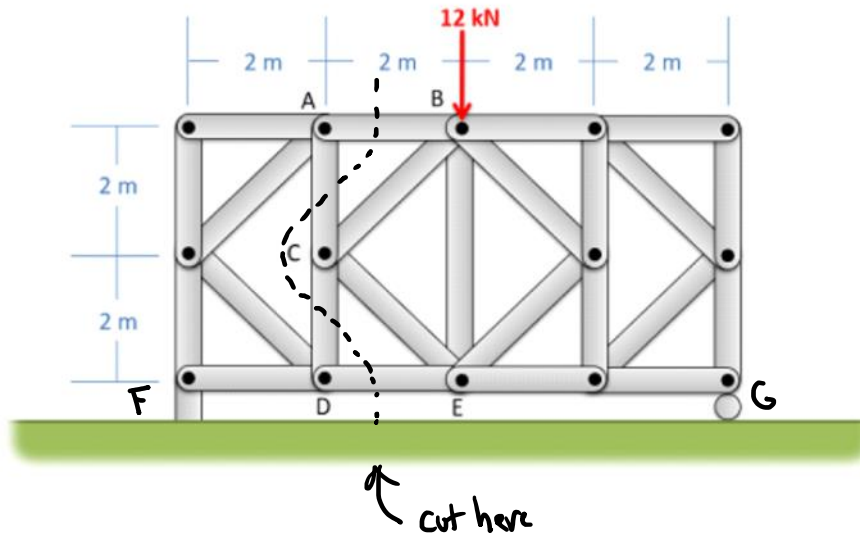
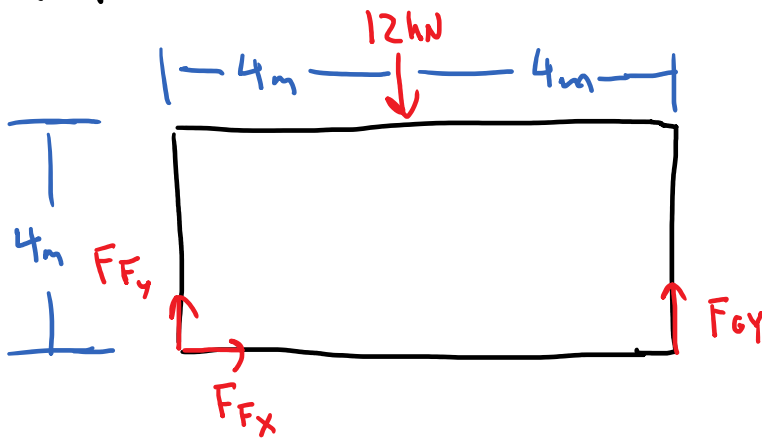


# Problem 3

Use the method of sections to find the forces in members AB and DE. Be sure to indicate if the forces are tensile or compressive.



whole structure



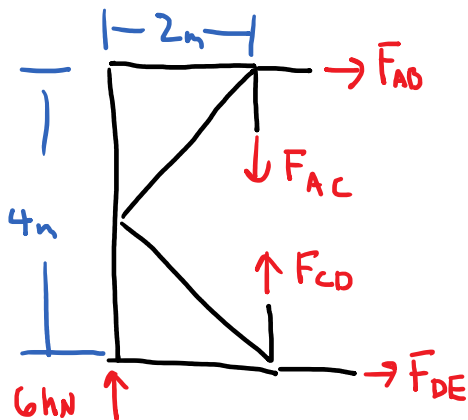
$$\sum F_x = F_{Fx} = 0$$

$$\sum F_y = F_{Fy} + F_{Gy} - 12 = 0$$

$$\sum M_F = (F_{Gy})(8) - (12)(4) = 0$$

$$\underline{F_{Fy} = F_{Gy} = 6 \text{ kN}}$$

left half



$$\sum F_x = F_{AB} + F_{DE} = 0$$

$$\sum M_D = -(6)(2) - (F_{AD})(4) = 0$$

$$F_{AB} = -12 \text{ kN} \rightarrow \boxed{12 \text{ kN C}}$$

$$F_{DE} = 12 \text{ kN} \rightarrow \boxed{12 \text{ kN T}}$$