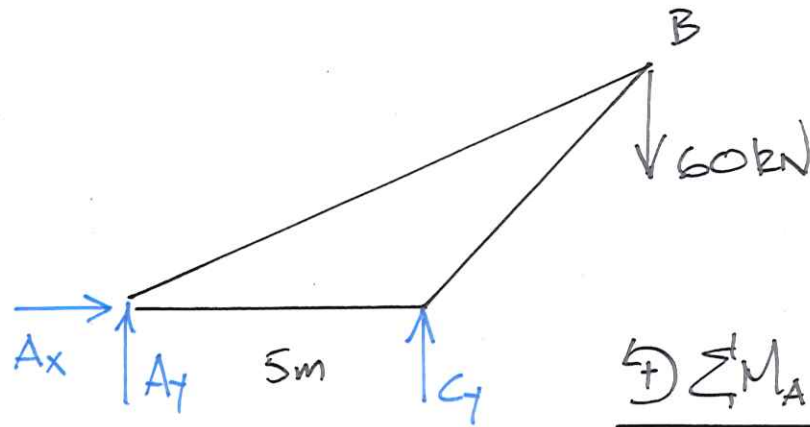
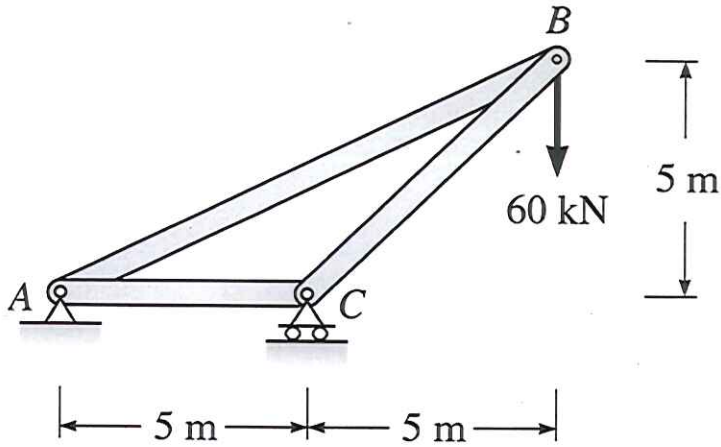
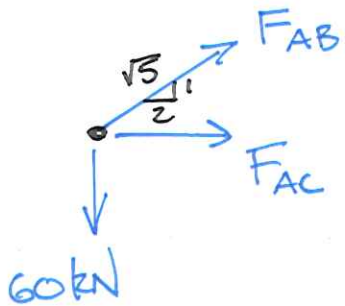


Example 3-1. Determine all the forces in the following truss.



JOINT A



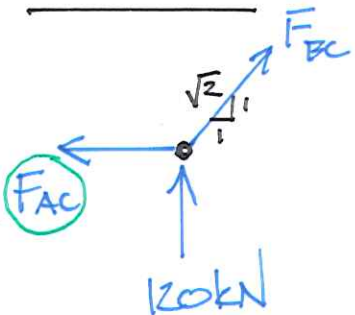
$$\uparrow \sum F_y = 0 = \frac{1}{\sqrt{5}} F_{AB} - 60 \text{ kN}$$

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

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

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

JOINT C



$$\uparrow \sum F_y = 0 = \frac{1}{\sqrt{2}} F_{BC} + 120 \text{ kN}$$

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

$$\odot \sum M_A = 0$$

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

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

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

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

$$\rightarrow \sum F_x = 0 = A_x$$

$$\underline{\underline{A_x = 0}}$$