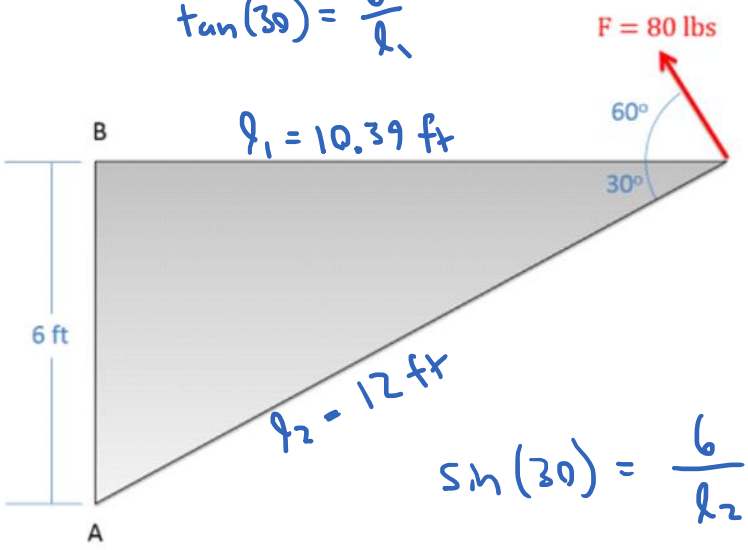
Question 2

What is the magnitude of the moment that this force exerts…

- about point A?
- about point B?

$\tan(30) = \frac{6}{\ell_1}$



$\ell_1 = 10.39$ ft

$\ell_2 = 12$ ft

$\sin(30) = \frac{6}{\ell_2}$

$M_A)$

$\vec{r} = [10.39, 6, 0]$ ft

$\vec{F} = [-80\cos(60), 80\sin(60), 0]$ lbs

$\vec{M}_A = \vec{r} \times \vec{F} = [0, 0, 960]$ ft lbs

$M_A = 960$ ft lbs

M_B)

$$\vec{r} = [10.39, 0, 0]$$

$$\vec{F} = [-80\cos(60), 80\sin(60), 0]$$

$$\vec{M}_B = \vec{r} \times \vec{F} = [0, 0, 720]$$

$$\boxed{M_B = 720 \text{ ft lbs}}$$