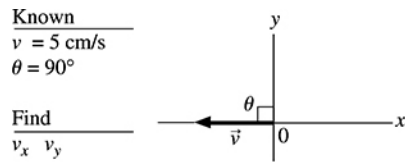
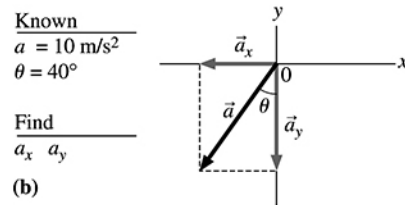


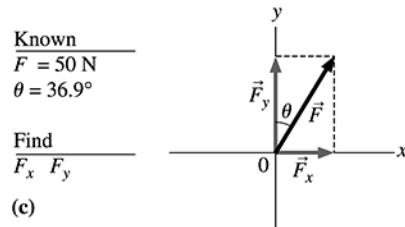
### 3.7. Visualize:



(a)



(b)



(c)

We will follow the rules given in Tactics Box 3.1.

**Solve:**

(a)  $v_x = -(5 \text{ cm/s})\sin 90^\circ = -5 \text{ cm/s}$        $v_y = (5 \text{ cm/s})\cos 90^\circ = 0 \text{ cm/s}$

(b)  $a_x = -(10 \text{ m/s}^2)\sin 40^\circ = -6.4 \text{ m/s}^2$        $a_y = -(10 \text{ m/s}^2)\cos 40^\circ = -7.7 \text{ m/s}^2$

(c)  $F_x = (50 \text{ N})\sin 36.9^\circ = 30 \text{ N}$        $F_y = (50 \text{ N})\cos 36.9^\circ = 40 \text{ N}$

**Assess:** The components have the same units as the vectors. Note the minus signs we have manually inserted according to Tactics Box 3.1.