

$$\Delta d = v_i t + \frac{1}{2} a t^2$$

$$10 \text{ m} = v_0 t + \frac{1}{2} 6 t^2$$

$$\Delta d = \left(\frac{v_i + v_f}{2} \right) t$$

$$10 \text{ m} = \left(\frac{v_0 + 2v_0}{2} \right) t$$

$$v_f = v_i + 2ad$$

$$(2v_0)^2 = v_0^2 + 2(6 \frac{\text{m}}{\text{s}^2})(10 \text{ m})$$

$$4v_0^2 = v_0^2 + 120 \frac{\text{m}^2}{\text{s}^2}$$

$$3v_0^2 = 120 \frac{\text{m}^2}{\text{s}^2}$$

$$v_0 = \sqrt{40 \frac{\text{m}^2}{\text{s}^2}}$$

$$F_{\text{net}} = ma$$

$$a = \frac{F_{\text{net}}}{m} = \frac{36 \text{ N}}{6 \text{ kg}}$$

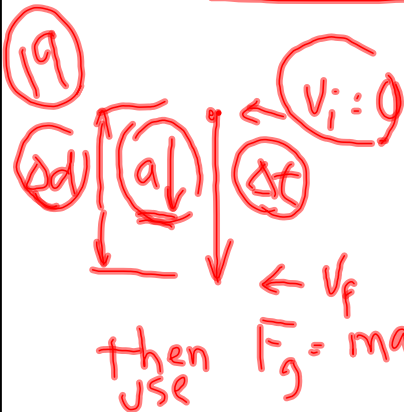
$$a = 6 \frac{\text{m}}{\text{s}^2}$$

$$v_f = v_i + at$$

$$2v_0 = v_0 + (6 \frac{\text{m}}{\text{s}})t$$

$$3v_0^2 = 120 \frac{\text{m}^2}{\text{s}^2}$$

$$v_0 = \sqrt{40 \frac{\text{m}^2}{\text{s}^2}}$$



$$\Delta d = v_i t + \frac{1}{2} a t^2$$

$$18 \text{ m} = 0 + \frac{1}{2} a (3.0 \text{ s})^2$$

$$C = m_0$$

$$J = 2m_0$$

$$I = 4m_0$$

$$M = 7m_0$$

$$\frac{\vec{F}_g}{M} = \frac{7m_0 g}{2m_0}$$

$$d = 60 \text{ m}$$

$$W = \vec{F} d = \frac{1}{2} m v^2$$

$$60 = \frac{1}{2} (2.5g) t^2$$

$$7m_0 g = \vec{F}_A + 2m_0 g$$

$$\frac{5m_0 g}{2m_0} = \frac{\vec{F}_A}{2m_0}$$

$$a = \frac{5g}{2}$$

$$a = 2.5g$$