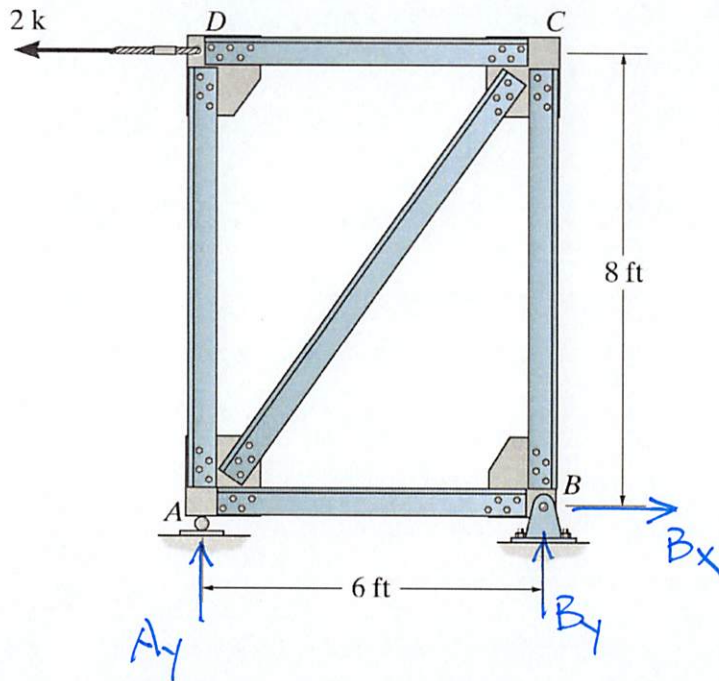


Example 3b-2. Determine all the forces in the following truss.



$$\sum M_B = 0 = 2k(8') - A_y(6')$$

$$\underline{A_y = 2.67k}$$

$$\sum F_y = 0 = A_y + B_y$$

$$\underline{B_y = -2.67k}$$

$$\sum F_x = 0 = B_x - 2k$$

$$\underline{B_x = 2k}$$

JOINT D

$$\begin{aligned} \sum F_y = 0 \\ = -F_{AD} = 0 \\ \underline{F_{AD} = 0} \end{aligned}$$

$$\begin{aligned} \sum F_x = 0 \\ = F_{CD} - 2k \\ \underline{F_{CD} = 2k} \end{aligned}$$

JOINT B

$$\begin{aligned} \sum F_y = 0 \\ = F_{BC} - 2.67k \\ \underline{F_{BC} = 2.67k} \end{aligned}$$

$$\begin{aligned} \sum F_x = 0 \\ = -F_{AB} + 2k \\ \underline{F_{AB} = 2k} \end{aligned}$$

JOINT C

$$\begin{aligned} \sum F_y = 0 \\ = -F_{BC} - \frac{4}{5}F_{AC} \\ \underline{F_{AC} = -3.33k} \end{aligned}$$