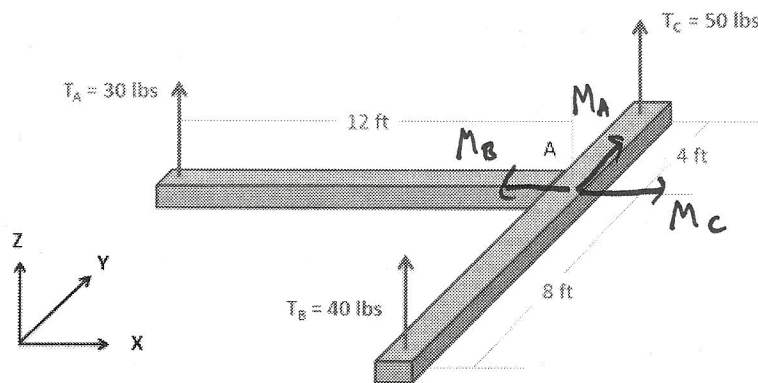


What are the moments that each of the three tension forces exert about point A (the point where the beams come together)?



T_A

$$M = F \times d = (30)(12)$$

$$M_A = 360 \text{ ft}\cdot\text{lbs}$$

$$M_A = [0, 360, 0] \text{ ft}\cdot\text{lbs}$$

T_B

$$M = F \times d = (40)(8)$$

$$M_B = 320 \text{ ft}\cdot\text{lbs}$$

$$M_B = [-320, 0, 0] \text{ ft}\cdot\text{lbs}$$

T_C

$$M = F \times d = (50)(4)$$

$$M_C = 200 \text{ ft}\cdot\text{lbs}$$

$$M_C = [200, 0, 0] \text{ ft}\cdot\text{lbs}$$