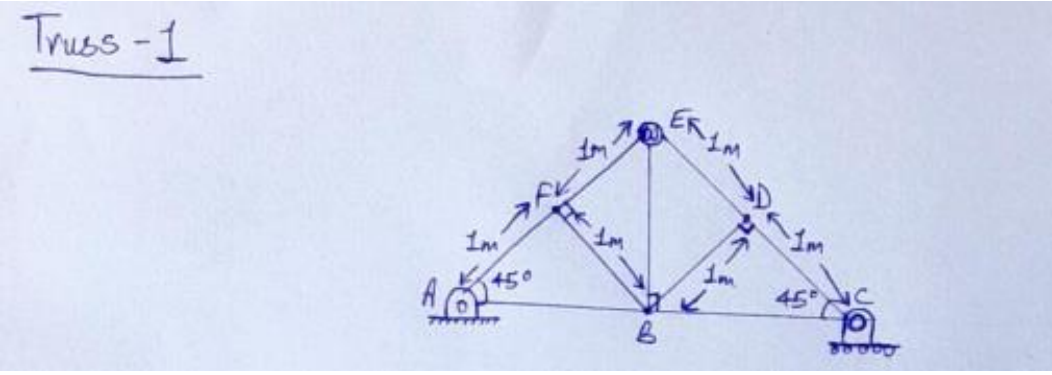
Please note that nodes 1,2,3,4,5…. Correspond to nodes A,B,C,D,E…. respectively in the truss diagrams

Truss 1



Input-
Nodes-
6
For Node Coordinates
0
0
1.414
0
2.828
0
2.121
0.707
1.414
1.414
0.707
0.707

For Node Loads
0
0
0
0
0
0
0
0
0

0
-50
0
0

For Constraint Matrix
1
1
0
0
0
1
0
0
0
0
0
0

For Adjacency Matrix
0
1
0
0
0
1
1
0
1
1
1
1
0
1
0
1
0
0
0
1
1
0

1
0
0
1
0
1
0
1
1
1
0
0
1
0

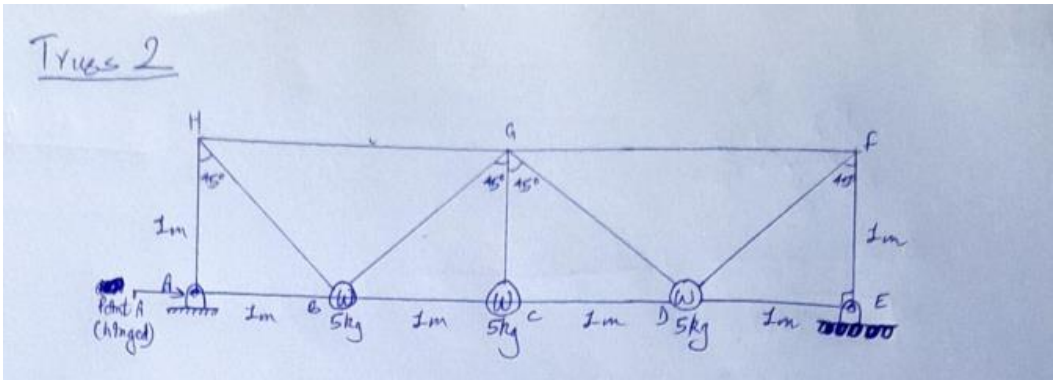
Output-

Force in member between 1 and 2 is 24.999999999999996
Force in member between 1 and 6 is 35.35533905932738
Force in member between 2 and 3 is 24.999999999999993
Force in member between 2 and 4 is 2.512147933894039e-15
Force in member between 2 and 5 is 3.552713678800501e-15
Force in member between 2 and 6 is 2.5121479338940403e-15
Force in member between 3 and 4 is 35.35533905932737
Force in member between 4 and 5 is 35.35533905932737
Force in member between 5 and 6 is 35.355339059327385
reaction at support 1
in the x direction is 6.328271240363392e-15
reaction at support 1
in the y direction is 25.000000000000004
reaction at support 3
in the y direction is 25.000000000000004

Beams/Supports	From code(2 decimal places)	From STAAD.Pro
AB	24.99	24.99
BC	24.99	24.99
CD	35.35	35.35
DE	35.35	35.35

EF	35.35	35.35
AF	35.35	35.35
BD	2.51e-15	0.001
BE	3.55e-15	0.002
BF	2.51e-15	0.001
Ax	6.32e-15	0
Ay	25.00	25
Cy	25.00	25

Truss-2



Input-

Nodes-

8

For Node Coordinates

0

0

1

0

2
0
3
0
4
0
4
1
2
1
0
1

For Node Loads
0
0
0
-50
0
-50
0
-50
0
0
0
0
0
0
0
0

For Constraint matrix
1
1
0
0
0
0
0
0
0
1

0
0
0
0
0
0

For Adjacency matrix
0
1
0
0
0
0
0
1
1
0
1
0
0
0
1
1
0
1
0
1
0
0
1
0
0
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1
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0
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1
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0
0
0
1
1
0
1
0
0
1
1
1
0
1
0
1
1
1
0
0
0
0
1
0

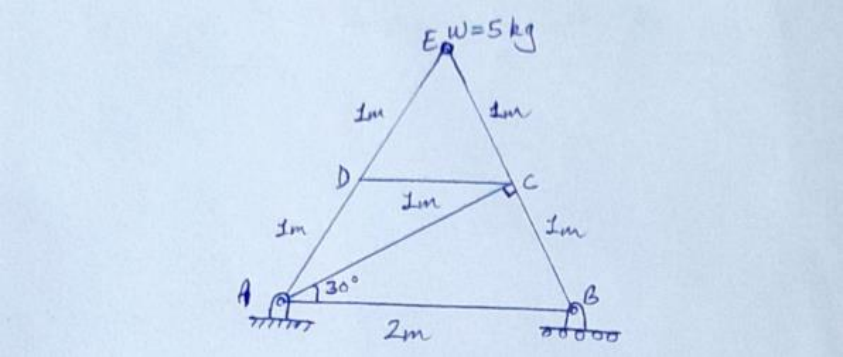
Output-

Force in member between 1 and 2 is 0.0
Force in member between 1 and 8 is 75.0
Force in member between 2 and 3 is 100.0
Force in member between 2 and 7 is 35.35533905932738
Force in member between 2 and 8 is 106.06601717798213
Force in member between 3 and 4 is 100.0
Force in member between 3 and 7 is 50.0
Force in member between 4 and 5 is 0.0

Force in member between 4 and 6 is 106.06601717798213
Force in member between 4 and 7 is 35.35533905932738
Force in member between 5 and 6 is 75.0
Force in member between 6 and 7 is 75.0
Force in member between 7 and 8 is 75.0
reaction at support 1
in the x direction is 0.0
reaction at support 1
in the y direction is 75.0
reaction at support 5
in the y direction is 75.0

Beams/Supports	From code(2 decimal places)	From STAAD.Pro
AB	0	0.002
BC	100	99.998
CD	100	99.998
AH	75	74.998
BG	35.35	35.35
BH	106.06	106.06
GH	75.0	74.998
CG	50.0	49.999
DE	0.0	0.002
DF	106.06	106.06
DG	35.35	35.35
EF	75.0	74.998
FG	75.0	74.998
Ax	0.0	0
Ay	75.0	75
Ey	75.0	75

Truss-3



Input-
Nodes-
5
For Node coordinates
0
0
2
0
1.5
0.866
0.5
0.866
1
1.732

For Node Loads
0
0
0
0
0
0
0
0
0
-50

For Constraint matrix

1
1
0
1
0
0
0
0
0
0

For Adjacency matrix

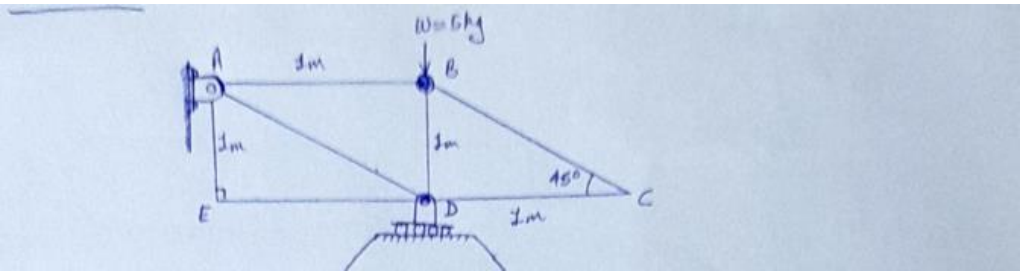
0
1
1
1
0
1
0
1
0
0
1
1
0
1
1
1
0
1
0
1
0
0
1
1
0

Output-

Force in member between 1 and 2 is 14.434180138568133
Force in member between 1 and 3 is 2.051145156912523e-15
Force in member between 1 and 4 is 28.867725166223863
Force in member between 2 and 3 is 28.867725166223867
Force in member between 3 and 4 is 0.0
Force in member between 3 and 5 is 28.867725166223863
Force in member between 4 and 5 is 28.867725166223863
reaction at support 1
in the x direction is 0.0
reaction at support 1
in the y direction is 25.0
reaction at support 2
in the y direction is 25.0

Beams/Supports	From code(2 decimal places)	From STAAD.Pro
AB	14.43	14.5
AC	2.05e-15	0
AD	28.86	27.95
BC	28.86	27.95
CD	0.0	0
CE	28.86	27.95
DE	28.86	27.95
Ax	0.0	0
Ay	25.0	25
By	25.0	25

Truss-4



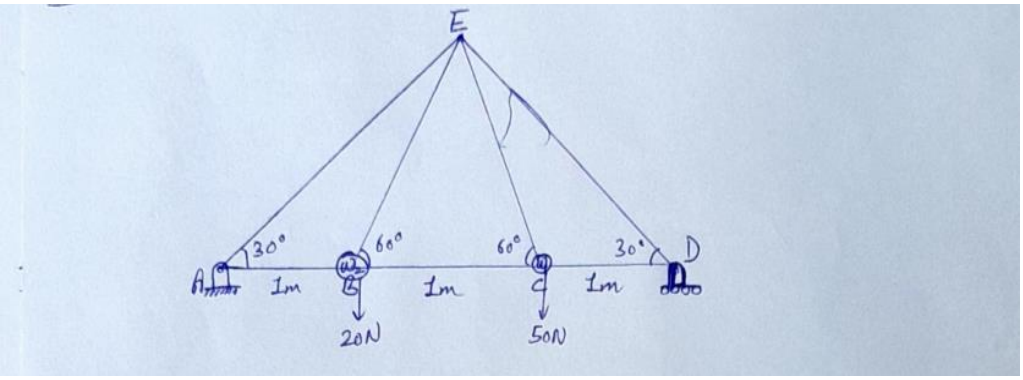
Input(Can be entered similarly as done in the above trusses)

Output-

Force in member between 1 and 2 is 0.0
Force in member between 1 and 4 is 0.0
Force in member between 1 and 5 is 0.0
Force in member between 2 and 3 is 0.0
Force in member between 2 and 4 is 50.0
Force in member between 3 and 4 is 0.0
Force in member between 4 and 5 is 0.0
reaction at support 1
in the x direction is 0.0
reaction at support 1
in the y direction is 0.0
reaction at support 4
in the y direction is 50.0

Beams/Supports	From code(2 decimal places)	From STAAD.Pro
AB	0.0	0
AD	0.0	0
AE	0.0	0
BC	0.0	0
BD	50.0	50
CD	0.0	0
DE	0.0	0
Ax	0.0	0
Ay	0.0	0
Dy	50.0	50

Truss-5



Output-
Force in member between 1 and 2 is 51.963048498845275
Force in member between 1 and 5 is 60.00132006292316
Force in member between 2 and 3 is 40.41570438799077
Force in member between 2 and 5 is 23.09418013297909
Force in member between 3 and 4 is 69.28406466512703
Force in member between 3 and 5 is 57.73545033244772
Force in member between 4 and 5 is 80.00176008389755
reaction at support 1
in the x direction is 0.0
reaction at support 1
in the y direction is 29.999999999999996
reaction at support 4
in the y direction is 40.0

Beams/Supports	From code(2 decimal places)	From STAAD.Pro
AB	51.96	49.99
AE	60.00	58.30
BC	40.41	38.889
BE	23.09	22.88
CD	69.28	66.66
CE	57.73	57.19
DE	80.00	77.74
Ax	0.0	0
Ay	29.99	29.99
Dy	40.0	40