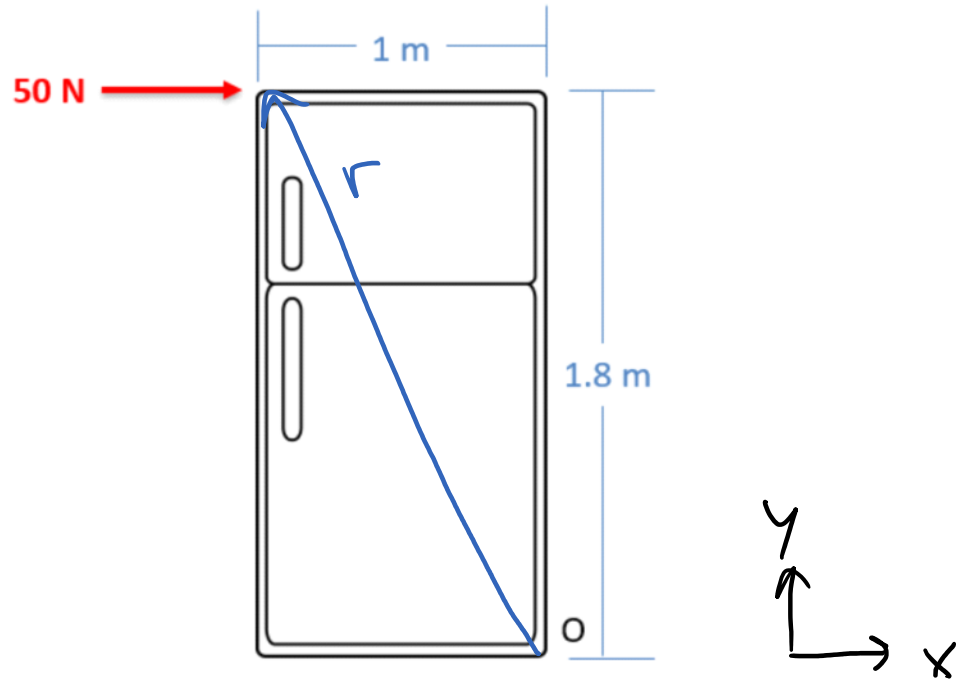


Question 1

What is the magnitude of the moment that the force shown below force exerts about point O?



$$\vec{r} = [-1, 1.8, 0] \text{ m}$$

$$\vec{F} = [50, 0, 0] \text{ N}$$

$$\vec{M} = \vec{r} \times \vec{F} = [-1, 1.8, 0] \times [50, 0, 0]$$

$$\vec{M} = [0, 0, -90] \text{ Nm}$$

$$M = -90 \text{ Nm}$$