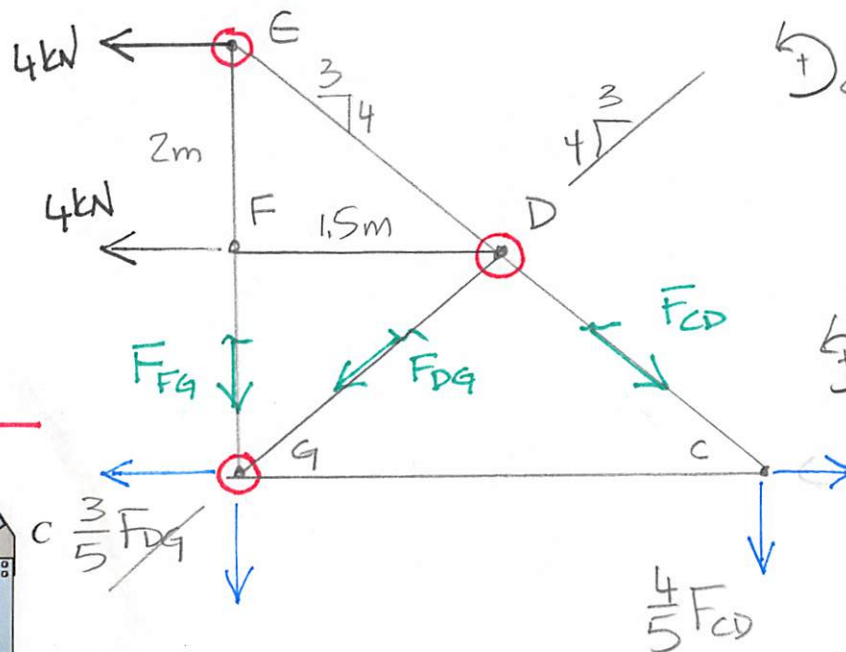
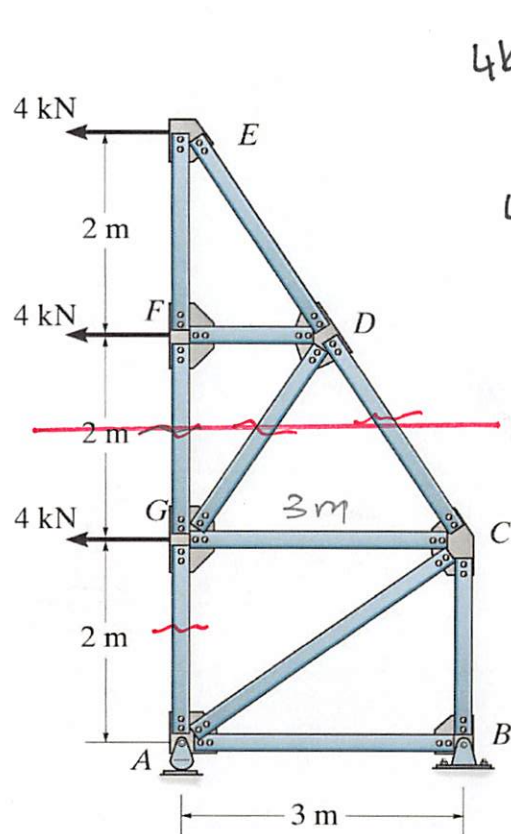


Problem 3c-3: Determine the forces in members FG, GD, CD, and GA.

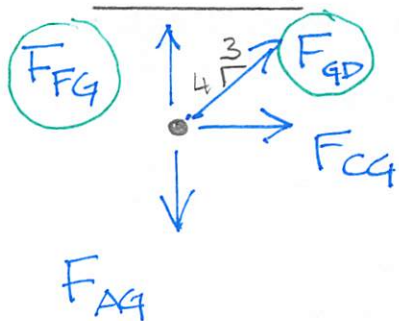


$$\begin{aligned} \sum M_D = 0 &= F_{FG}(1.5\text{m}) + 4\text{kN}(2\text{m}) \\ F_{FG} &= -5.33\text{ kN} \end{aligned}$$

$$\begin{aligned} \sum M_E = 0 &= -\frac{3}{5}F_{DG}(4\text{m}) - 4\text{kN}(2\text{m}) \\ F_{DG} &= -3.33\text{ kN} \end{aligned}$$

$$\begin{aligned} \sum M_G = 0 &= -\frac{4}{5}F_{CD}(3\text{m}) + 4\text{kN}(2\text{m} + 4\text{m}) \\ F_{CD} &= 10\text{ kN} \end{aligned}$$

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$$\begin{aligned} +\uparrow \sum F_y &= 0 \\ &= \frac{4}{5}F_{GD} + F_{FG} - F_{AG} \end{aligned}$$

$$F_{AG} = -8\text{ kN}$$