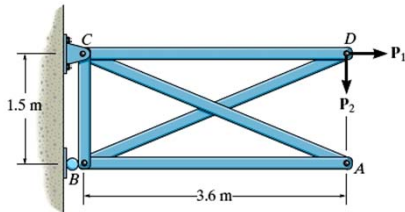
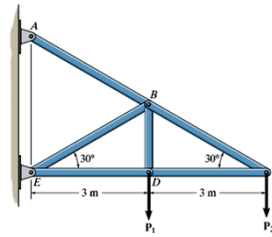


Exercise

6-7. Determine the force in each member of the truss and state if the members are in tension or compression. Set $P_1 = P_2 = 4 \text{ kN}$.

$F_{CB} = 8.00 \text{ kN (T)}$ $F_{CD} = 6.928 \text{ kN (C)}$
 $F_{DE} = 6.93 \text{ kN (C)}$ $F_{DB} = 4.00 \text{ kN (T)}$ **Ans.**
 $F_{BE} = 4.00 \text{ kN (C)}$ $F_{BA} = 12.0 \text{ kN (T)}$

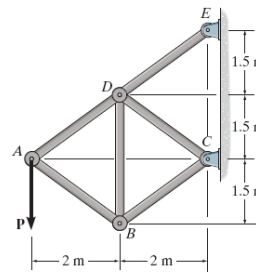


6-13. Determine the largest load P_2 that can be applied to the truss so that the force in any member does not exceed 2.5 kN (T) or 1.75 kN (C) . Take $P_1 = 0$.

$P_2 = 0.673 \text{ kN}$ **Ans**

6-17. Determine the greatest force P that can be applied to the truss so that none of the members are subjected to a force exceeding either 2.5 kN in tension or 2 kN in compression.

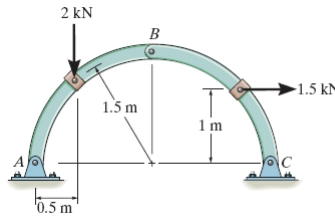
$P = 1.50 \text{ kN}$ **Ans.**



Exercise

6-83. Determine the horizontal and vertical components of reaction that pins A and C exert on the two-member arch.

$A_x = 0.167 \text{ kN} \leftarrow$ $C_x = 1.33 \text{ kN} \leftarrow$
 $A_y = 1.17 \text{ kN} \uparrow$ $C_y = 0.833 \text{ kN} \uparrow$



Exercise

6-87. The hoist supports the 125-kg engine. Determine the force the load creates in member DB and in member FB , which contains the hydraulic cylinder H .

$F_{FB} = 1938.87 \text{ N} = 1.94 \text{ kN}$
 $F_{BD} = 2601.27 \text{ N} = 2.60 \text{ kN}$

