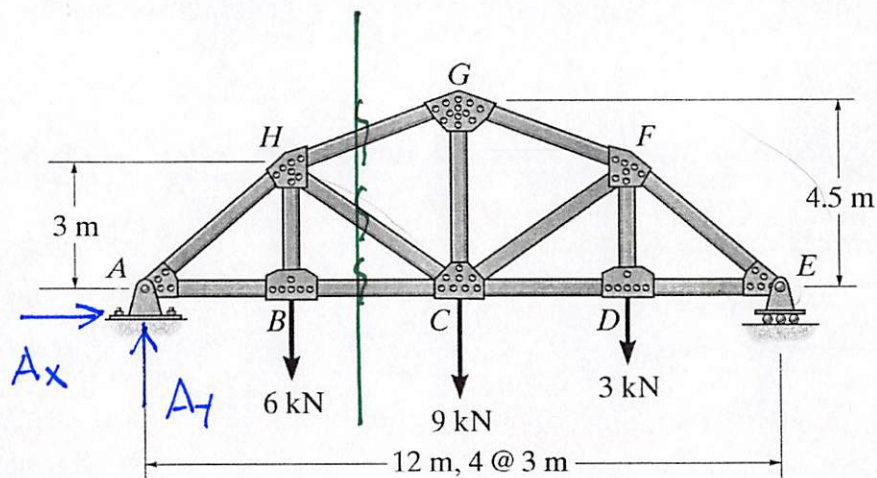


Problem 3c-4: Determine the forces in members GH, HC, and BC.



$$\sum M_E = 0 = 3 \text{ kN}(3\text{m}) + 9 \text{ kN}(6\text{m}) + 6 \text{ kN}(9\text{m}) - A_y(12\text{m})$$

$$A_y = 9.75 \text{ kN}$$

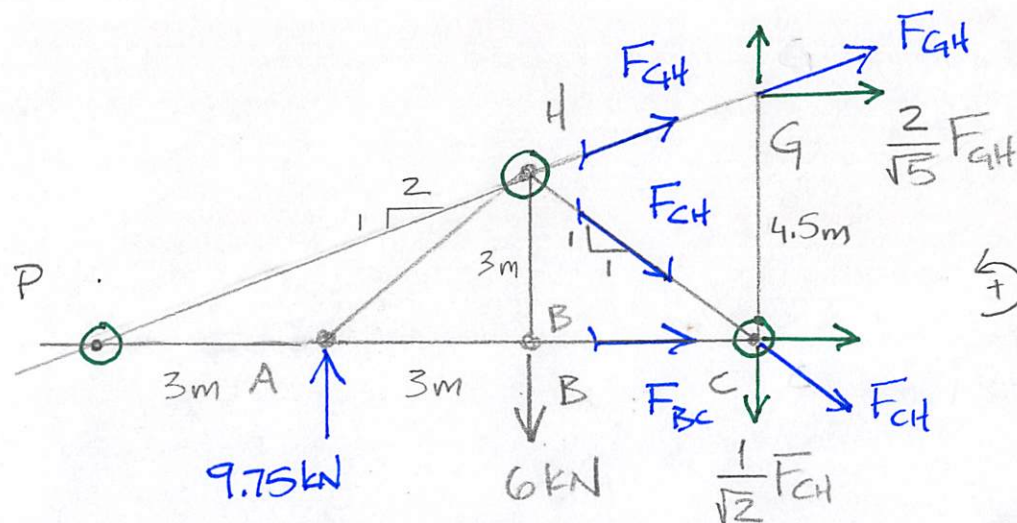
$$\sum F_x = 0 = A_x$$

$$\sum M_C = 0 = -\frac{2}{\sqrt{5}} F_{GH}(4.5\text{m}) + 6 \text{ kN}(3\text{m}) - 9.75 \text{ kN}(6\text{m})$$

$$F_{GH} = -10.06 \text{ kN}$$

$$\sum M_H = 0 = F_{BC}(3\text{m}) - 9.75 \text{ kN}(3\text{m})$$

$$F_{BC} = 9.75 \text{ kN}$$



$$\sum F_x = 0 = F_{BC} + \frac{1}{\sqrt{2}} F_{CH} + \frac{2}{\sqrt{5}} F_{GH}$$

$$F_{CH} = -1.06 \text{ kN} \checkmark$$

$$\sum M_P = 0 = -\frac{1}{\sqrt{2}} F_{CH}(9\text{m}) + 9.75 \text{ kN}(3\text{m}) - 6 \text{ kN}(6\text{m})$$

$$F_{CH} = -1.06 \text{ kN}$$