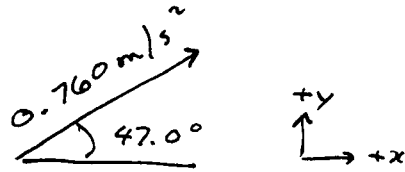


Problem 7-26

(a)



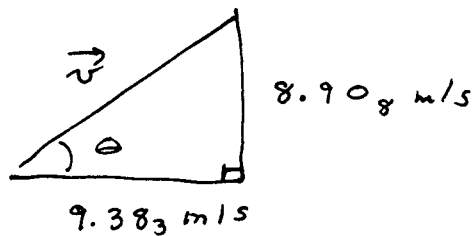
$$a_x = (0.760) \cos 47.0^\circ = 0.5183 \text{ m/s}^2$$

$$a_y = (0.760) \sin 47.0^\circ = 0.5558 \text{ m/s}^2$$

$$\begin{aligned} v_x &= v_{0x} + a_x t \\ &= 4.20 + (0.5183)(10.0) \\ &= 9.38 \text{ m/s} \quad (9.383 \text{ m/s}) \end{aligned}$$

$$\begin{aligned} v_y &= v_{0y} + a_y t \\ &= 3.35 + (0.5558)(10.0) \\ &= 8.91 \text{ m/s} \quad (8.908 \text{ m/s}) \end{aligned}$$

(b)



$$v = \sqrt{(8.908)^2 + (9.383)^2} \text{ m/s}$$

$$= 12.9 \text{ m/s}$$

$$\theta = \tan^{-1} \left(\frac{8.908}{9.383} \right) = 43.5^\circ$$