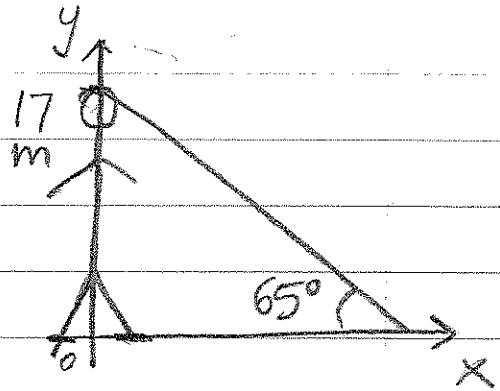


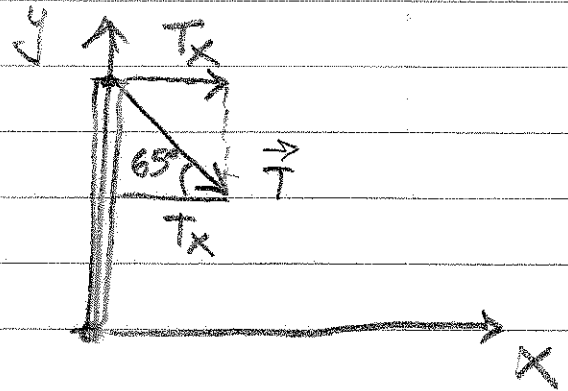
Torque sample problem

Tension in the rope
 $T = 4200 \text{ N}$



Component of tension perpendicular to the radial line is

$$\begin{aligned} T_x &= T \cos 65^\circ \\ &= (4200 \text{ N}) \cos 65^\circ \\ &= 1775 \text{ N} \end{aligned}$$



$$\begin{aligned} \text{Torque } \tau &= r T_x = (17 \text{ m})(1775 \text{ N}) \\ &= 30.2 \times 10^3 \text{ N}\cdot\text{m} \end{aligned}$$

Torque is negative since motion is clockwise