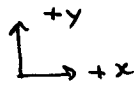
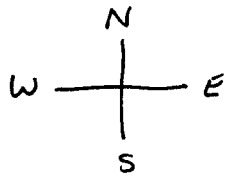


Exercise 7-11



$$v_{0x} = +6.60 \text{ m/s}$$

$$v_{0y} = 0$$

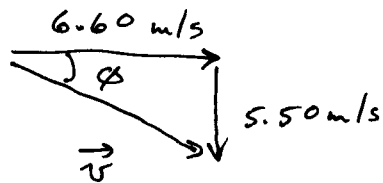
$$a_x = 0$$

$$a_y = -2.20 \text{ m/s}^2$$

$$t = 2.50 \text{ s}$$

$$v_x = v_{0x} + a_x t = (6.60 + 0) \text{ m/s} = 6.60 \text{ m/s}$$

$$\begin{aligned} v_y &= v_{0y} + a_y t = [0 + (-2.20)(2.50)] \text{ m/s} \\ &= -5.50 \text{ m/s} \end{aligned}$$



$$\begin{aligned} v &= \sqrt{(6.60)^2 + (5.50)^2} \text{ m/s} \\ &= 8.59 \text{ m/s} \end{aligned}$$

$$\phi = \tan^{-1} \left(\frac{5.50}{6.60} \right) = 39.8^\circ$$

$\therefore \vec{v} = 8.59 \text{ m/s}$ at 39.8° south of east