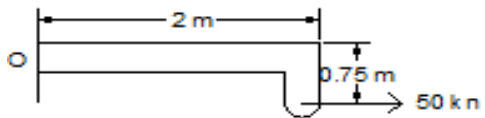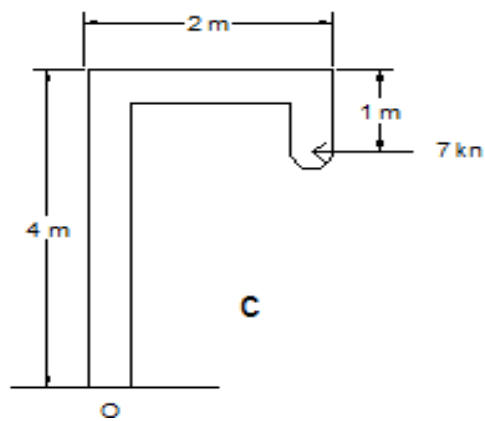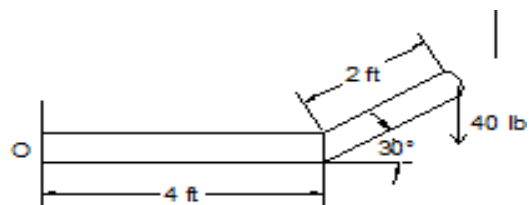1. Determine the moment of the force with respect to point o.
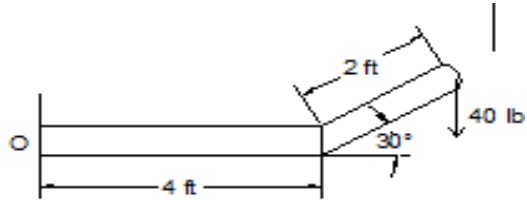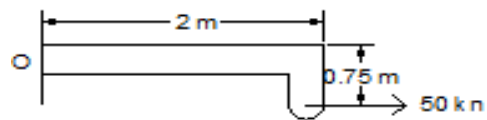

2. Determine the reactions at point o.

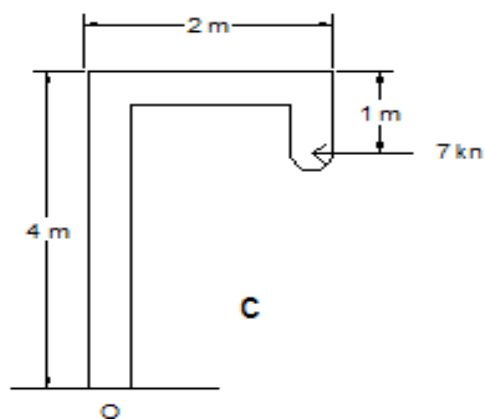3. Determine the reactions at point o.

4. Determine the moment of the force with respect to point o.
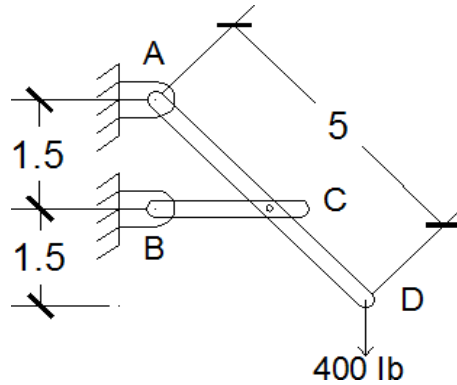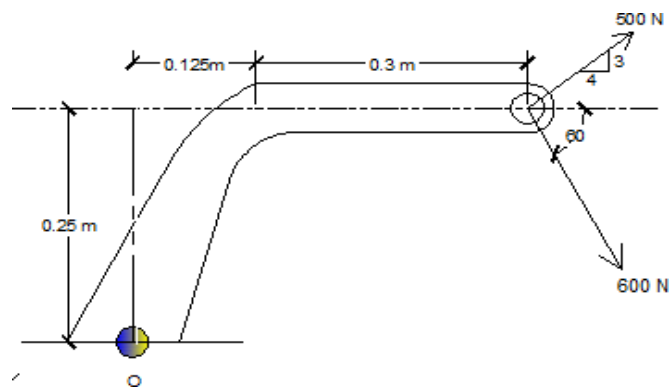

5. Determine the reactions at point o.

6. Determine the moment of the force with respect to point o.

7. Determine the moment of the force 400 Ib with respect to point A.

A

1.5

5

C

1.5   B

D

400 lb

8. Determine the resultant moment of the fig. shown below.

500 N

—0.125m—   —0.3 m—

3

4

60

0.25 m

600 N

O

9. Determine the components F 80 Ib in the fig. shown below.
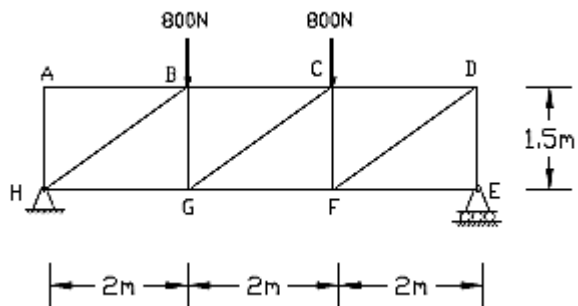
y

4 ft

3 ft

80 lb

Z

x

8 ft
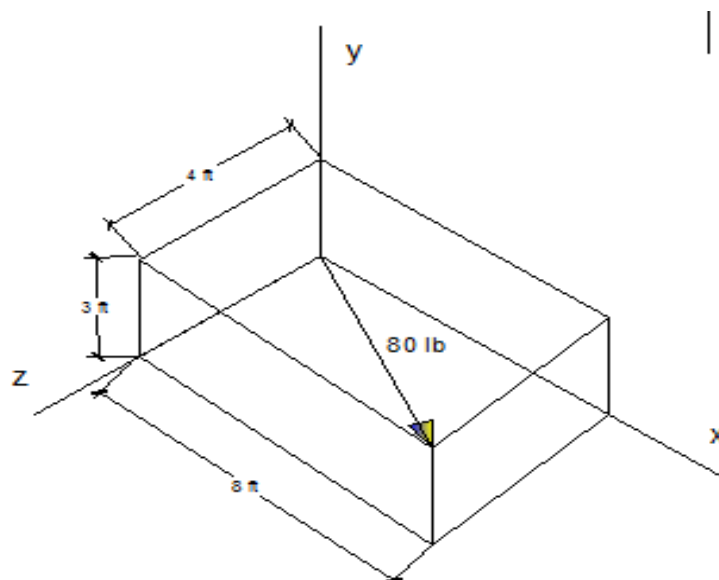
10. Determine the reactions at point o.
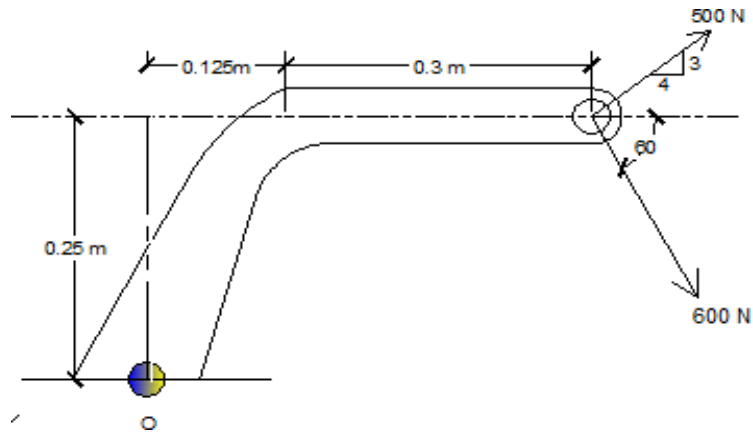
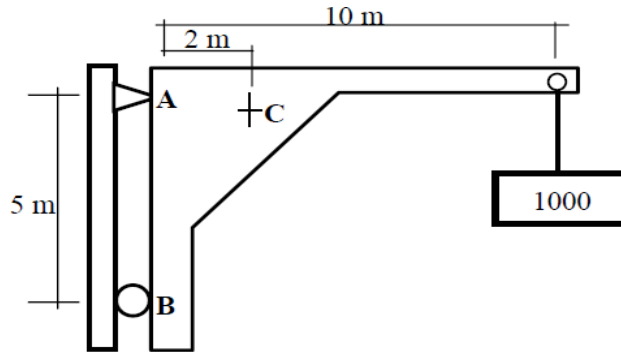11. Determine the reaction A and B in the fig. bellow.
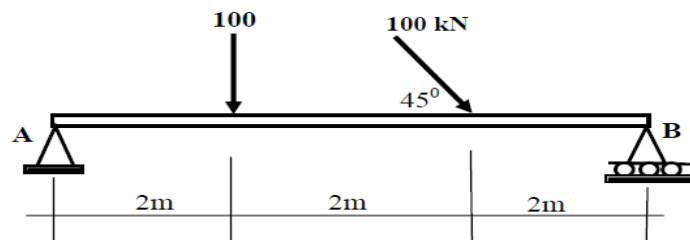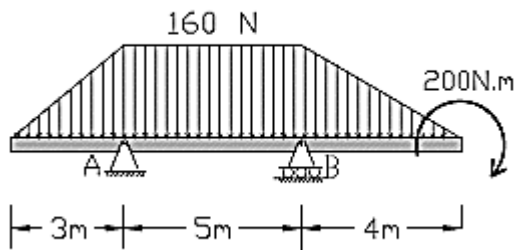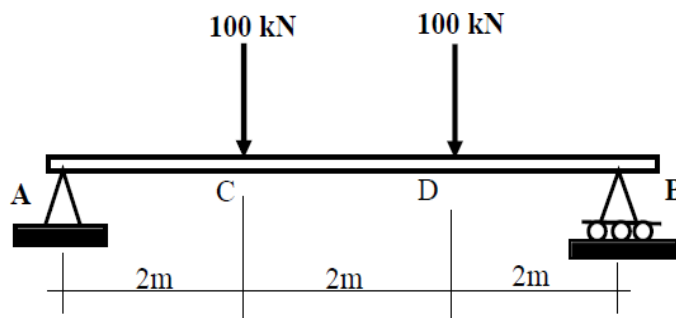

12. Determine the force in member AB.

13. Find the reactions at A and B.

14. Determine the reactions at point A.

15. Find the reactions at A and B.

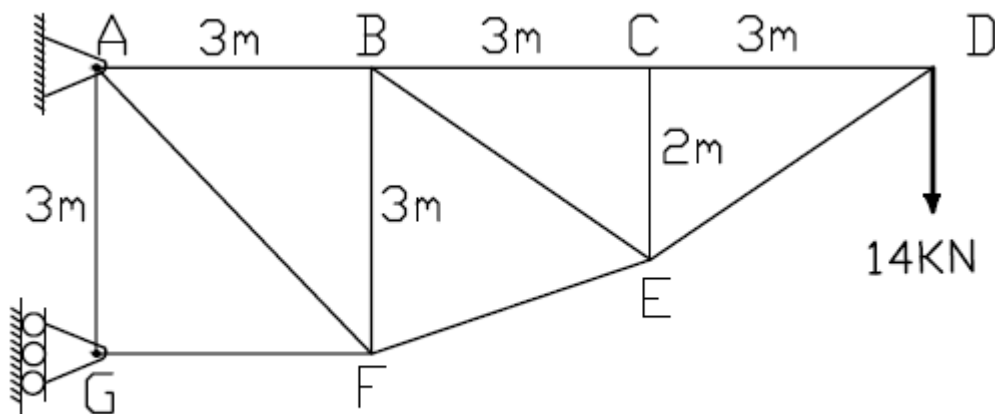16. Find the reaction of a 6m long simply supported beam subjected to a uniform distributed load of 5kN/m.

17. Find the reaction of a 2m long cantilever beam subjected to a uniform
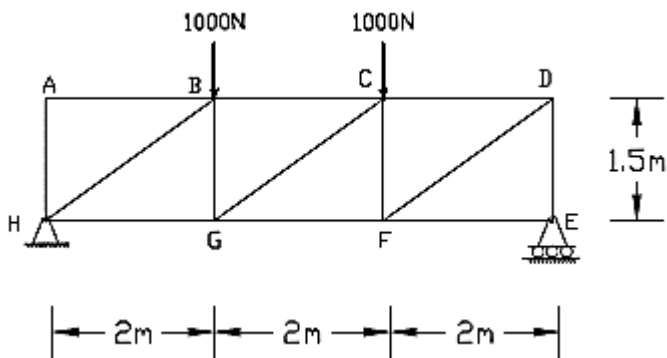
distributed load of 5kN/m.

18. Determine the reactions of a simply supported beam subjected to a concentrated load of 10kN at the mid of the 7m long span.

19. Determine the reactions of a cantilever beam subjected to a concentrated load of 10kN at the free end of the 2.2m long span.
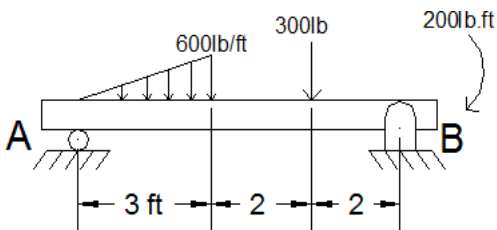

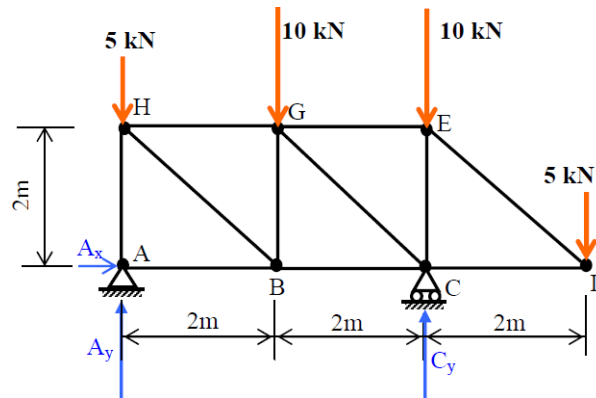20. Determine the force in member AB.

21. Determine the force in member BC.

22. Determine the reaction on the beam at A and B.

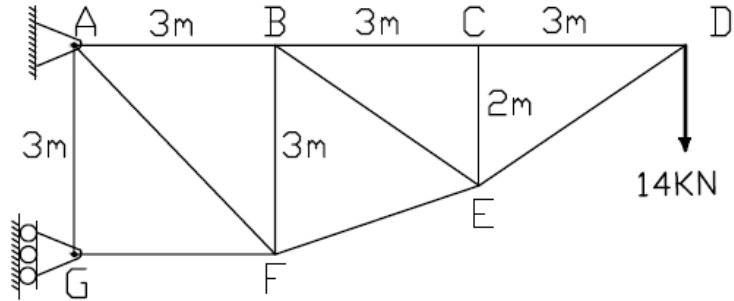23. Determine the force member AH and HB in truss shown in fig. bellow.

24. Find the reaction of a 7.5m long simply supported beam subjected to a uniform distributed load of 7kN/m.

25. Find the reaction of a 2.3m long cantilever beam subjected to a uniform distributed load of 4.5kN/m.
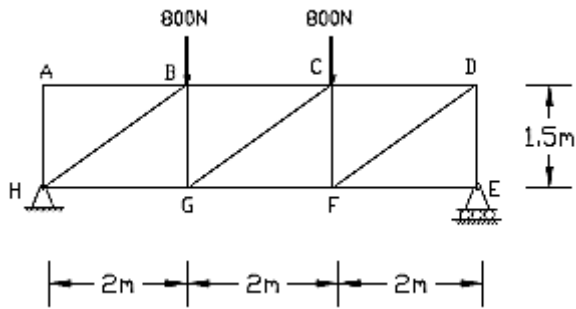
26. Determine the reactions of a simply supported beam subjected to a concentrated load of 9kN at the mid of the 6.5m long span.

27. Determine the reactions of a cantilever beam subjected to a concentrated load of 13kN at the free end of the 1.8m long span.
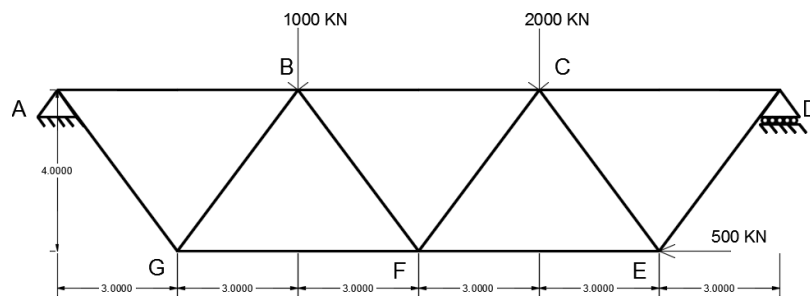
28. Determine the force in member AG.

29. Determine the force in member BE.

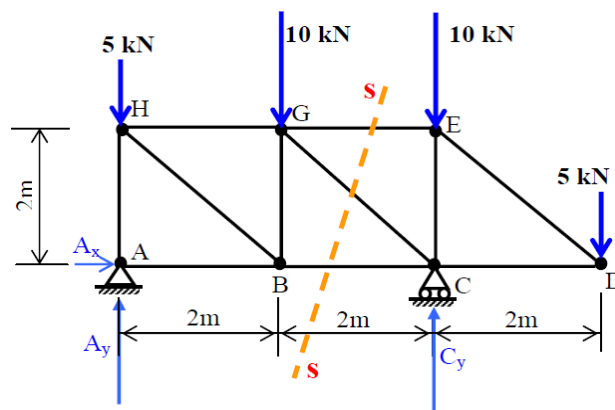## 30. Determine the force member AB and AG in truss shown below.

31. Find the reaction of a 4m long simply supported beam subjected to a uniform distributed load of 10kN/m.
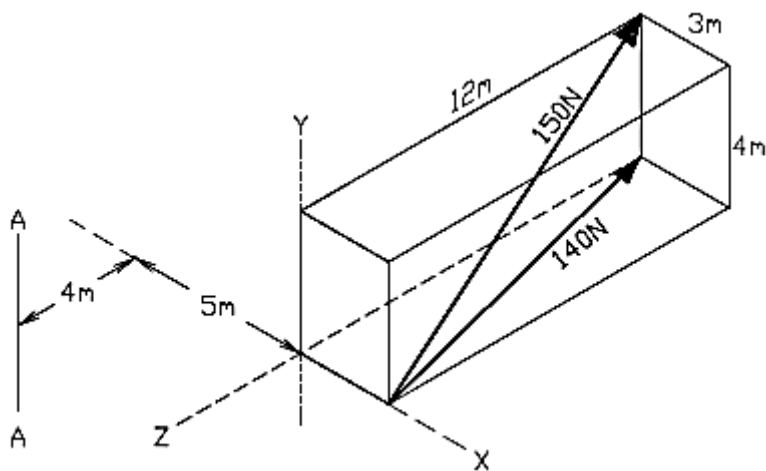
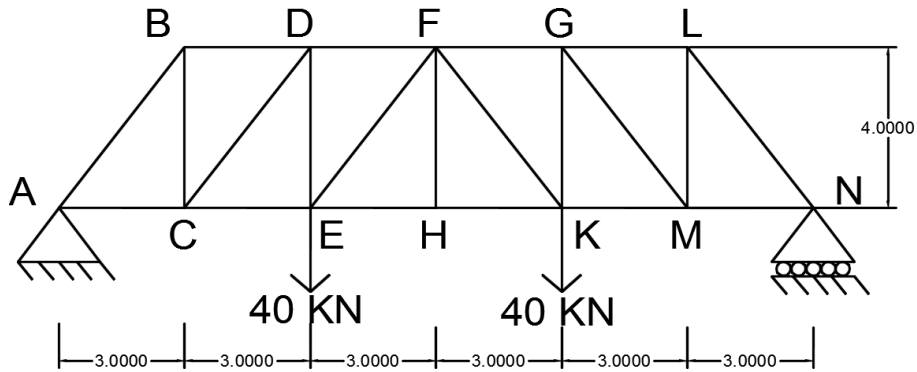32. Find the reaction of a 3m long cantilever beam subjected to a uniform distributed load of 4kN/m.

33. Determine the force member BC in truss shown in fig. bellow.

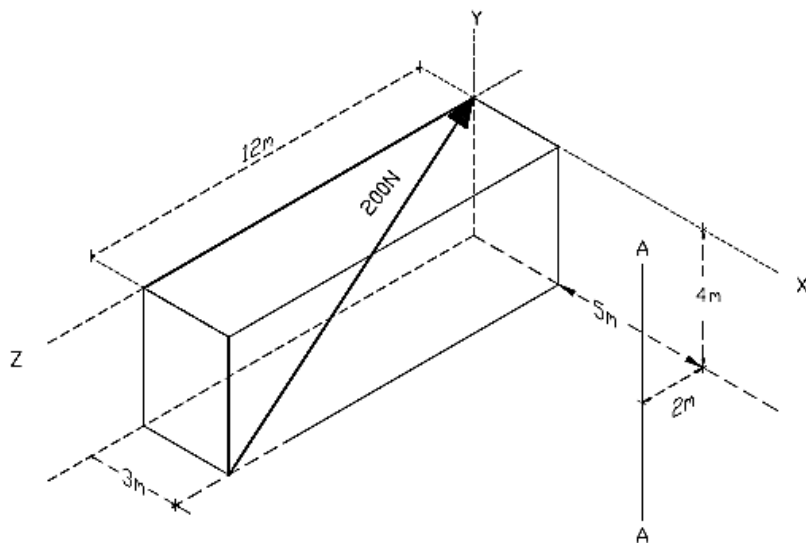34. Determine the moment of the force with respect to the line A-A.

35. Determine the forces in members AB, EF, CD and FH in truss shown below.

B D F G L

4.0000

A   N

C   E   H   K   M

40 KN   40 KN

|—3.0000—|—3.0000—|—3.0000—|—3.0000—|—3.0000—|—3.0000—|

36. Determine the reactions of a simply supported beam subjected to a concentrated load of 8kN at the mid of the 5.6m long span.

37. Determine the reactions of a cantilever beam subjected to a concentrated load of 6kN at the free end of the 1.9m long span.
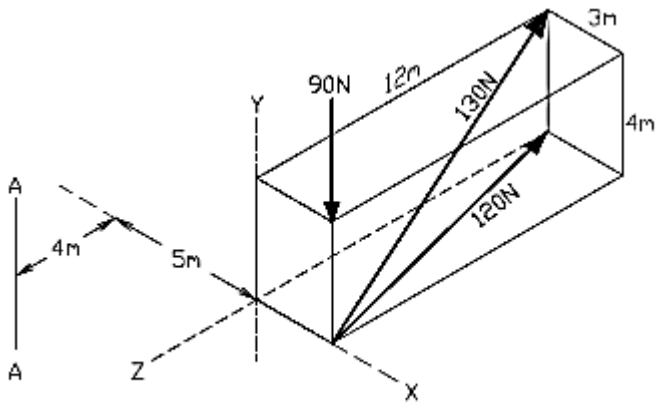
38. Determine the moment of the force with respect to the line A-A.
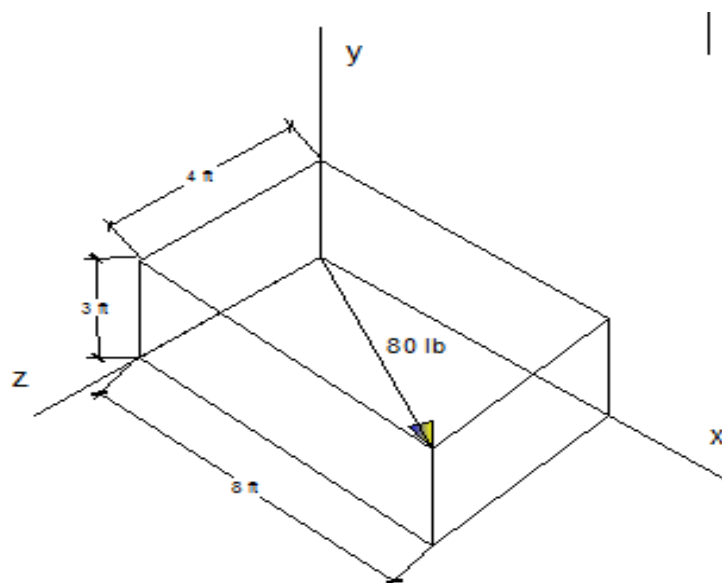

12m

200N

A

4m

X

5m

Z

2m

3m

A

39. Find the reaction of a 3.5m long simply supported beam subjected to a uniform distributed load of 7kN/m.

40. Find the reaction of a 1.5m long cantilever beam subjected to a uniform distributed load of 6kN/m.
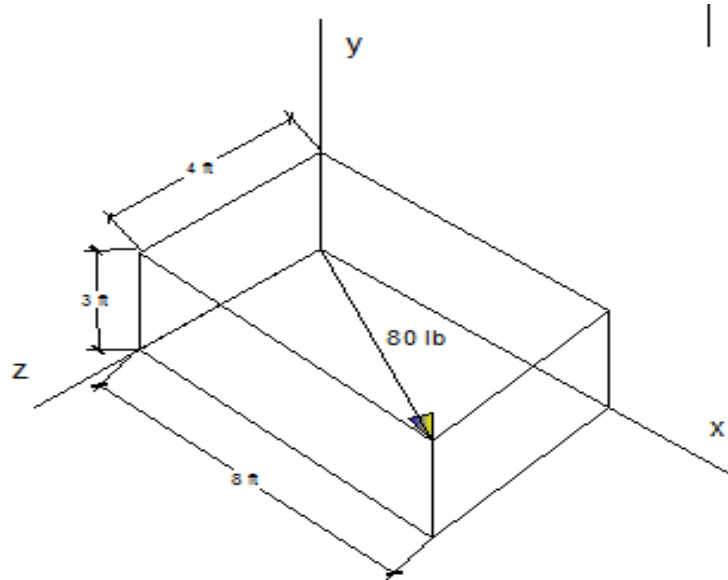
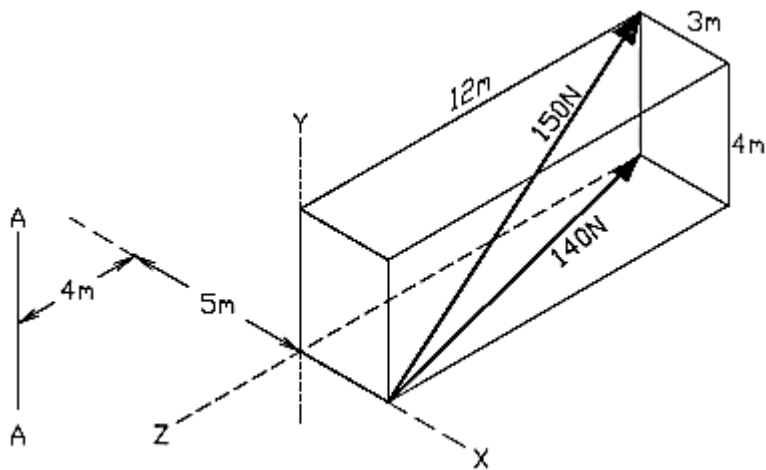41. Determine the moment of the force with respect to the line A-A.

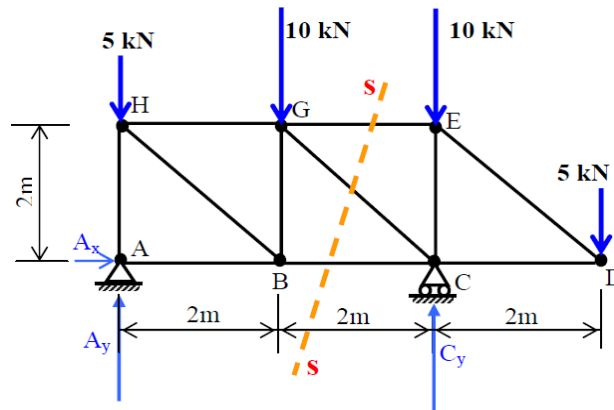42. Find the moment with respect to X axis.
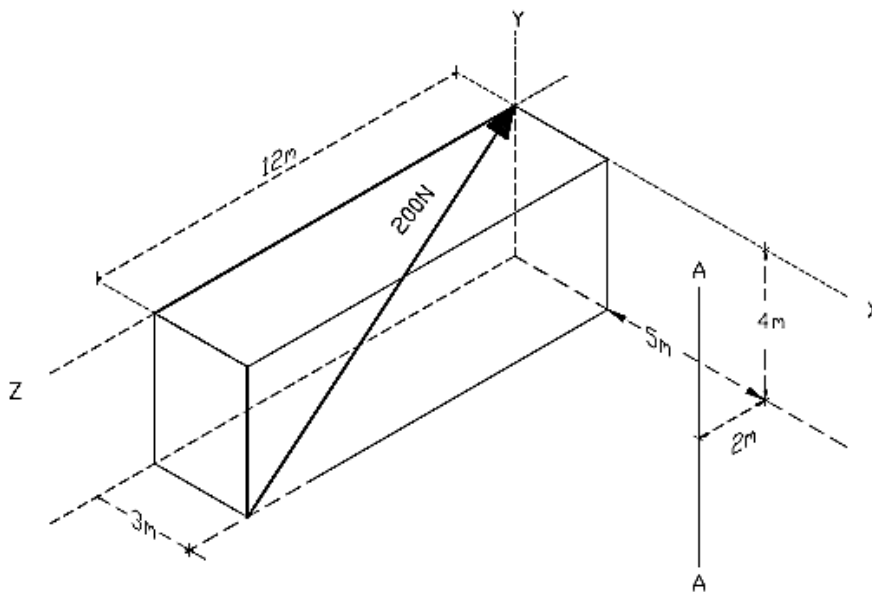
43. Find the moment with respect to Y axis.

44. Determine the moment of the force with respect to the X-axis.

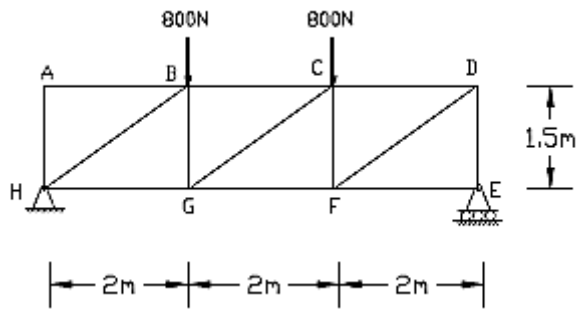## 45. Determine the force member GE in truss shown in fig. bellow.

46. Determine the moment of the force with respect to the line A-A.
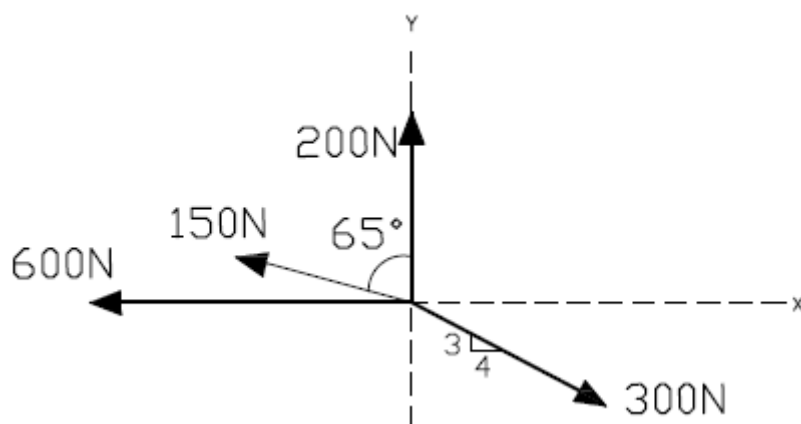

47. Determine the reactions of a simply supported beam subjected to a concentrated load of 5kN at the mid of the 4m long span.

48. Determine the reactions of a cantilever beam subjected to a concentrated load of 6.6kN at the free end of the 2.45m long span.
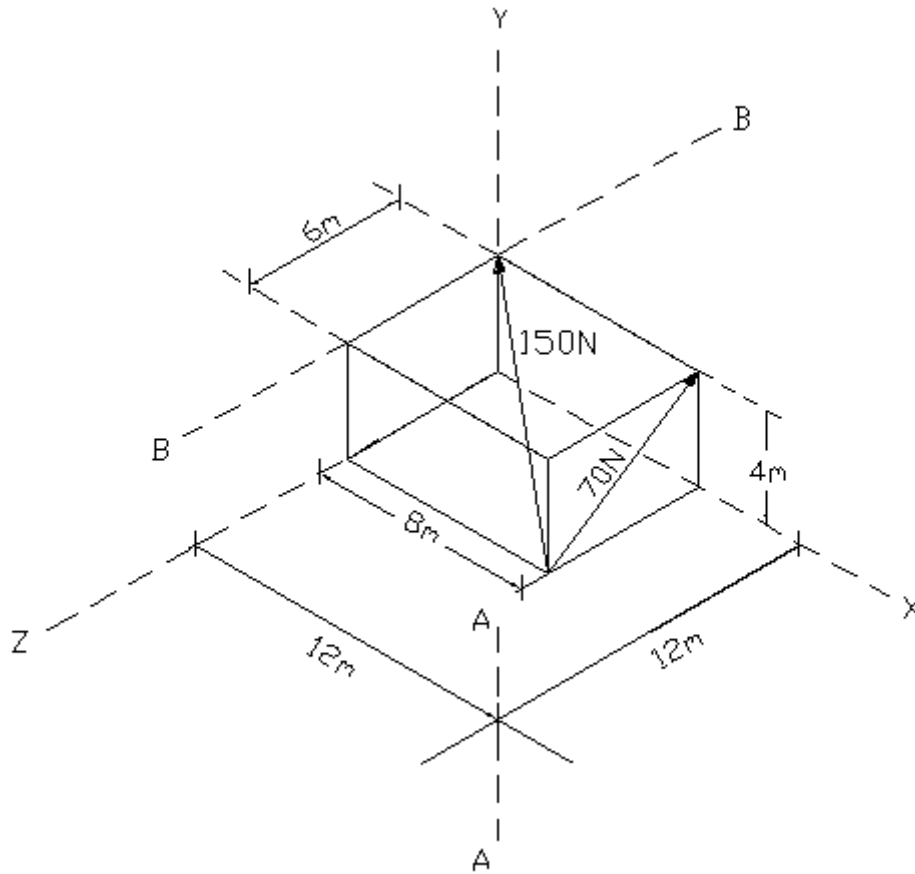
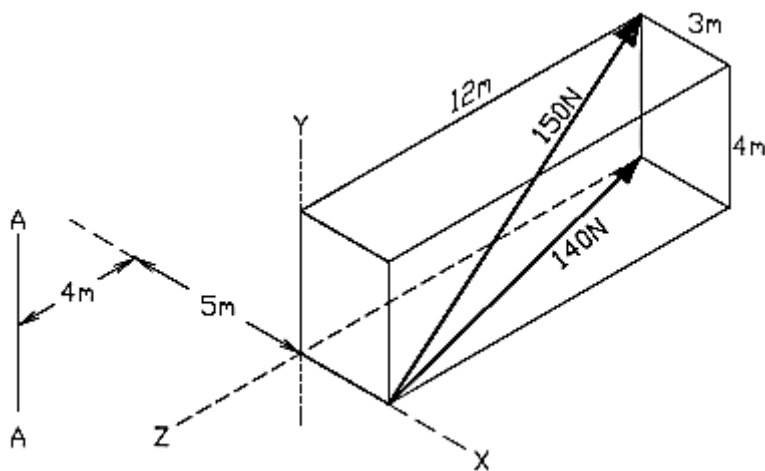## 49. Determine the force in the member CD in truss shown below.

800N   800N

A   B   C   D

H   G   F   E

1.5m

|← 2m →|← 2m →|← 2m →|

50. Find the resultant of the forces shown in the figure below.
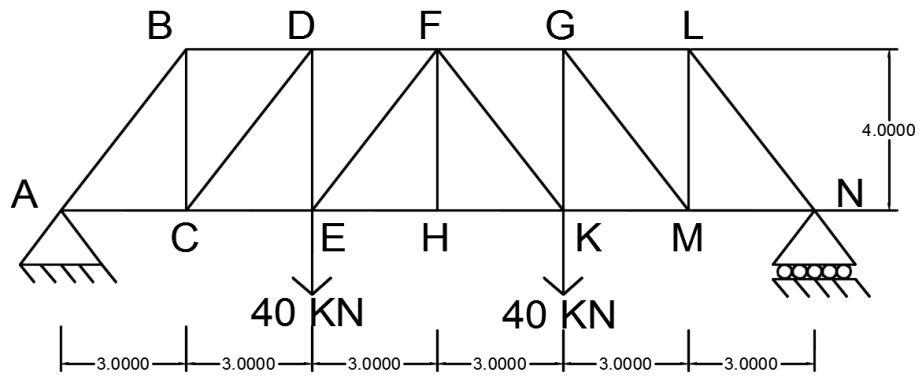

Y

200N

150N   65°

600N

X

3
4

300N

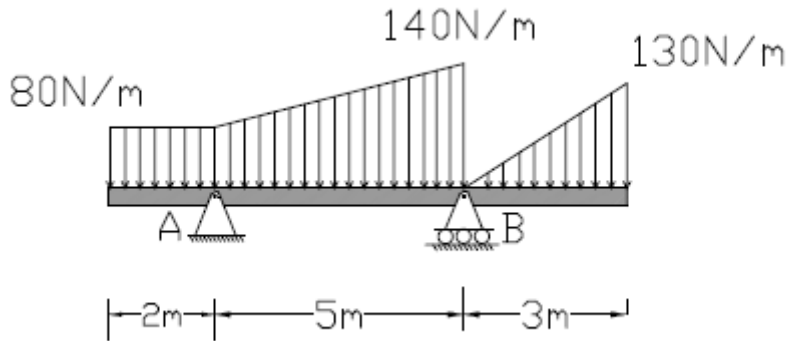51. Determine the moment with respect to the axis A-A in the figure below.

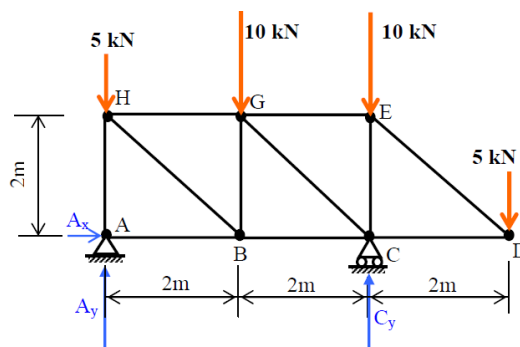52. Determine the moment with respect to the Y-axis in the figure below.

53. Determine the force member GL in truss shown in figure below.


B   D   F   G   L

A   N

C   E   H   K   M

4.0000

40 KN   40 KN

|—3.0000—|—3.0000—|—3.0000—|—3.0000—|—3.0000—|—3.0000—|

54. Determine the reaction at point A.

140N/m

130N/m

80N/m

A   B

|—2m—|———5m———|——3m——|

55. Determine the force member ED in truss shown in figure below.

5 kN   10 kN   10 kN

H   G   E

5 kN

2m

Ax   A

B   C   D

2m   2m   2m

Ay

Cy

56. Determine the reactions of a simply supported beam subjected to a concentrated load of 4.75kN at the mid of the 3.67m long span.

57. Determine the reactions of a cantilever beam subjected to a concentrated load of 12.4kN at the free end of the 2.6m long span.

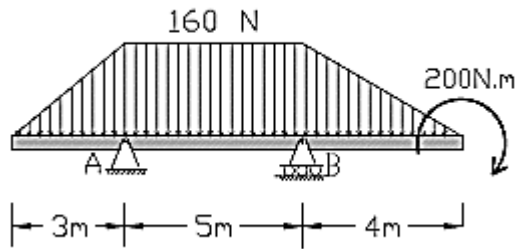58. Determine the moment with respect to the Y-axis in the figure below.
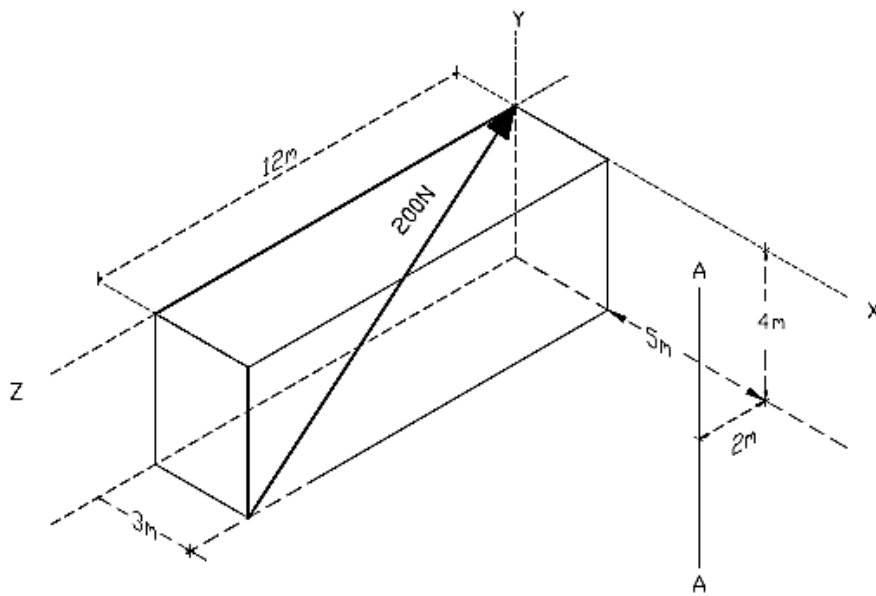
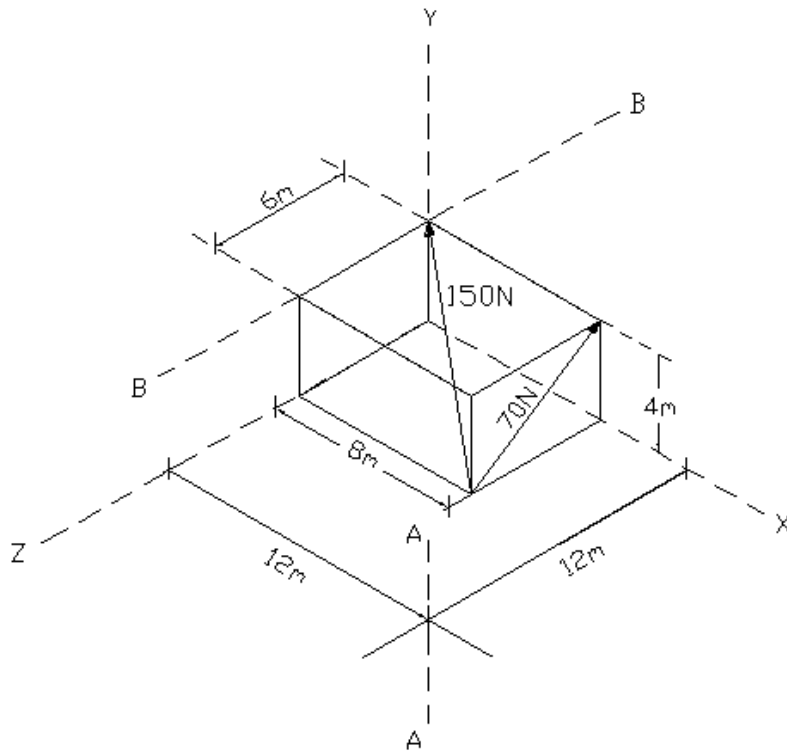59. Determine the force in the member GF in truss shown below.
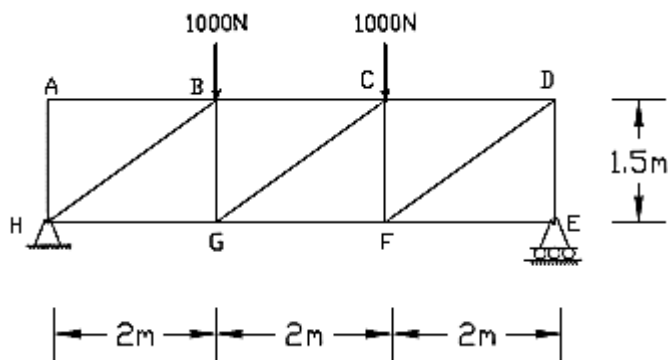
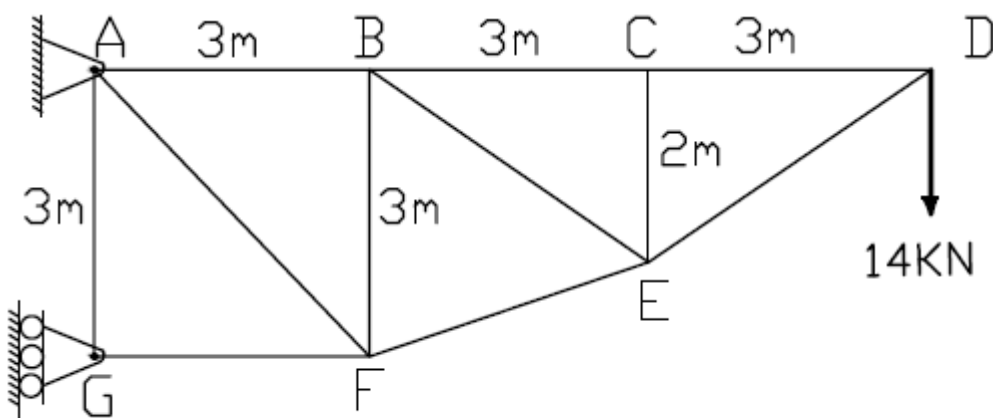60. Find the resultant of the forces shown in the figure below.
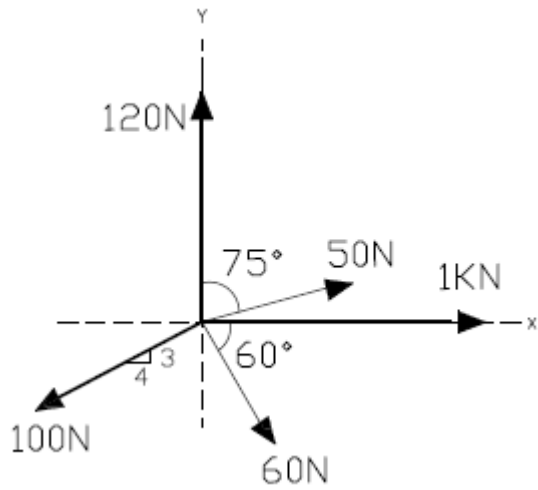
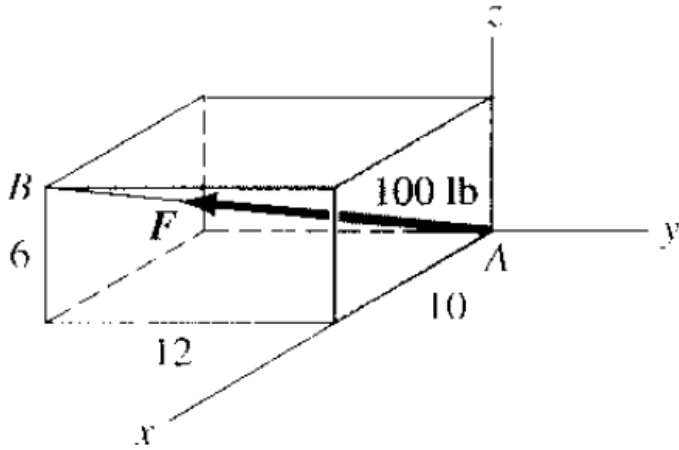

61. Determine the reaction at point B.

62. Determine the moment with respect to the axis Z-axis in the figure below.
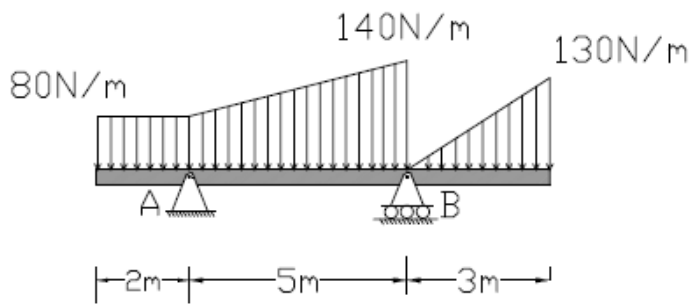

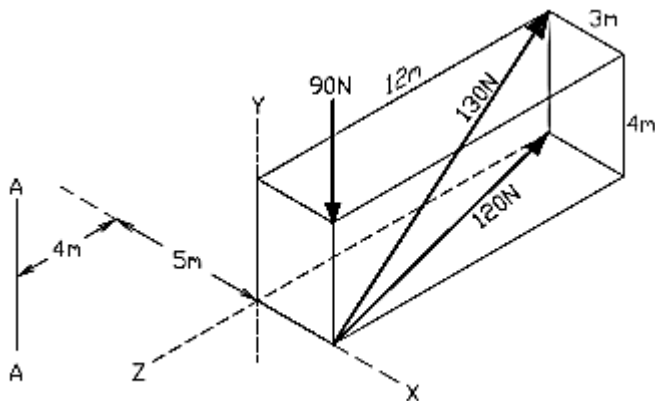63. Determine the force in the member CE in truss shown below.

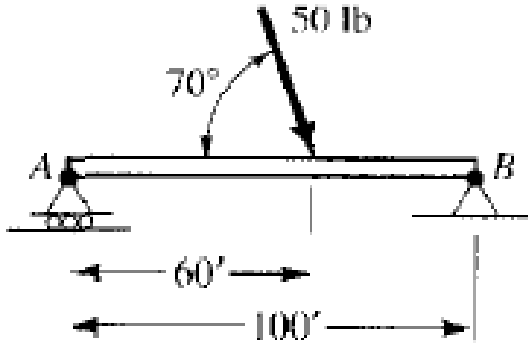64. Determine the moment with respect to the X-axis in the figure below.
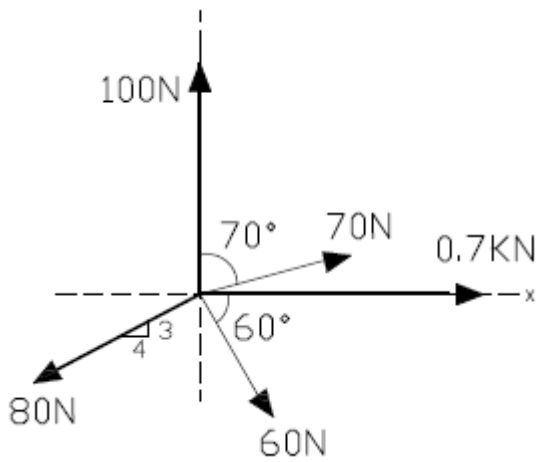

65. Determine the reactions at point B.

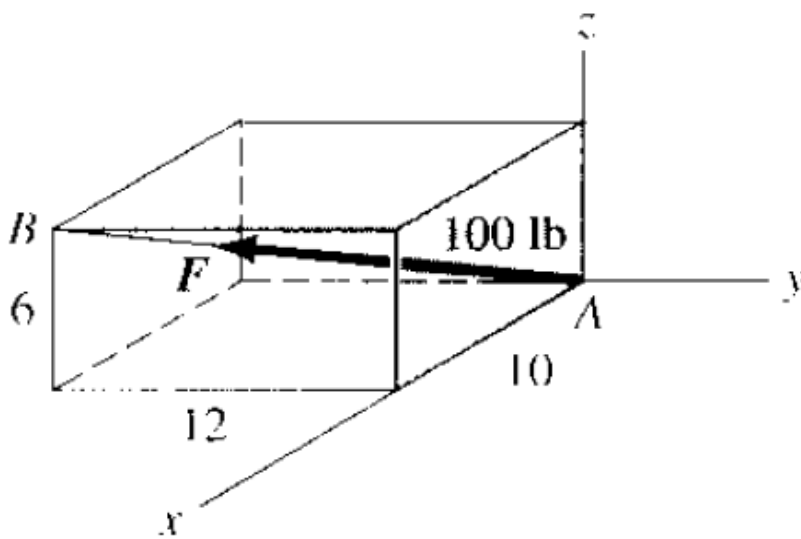66. Determine the moment with respect to the Z-axis in the figure below.

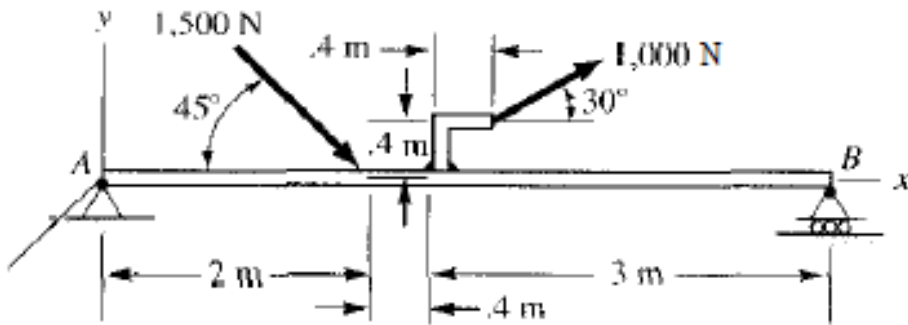67. Determine the reaction at point A.

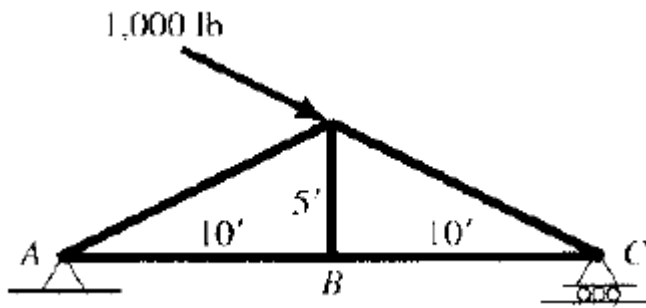68. Find the resultant of the forces shown in the figure below.

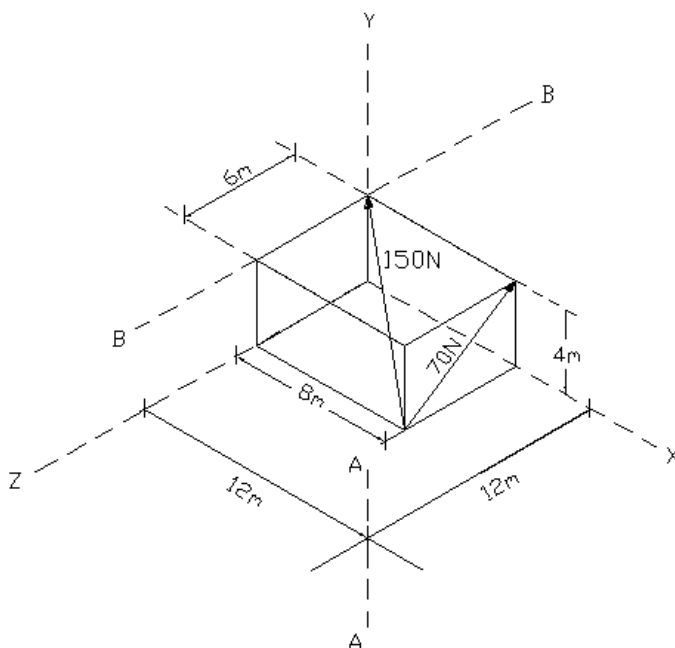69. Determine the moment with respect to the Z-axis in the figure below.

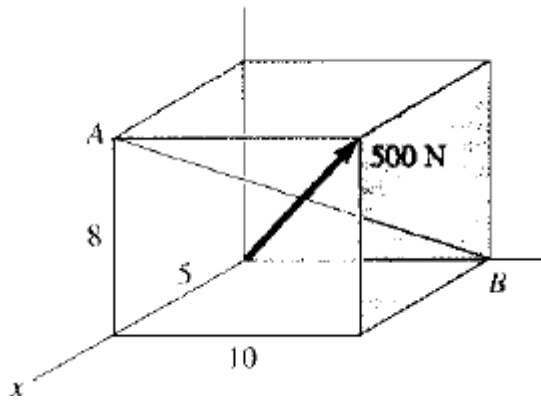## 70. Determine the reaction at point A.

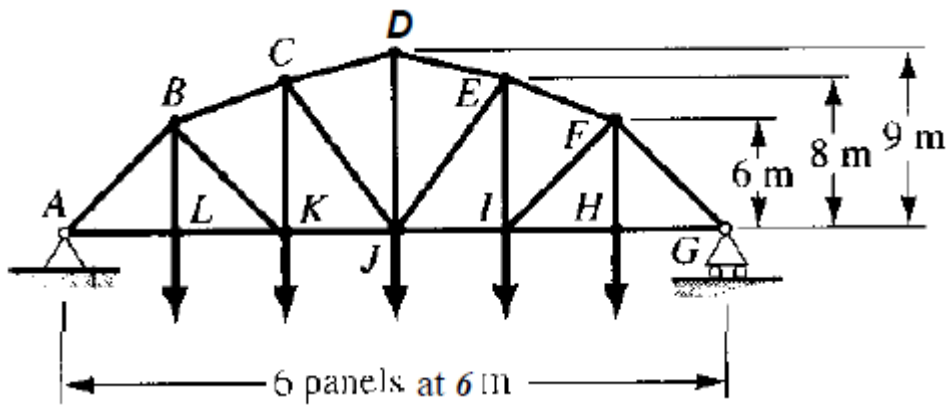## 71. Determine the reactions at point A.

72. Determine the moment with respect to the Z-axis in the figure below.
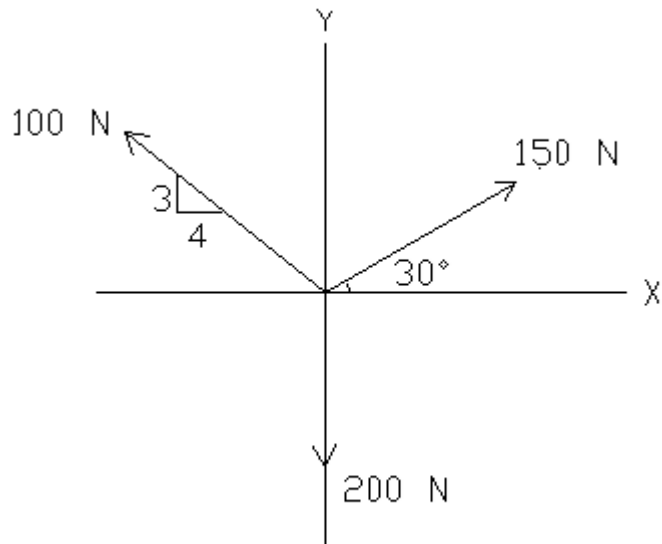
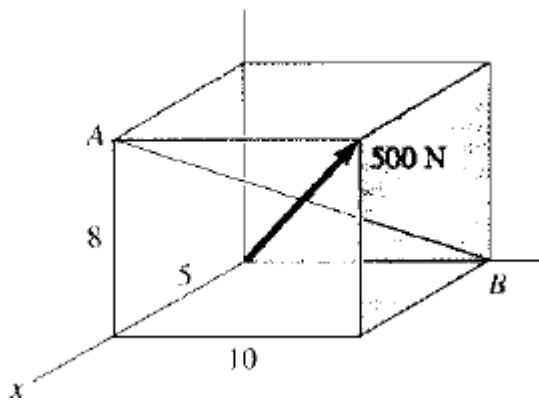73. Determine the moment with respect to the X-axis in the figure below.

74. Determine the force in the member KJ in truss shown below.

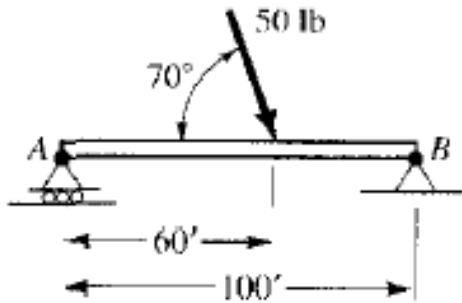75. Find the resultant of the forces shown in the figure below.

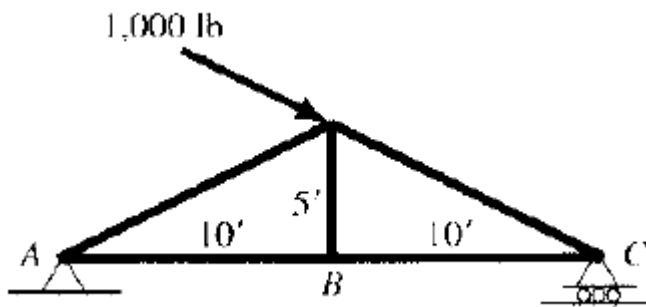76. Determine the component of the force in the figure below in the x, y, and z directions.
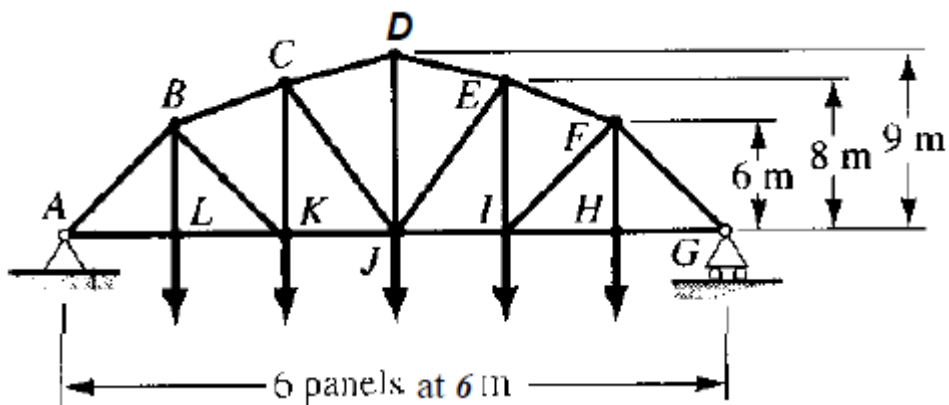
77. Determine the reaction at point B.

78. Determine the reaction at point C.

79. Determine the force in the member BL in truss shown below.

80. Determine the force in the member HB in truss shown below.