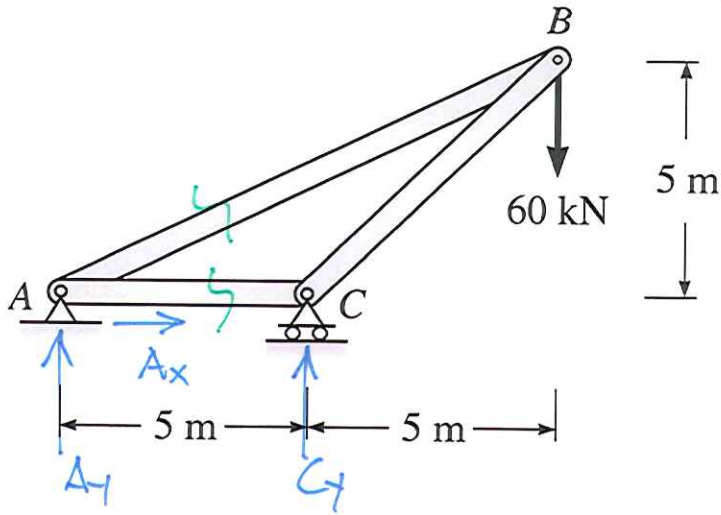


Example 3-1. Determine all the forces in the following truss.



$$\sum M_A = 0 = C_y(5\text{m}) - 60\text{kN}(10\text{m})$$

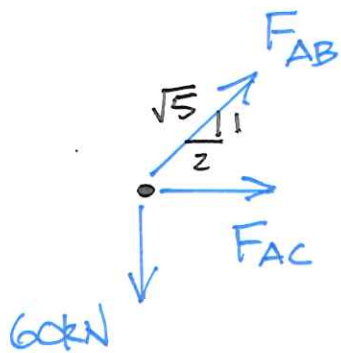
$$C_y = 120\text{kN}$$

$$\sum F_y = 0 = A_y + C_y - 60\text{kN}$$

$$A_y = -60\text{kN}$$

$$\sum F_x = 0 = A_x$$

JOINT A



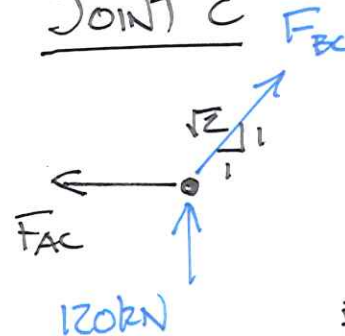
$$\sum F_y = 0 = \frac{1}{\sqrt{5}} F_{AB} - 60\text{kN}$$

$$F_{AB} = 134.2\text{kN}$$

$$\sum F_x = 0 = F_{AC} + \frac{2}{\sqrt{5}} F_{AB}$$

$$F_{AC} = -120\text{kN}$$

JOINT C



$$\sum F_y = 0$$

$$= \frac{1}{\sqrt{2}} F_{BC} + 120\text{kN}$$

$$F_{BC} = -169.7\text{kN}$$