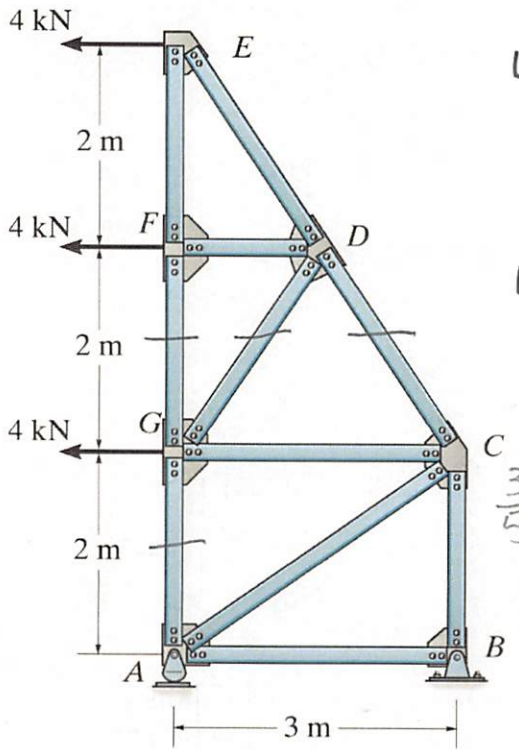
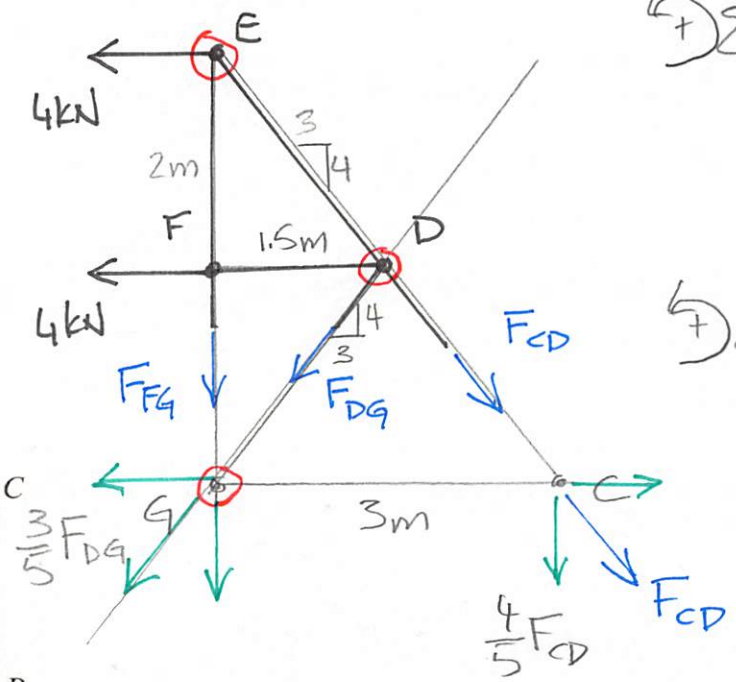
Problem 3c-3: Determine the forces in members *FG*, *GD*, *CD*, and *GA*.





$$\circlearrowleft +\Sigma M_D = 0 = F_{FG}(1.5m) + 4kN(2m)$$

$$F_{FG} = -5.33kN$$

$$\circlearrowleft +\Sigma M_G = 0 = -\frac{4}{5}F_{CD}(3m) + 4kN(2m+4m)$$

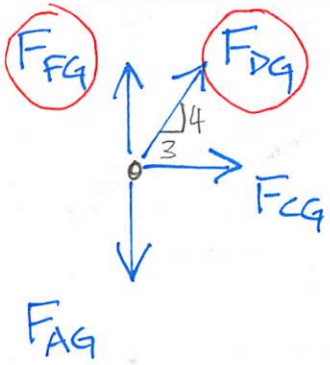
$$F_{CD} = 10kN$$

$$\circlearrowleft +\Sigma M_E = 0$$

$$= -\frac{3}{5}F_{DG}(4m) - 4kN(2m)$$

$$F_{DG} = -3.33kN$$

JOINT G



$$+\uparrow \Sigma F_y = 0$$

$$= -F_{AG} + F_{FG} + \frac{4}{5}F_{DG}$$

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