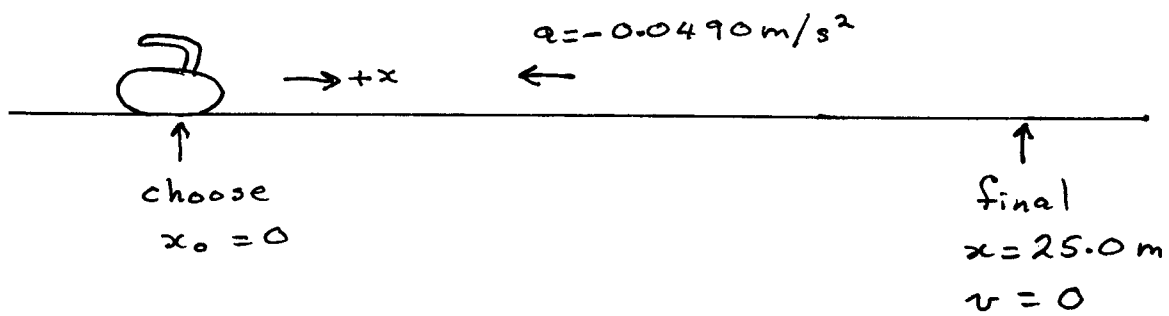


### Exercise 7-7



(a)  $v_0 = ?$

$$v^2 = v_0^2 + 2a(x - x_0)$$

$$\therefore v_0 = \sqrt{v^2 - 2a(x - x_0)}$$

$$= \sqrt{0^2 - 2(-0.0490)(25.0)}$$

$$= 1.57 \text{ m/s} \quad (1.565 \text{ m/s})$$

(b)  $t = ?$

$$v = v_0 + at$$

$$\therefore t = \frac{v - v_0}{a}$$

$$= \frac{-1.565 \text{ m/s}}{-0.0490 \text{ m/s}^2}$$

$$= 31.9 \text{ s}$$