 kNm
 N25= -141.00 kN Q25= 3.79 kN M25= -82.96 kNm
 Beam :26 connects nodes 25 and 26
 Beam forces
 N25= -141.00 kN Q25= 3.79 kN M25= -82.96 kNm
 N26= -141.00 kN Q26= 3.79 kN M26= -79.66 kNm
 Beam :27 connects nodes 26 and 27
 Beam forces
 N26= -141.00 kN Q26= 3.79 kN M26= -79.66 kNm
 N27= -141.00 kN Q27= 3.79 kN M27= -76.41 kNm
 Beam :28 connects nodes 27 and 28
 Beam forces
 N27= -141.00 kN Q27= 3.79 kN M27= -76.41 kNm
 N28= -141.00 kN Q28= 3.79 kN M28= -73.11 kNm
 Beam :30 connects nodes 28 and 40
 Beam forces
 N28= -141.00 kN Q28= 3.79 kN M28= -73.11 kNm
 N40= -141.00 kN Q40= 3.79 kN M40= -71.79 kNm
 Beam :31 connects nodes 40 and 29
 Beam forces
 N40= 0.00 kN Q40= -23.06 kN M40= 8.07 kNm
 N29= 0.00 kN Q29= -23.06 kN M29= 0.00 kNm
 Beam :32 connects nodes 30 and 31
 Beam forces
 N30= 3.79 kN Q30= -95.14 kN M30= 79.86 kNm
 N31= 3.79 kN Q31= -95.14 kN M31= 3.75 kNm
 Beam :33 connects nodes 31 and 32
 Beam forces
 N31= 3.79 kN Q31= -73.01 kN M31= 3.75 kNm

N32= 3.79 kN Q32= -73.01 kN M32= -54.66 kNm
 Beam :34 connects nodes 32 and 33
 Beam forces
 N32= 3.79 kN Q32= -51.56 kN M32= -54.66 kNm
 N33= 3.79 kN Q33= -51.56 kN M33= -95.91 kNm
 Beam :35 connects nodes 33 and 34
 Beam forces
 N33= 3.79 kN Q33= -30.68 kN M33= -95.91 kNm
 N34= 3.79 kN Q34= -30.68 kN M34= -120.45 kNm
 Beam :36 connects nodes 34 and 35
 Beam forces
 N34= 3.79 kN Q34= -10.18 kN M34= -120.45 kNm
 N35= 3.79 kN Q35= -10.18 kN M35= -128.60 kNm
 Beam :37 connects nodes 35 and 36
 Beam forces
 N35= 3.79 kN Q35= 10.18 kN M35= -128.60 kNm
 N36= 3.79 kN Q36= 10.18 kN M36= -120.45 kNm
 Beam :38 connects nodes 36 and 37
 Beam forces
 N36= 3.79 kN Q36= 30.68 kN M36= -120.45 kNm
 N37= 3.79 kN Q37= 30.68 kN M37= -95.91 kNm
 Beam :39 connects nodes 37 and 38
 Beam forces
 N37= 3.79 kN Q37= 51.56 kN M37= -95.91 kNm
 N38= 3.79 kN Q38= 51.56 kN M38= -54.66 kNm
 Beam :40 connects nodes 38 and 39
 Beam forces
 N38= 3.79 kN Q38= 73.01 kN M38= -54.66 kNm
 N39= 3.79 kN Q39= 73.01 kN M39= 3.75 kNm
 Beam :41 connects nodes 39 and 40
 Beam forces
 N39= 3.79 kN Q39= 95.14 kN M39= 3.75 kNm
 N40= 3.79 kN Q40= 95.14 kN M40= 79.86 kNm
 Beam :42 connects nodes 1SPRING and 1
 Beam forces
 N1SPRING= -23.06 kN
 N1= -23.06 kN
 Beam :43 connects nodes 30SPRING and 30
 Beam forces
 N30SPRING= -22.80 kN
 N30= -22.80 kN
 Beam :44 connects nodes 31SPRING and 31
 Beam forces
 N31SPRING= -22.13 kN
 N31= -22.13 kN
 Beam :45 connects nodes 32SPRING and 32
 Beam forces
 N32SPRING= -21.45 kN
 N32= -21.45 kN
 Beam :46 connects nodes 33SPRING and 33
 Beam forces
 N33SPRING= -20.88 kN
 N33= -20.88 kN
 Beam :47 connects nodes 34SPRING and 34
 Beam forces
 N34SPRING= -20.50 kN
 N34= -20.50 kN
 Beam :48 connects nodes 35SPRING and 35
 Beam forces
 N35SPRING= -20.37 kN
 N35= -20.37 kN
 Beam :49 connects nodes 36SPRING and 36
 Beam forces
 N36SPRING= -20.50 kN
 N36= -20.50 kN
 Beam :50 connects nodes 37SPRING and 37
 Beam forces
 N37SPRING= -20.88 kN
 N37= -20.88 kN
 Beam :51 connects nodes 38SPRING and 38
 Beam forces
 N38SPRING= -21.45 kN
 N38= -21.45 kN
 Beam :52 connects nodes 39SPRING and 39
 Beam forces
 N39SPRING= -22.13 kN
 N39= -22.13 kN
 Beam :53 connects nodes 40SPRING and 40
 Beam forces