

Node Coordinates

Node ID	X - Coordinate	Y - Coordinate	Z - Coordinate
1	0.00	0.00	0.00
2	3.00	0.00	0.00
3	6.00	0.00	0.00
4	6.00	-0.25	0.00

Node Constraints

Node ID	X - Displacement	Y - Displacement	Z - Displacement	X - Rotation	Y - Rotation	Z - Rotation
1	Yes	Yes	Yes	Yes	Yes	Yes
2	No	Yes	No	No	No	No
4	Yes	Yes	Yes	No	No	No

Material Properties

Material ID	E	G	v	ρ	α	F _{yield}	F _{ultimate}
1	210,000,000	90,000,000	0.3000	0.00000000	0.00000000	0	0

Section Properties

Section ID	Type	Geometry	Area	I ₂	I ₃	A ₂	A ₃	J
1	generic		1.0000	0.0002	0.0002	1.0000	1.0000	1.0000

Beam Definitions

Beam ID	I Node	J Node	Material ID	Section ID	Ref. Node
1	1	2	1	1	
2	2	3	1	1	

Spring Definitions

Spring ID	I Node	J Node	Spring Stiffness
3	3	4	200

Basic Load Cases

Basic Load Case ID	Name	Active
D	Dead Load	Yes
L	Live Load	Yes

Nodal Loads

ID	BLC ID	Node ID	F _x	F _y	F _z	M _x	M _y	M _z
1	D	3	0.0000	-50.0000	0.0000	0.0000	0.0000	0.0000

Node Displacements

Node ID	BLC ID	Global Displacement			Global Rotation		
		X	Y	Z	X	Y	Z
1	D	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	D	0.000000	0.000000	0.000000	0.000000	0.000000	-0.002493
3	D	0.000000	-0.017447	0.000000	0.000000	0.000000	-0.007476
4	D	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Reactions

Node ID	BLC ID	Global Reaction			Global Moment		
		X	Y	Z	X	Y	Z
1	D	0.0000	-69.7552	0.0000	0.0000	0.0000	-69.7335
2	D	0.0000	116.2659	0.0000	0.0000	0.0000	0.0000
4	D	0.0000	3.4893	0.0000	0.0000	0.0000	0.0000

Element Forces

Elem. ID	BLC ID	Node ID	Local 1-2 Plane		Local 1-3 Plane		Axial	
			Shear	Moment	Shear	Moment	Axial Force	Torsion
1	D	1	-69.7552	-69.7335	0.0000	0.0000	0.0000	0.0000
1	D	2	69.7552	-139.5321	0.0000	0.0000	0.0000	0.0000
2	D	2	46.5107	139.5321	0.0000	0.0000	0.0000	0.0000
2	D	3	-46.5107	0.0000	0.0000	0.0000	0.0000	0.0000
3	D	3	0.0000	0.0000	0.0000	0.0000	3.4893	0.0000
3	D	4	0.0000	0.0000	0.0000	0.0000	-3.4893	0.0000