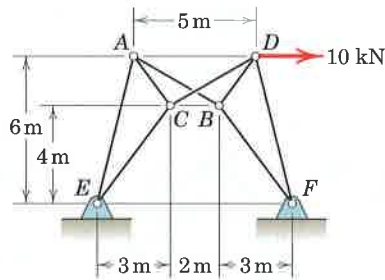


Problem 4/45

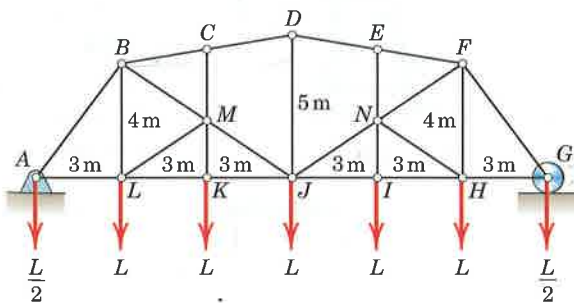
4/46 The hinged frames ACE and DFB are connected by two hinged bars, AB and CD , which cross without being connected. Compute the force in AB .



Problem 4/46

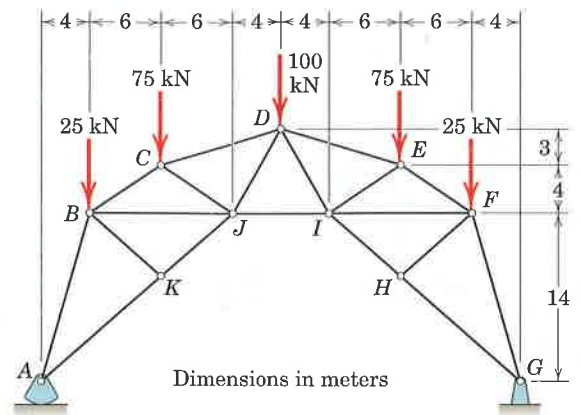
4/47 Determine the force in member JM of the loaded truss.

Ans. $JM = 0.0901L T$



Problem 4/47

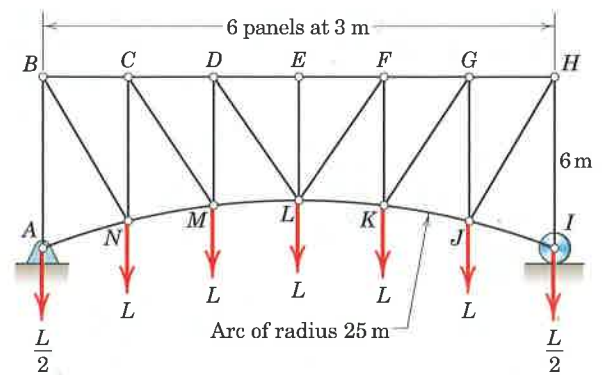
4/48 Determine the forces in members DE , EI , FI , and HI of the arched roof truss.



Problem 4/48

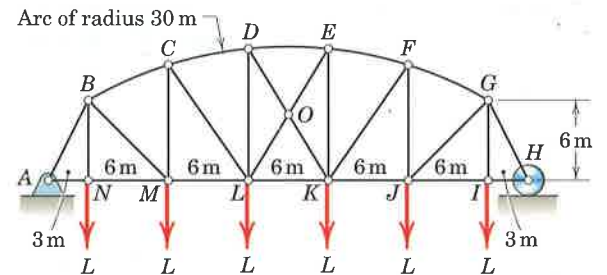
4/49 Determine the force in member GK of the loaded symmetrical truss.

Ans. $GK = 2.13L T$



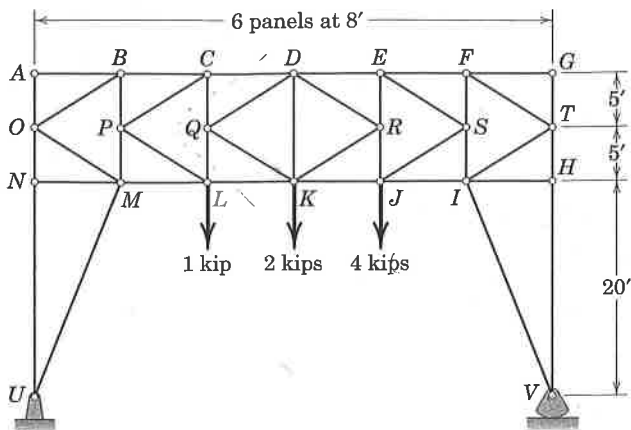
Problem 4/49

4/50 Determine the force in member CL of the loaded truss. The radius of curvature of the upper chord $BCDEFG$ is 30 m.



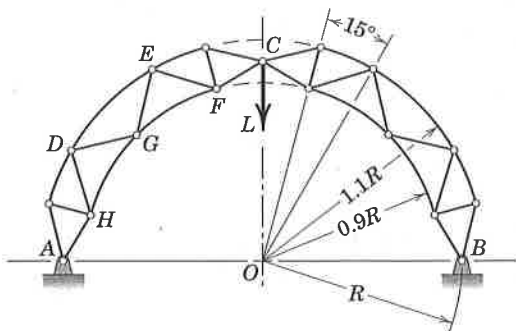
Problem 4/50

- 4/51 Determine the force in member DK of the loaded overhead sign truss.



Problem 4/51

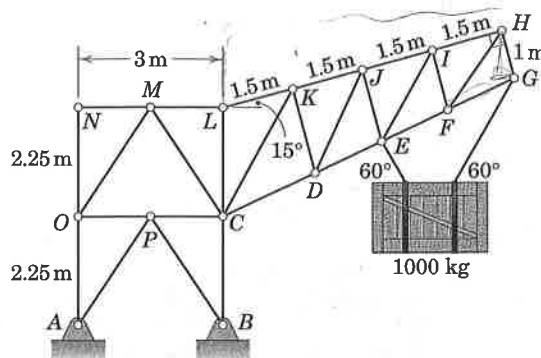
- 4/52 Determine the force in member DG of the compound truss. The joints all lie on radial lines subtending angles of 15° as indicated, and the curved members act as two-force members. Distance $OC = OA = OB = R$.
Ans. $DG = 0.569L C$



Problem 4/52

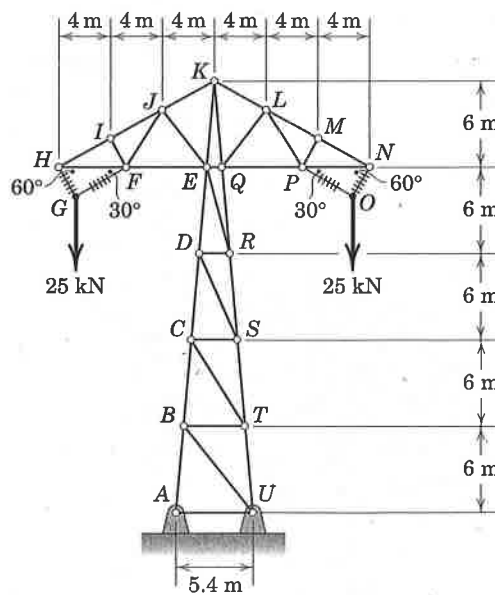
- 4/53 Determine the force in member CK of the loaded truss.

Ans. $CK = 9290 \text{ N C}$



Problem 4/53

- 4/54 A design model for a transmission-line tower is shown in the figure. Members $GH, FG, OP,$ and NO are insulated cables; all other members are steel bars. For the loading shown, compute the forces in members $FI, FJ, EJ, EK,$ and ER . Use a combination of methods if desired.



Problem 4/54

A truss consists of a pin-connected truss, a cable, and a support. In Fig. 4/54, the support forms a

We determine the additional forces at point H and H. The loads are formed

Ideally, the trusses can just and cor

Statics

When the truss is terminated at its joint without three supports, the truss is statically indeterminate. The truss is a three-dimensional truss.

As the truss is formed of three members, the static