

10-77



$$60 \sin 20^\circ = 20.52$$

vertical

$$\uparrow v_{0y} = 20.52$$

highest height $\Rightarrow v_y = 0$

$$v_y = v_{0y} + at$$

$$0 = 20.52 - 9.8t$$

$$t = 2.09 \text{ s}$$

$$\theta = \theta_0 + \omega t$$

$$\theta = 0 + 90(2.09) = 188.1 \text{ rad}$$

$$188.1 \text{ rad} \times \frac{\text{rev}}{2\pi \text{ rad}} = \underline{\underline{30 \text{ revolutions}}}$$