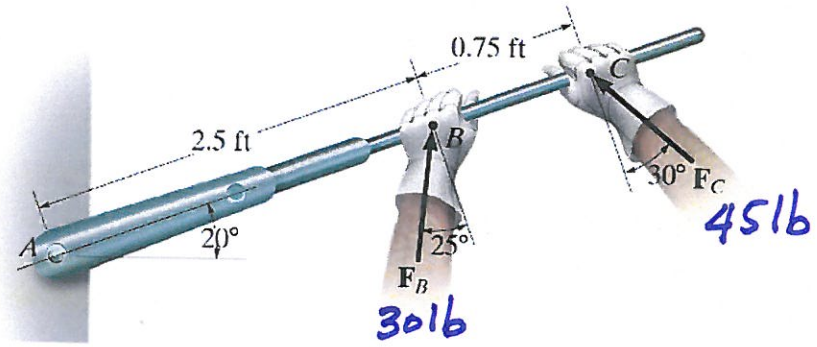
If $F_B = 30$ lb and $F_C = 45$ lb, determine the resultant moment about the bolt located at A.

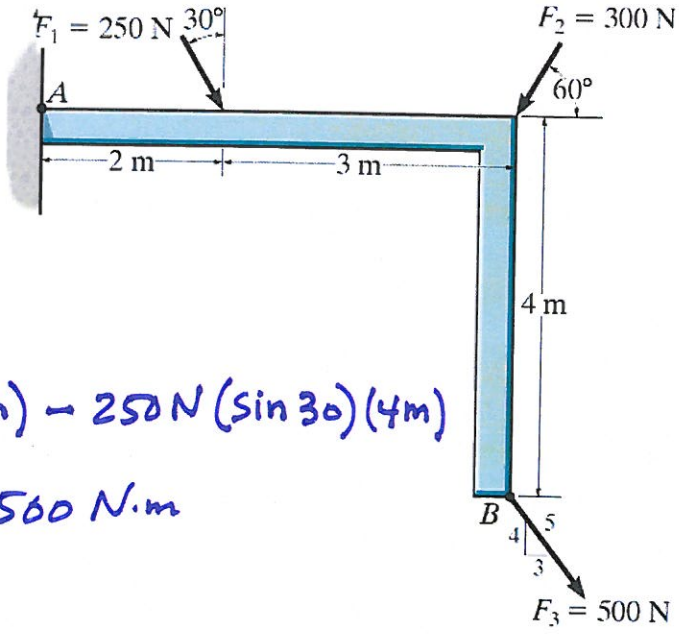


$$\curvearrowleft \Sigma M_A = (30\,\text{lb})(\cos 25)(2.5\,\text{ft}) + 45\,\text{lb}\,(\cos 30)\,3.25\,\text{ft}$$

$$= 67.973\ \text{lb}\cdot\text{ft} + 126.656\ \text{lb}\cdot\text{ft}$$

$$= \underline{194.6\ \text{lb}\cdot\text{ft}\ \circlearrowleft}$$

Determine the moment of each of the three forces about point B.



Force $F_1 = 250\,N$

$$\curvearrowleft M_B = 250N(\cos 30)(3m) - 250N(\sin 30)(4m)$$

$$= 649.52\,Nm - 500\,N.m$$

$$= 149.5\,N.m \curvearrowleft$$

Force $F_2 = 300\,N$

$$\curvearrowleft M_B = 300N(\cos 60)(4m)$$

$$= 600\,N.m \curvearrowleft$$

Force $F_3 = 500\,N$

$M_B = \emptyset$ (Since the line of Action of F_3 passes through B, its moment arm about point B is zero)