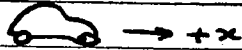


Exercise 7-6

$$\underline{(a)} \quad \frac{80.0 \text{ km}}{\text{h}} \times \frac{1000 \text{ m}}{1 \text{ km}} \times \frac{1 \text{ h}}{3600 \text{ s}} = 22.2 \text{ m/s}$$

(22.22 m/s)

(b)



$$v_0 = 22.2 \text{ m/s}$$

$$v = 0 \text{ m/s}$$

$$t = 4.50 \text{ s}$$

$$v = v_0 + at$$

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

$$= \frac{(0 - 22.2)}{4.50}$$

$$= -4.94 \text{ m/s}^2$$

(c)

$$x - x_0 = \left(\frac{v_0 + v}{2} \right) t$$

$$= \left(\frac{[22.22 + 0] \text{ m/s}}{2} \right) (4.50)$$

$$= 50.0 \text{ m}$$