Analysis2Stiffness

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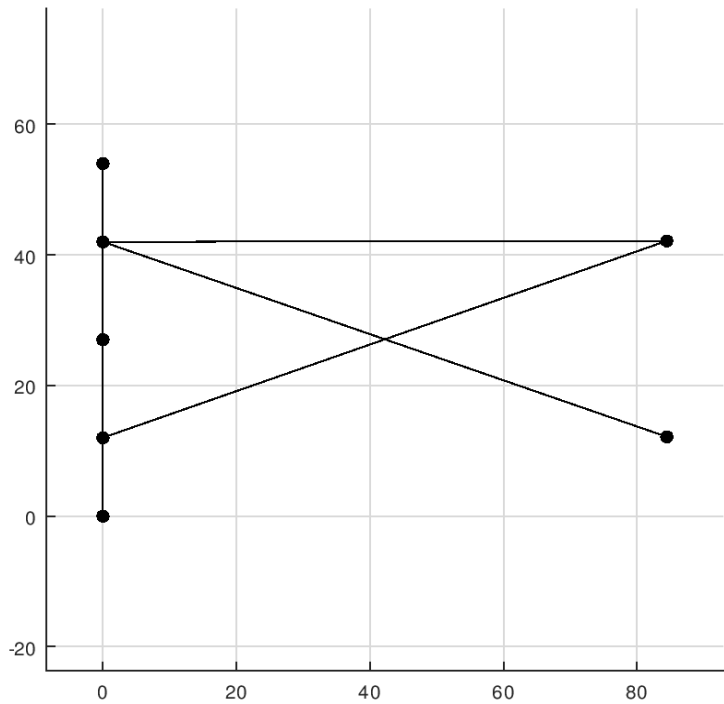
Column1
****
GEOMETRY
****

Nodal Coordinates:
(Node No. - X - Y - Z)

NODES =
1.00000   0.00000   0.00000
2.00000   0.00000 12.00000
3.00000   0.00000 27.00000
4.00000   0.00000 42.00000
5.00000   0.00000 54.00000
6.00000 84.46000 12.14660
7.00000 84.46000 42.14660

Boundary Conditions: 1 = Restrained, 0 = Free
(Node No. - Tx - Ty - Rz)

BOUNDS =

  1 1 1 0
  6 1 1 1
  7 1 1 1

Element Information:
(Ele No. - iNode - jNode - Member Type - E - A - I)

ELES =

  1   1   2   0 29000   9999 999999
  2   2   3   0 29000   9999 999999
  3   3   4   0 29000   9999 999999
  4   4   5   0 29000   9999 999999
  5   4   7   1 29000   5   50
  6   4   6   1 29000   5   50
  7   2   7   1 29000   5   50

Load Information:
(Node No. - Fx - Fy - Mz)

LOADS =

  1   0   0 1000

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plotFile = ../../1. OUTPUT/Analysis2Stiffness.png
ans =

  -8.4460 92.9060 -23.6760 77.6760

****

ANALYSIS

****

kff =

Columns 1 through 5:

9666657000.00000	1208332125.00000	0.00000	4833328500.00000	0.00000
1208332125.00000	304501130.34623	509.99182	434999565.00000	-103111008.00000
0.00000	509.99182	43495838.06455	0.00000	0.00000
4833328500.00000	434999565.00000	0.00000	17399982600.00000	773332560.00000
0.00000	-103111008.00000	0.00000	773332560.00000	206222016.00000
0.00000	0.00000	-19331400.00000	0.00000	0.00000
0.00000	-773332560.00000	0.00000	3866662800.00000	0.00000
0.00000	0.00000	0.00000	0.00000	-103111008.00000
0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	-773332560.00000
0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	0.00000	0.00000	0.00000	0.00000

Columns 6 through 10:

0.00000	0.00000	0.00000	0.00000	0.00000
0.00000	-773332560.00000	0.00000	0.00000	0.00000
-19331400.00000	0.00000	0.00000	0.00000	0.00000
0.00000	3866662800.00000	0.00000	0.00000	0.00000
0.00000	0.00000	-103111008.00000	0.00000	-773332560.00000
38662800.00000	0.00000	0.00000	-19331400.00000	0.00000
0.00000	15466651200.00000	773332560.00000	0.00000	3866662800.00000
0.00000	773332560.00000	304502851.83659	-503.72186	-434999565.00000
-19331400.00000	0.00000	-503.72186	43495842.37172	0.00000
0.00000	3866662800.00000	-434999565.00000	0.00000	17399982600.00000
0.00000	0.00000	-201388687.50000	0.00000	1208332125.00000
0.00000	0.00000	0.00000	-24164250.00000	0.00000
0.00000	0.00000	-1208332125.00000	0.00000	4833328500.00000

Columns 11 through 13:

0.00000	0.00000	0.00000
0.00000	0.00000	0.00000
0.00000	0.00000	0.00000
0.00000	0.00000	0.00000
0.00000	0.00000	0.00000
0.00000	0.00000	0.00000
0.00000	0.00000	0.00000
-201388687.50000	0.00000	-1208332125.00000

0.00000	-24164250.00000	0.00000
1208332125.00000	0.00000	4833328500.00000
201388687.50000	0.00000	1208332125.00000
0.00000	24164250.00000	0.00000
1208332125.00000	0.00000	9666657000.00000

Number of dof: 13
Number of loads: 1
LOADS =

1	0	0	1000

deg = 1
P =

1000
0
0
0
0
0
0
0
0
0
0
0
0

uf =

0.00017364187
-0.00208147735
-0.00000010768
0.00017329249
-0.00467863833
-0.00000029719
0.00017302533
-0.00727312768
-0.00000048670
0.00017293627
-0.00934836294
-0.00000048670
0.00017293627

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Post Process

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Nodal Displacements:
(Node No. - Tx - Ty - Rz)
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NodalDisp =

  1.00000  0.00000  0.00000  0.00017
  2.00000 -0.00208 -0.00000  0.00017
  3.00000 -0.00468 -0.00000  0.00017
  4.00000 -0.00727 -0.00000  0.00017
  5.00000 -0.00935 -0.00000  0.00017
  6.00000  0.00000  0.00000  0.00000
  7.00000  0.00000  0.00000  0.00000

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Global Member Forces:
(Element No. - iFx - iFy - iMz - jFx - jFy - jMz)
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GlobalForces =

  1.00000  -25.94285    2.60198 1000.00000   25.94285   -2.60198 -688.68582
  2.00000  -22.95619    3.66354  688.68582   22.95619   -3.66354 -344.34291
  3.00000  -22.95619    3.66354  344.34291   22.95619   -3.66354    0.00000
  4.00000    0.00000    0.00000   -0.00000   -0.00000    0.00000   -0.00000
  5.00000  -12.48637   -0.02159    0.00000   12.48637    0.02159    0.00740
  6.00000  -10.46982    3.68513    0.00000   10.46982   -3.68513   -1.31414
  7.00000   -2.98665   -1.06156    0.00000    2.98665    1.06156    0.37841

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Local Member Forces:
(Element No. - iFx - iFy - iMz - jFx - jFy - jMz)
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LocalForces =

  1.00000    2.60198   25.94285 1000.00000   -2.60198  -25.94285 -688.68582
  2.00000    3.66354   22.95619  688.68582   -3.66354  -22.95619 -344.34291
  3.00000    3.66354   22.95619  344.34291   -3.66354  -22.95619    0.00000
  4.00000    0.00000   -0.00000   -0.00000    0.00000    0.00000   -0.00000
  5.00000  -12.48639    0.00009    0.00000   12.48639   -0.00009    0.00740
  6.00000  -11.09942   -0.01467    0.00000   11.09942    0.01467   -1.31414
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   7.00000   -3.16970    0.00422    0.00000    3.16970   -0.00422    0.37841


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Nodal Support Reactions:
(Node No. - Fx - Fy - Mz)
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Support =

   1.00000  -25.94285    2.60198    0.00000
   2.00000    0.00000    0.00000    0.00000
   3.00000    0.00000    0.00000    0.00000
   4.00000    0.00000    0.00000    0.00000
   5.00000    0.00000    0.00000    0.00000
   6.00000   10.46982   -3.68513   -1.31414
   7.00000   15.47303    1.08314    0.38581

sumFx = -0.00000000029384
sumFy =    4.4409e-16
sumMz = -0.92833
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