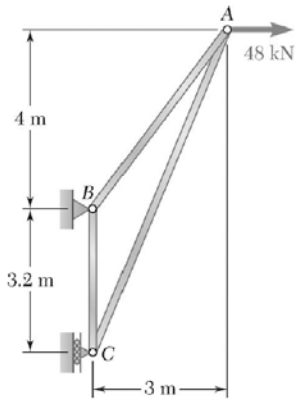
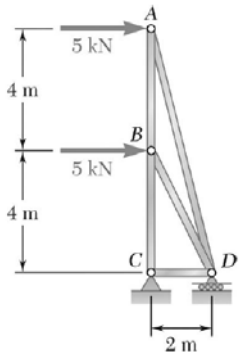


PROBLEM 6.1

Using the method of joints, determine the force in each member of the truss shown. State whether each member is in tension or compression.

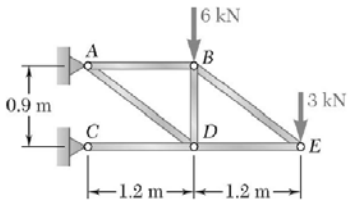
Ans. F_{AB} = 180.0 kN (T), F_{BC} = 144.0 kN (T), F_{AC} = 156.0 kN (C)



PROBLEM 6.7

Using the method of joints, determine the force in each member of the truss shown. State whether each member is in tension or compression.

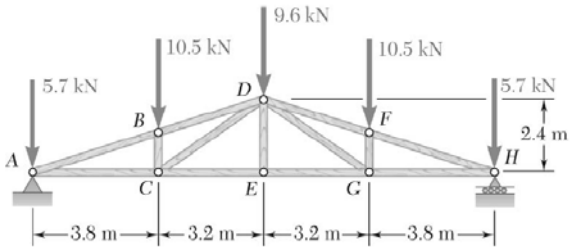
Ans. $F_{AB} = 20.0$ kN (T), $F_{AD} = 20.6$ kN (C), $F_{BD} = 11.18$ kN (C), $F_{BC} = 30.0$ kN (T)



PROBLEM 6.8

Using the method of joints, determine the force in each member of the truss shown. State whether each member is in tension or compression.

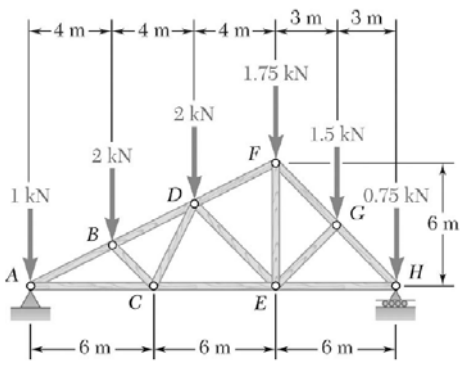
Ans. $F_{BE} = 5$ kN (T), $F_{DE} = 4$ kN (C), $F_{AB} = 4$ kN (T), $F_{BD} = 9$ kN (C), $F_{AD} = 15$ kN (T), $F_{CD} = 16$ kN (C)



PROBLEM 6.11

Determine the force in each member of the Pratt roof truss shown. State whether each member is in tension or compression.

Ans. F_{AB} = 47.2 kN (C), F_{AC} = 44.6 kN (T), F_{BC} = 10.5 kN (C), F_{BD} = 47.2 kN (C), F_{CD} = 17.5 kN (T), F_{CE} = 30.6 kN (T), F_{DE} = 0



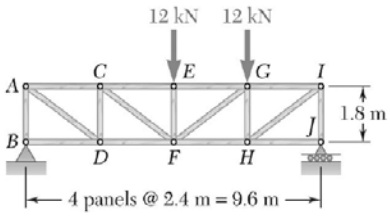
PROBLEM 6.13

Using the method of joints, determine the force in each member of the double-pitch roof truss shown. State whether each member is in tension or compression.

Ans. F_{AB} = 7.83 kN (C), F_{AC} = 7.00 kN (T), F_{BC} = 1.89 kN (C), F_{BD} = 6.34 kN (C),

F_{CD} = 1.49 kN (T), F_{CE} = 5.00 kN (T), F_{DE} = 2.83 kN (C), F_{DF} = 3.35 kN (C)

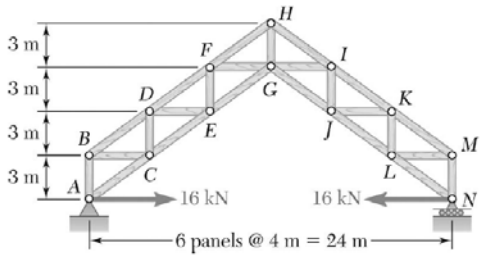
F_{FG} = 4.24 kN (C), F_{EF} = 2.75 kN (T), F_{GH} = 5.30 kN (C), F_{EG} = 1.06 kN (C), F_{EH} = 3.75 kN (T)



PROBLEM 6.44

Determine the force in members *FG* and *FH* of the truss shown.

Ans. $F_{FG} = 5.00$ kN (T), $F_{FH} = 20.0$ kN (T)



PROBLEM 6.47

Determine the force in members *DF*, *EF*, and *EG* of the truss shown.

Ans. $F_{DF} = 40.0$ kN (T), $F_{EF} = 12.0$ kN (T), $F_{EG} = 60.0$ kN (C)