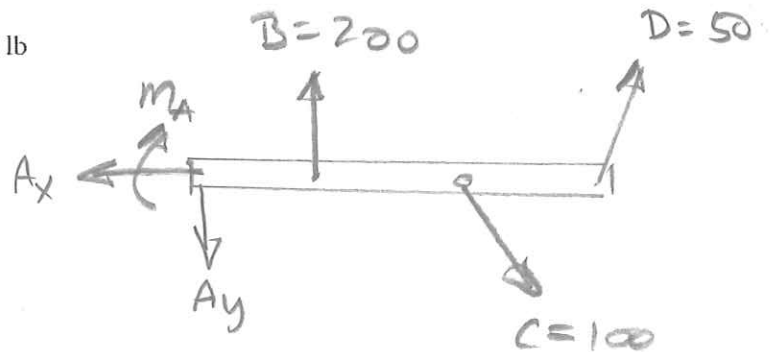
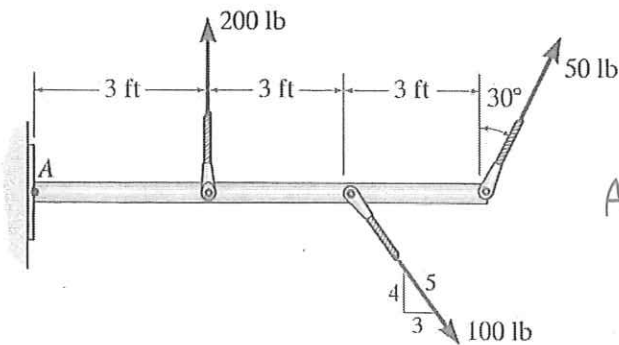


Determine the reactions at the fixed connection at point A.



$$\sum M_A = 0$$

$$+ B(3) - C_y(6) + D_y(9) - M = 0$$

$$M_A = (200)(3) - 80(6) + (50 \cos 30^\circ) 9$$

$$M_A = 509.7 \text{ FT LB}$$

$$\sum F_x = 0$$

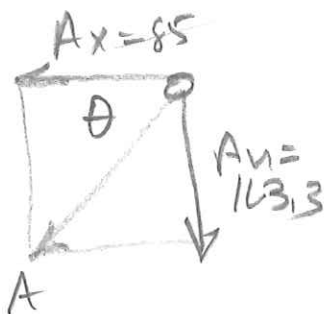
$$-A_x + C_x + D_x = 0$$

$$A_x = 60 + 50 \sin 30^\circ = 85 \text{ LB}$$

$$\sum F_y = 0$$

$$-A_y + B - C_y + D_y = 0$$

$$A_y = 200 - 80 + 43.3 = 163.3 \text{ LB}$$



$$A = \sqrt{A_x^2 + A_y^2} = 184 \text{ LB}$$

$$\theta = \tan^{-1}\left(\frac{A_y}{A_x}\right) = 27.5^\circ$$

$$\bar{A} = 184 \text{ LB @ } 27.5^\circ$$