

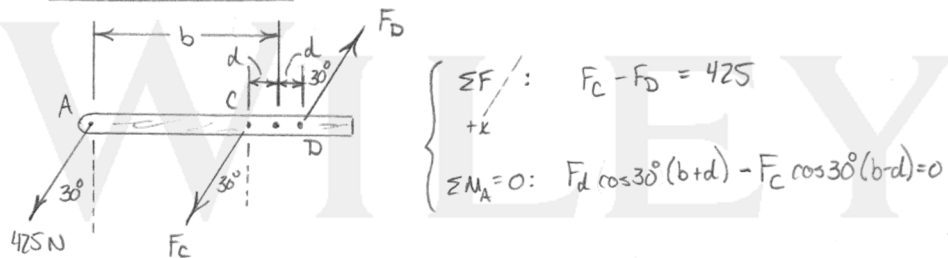
a) Force - Couple At B:

$F = 425 \text{ N @ } 120^\circ \text{ CW BELOW HORIZONTAL}$

$$M_B = F \cos \theta b + F \sin \theta (l - h) = 425 \cos 30^\circ (1.9) + 425 \sin 30^\circ (2.75 - 0.8)$$

$$\therefore M_B = 1114 \text{ N}\cdot\text{m CCW}$$

b) Forces At C And D:



Solving...

$$\begin{cases} F_C = 2230 \text{ N @ } 120^\circ \text{ CW BELOW HORIZONTAL} \\ F_D = 1806 \text{ N @ } 60^\circ \text{ CCW ABOVE HORIZONTAL} \end{cases}$$