The component form of vector $\vec{v}$ is given. Find the magnitude and direction of $\vec{v}$.
Write magnitude as a simplified radical and direction in degrees, rounded to the nearest hundredth. Use [0°, 360°).

1. $\vec{v} = \left\langle \sqrt{3}, 1 \right\rangle$

2. $\vec{v} = \left\langle -8, 8 \right\rangle$

3. $\vec{v} = \left\langle \sqrt{2}, -\sqrt{6} \right\rangle$

4. $\vec{v} = \left\langle -4, -5 \right\rangle$

5. $\vec{v} = \left\langle -2, 3 \right\rangle$

6. $\vec{v} = \left\langle 6, -7 \right\rangle$

answers:

1) $\|\vec{v}\| = 2$; $\theta = 30°$ 2) $\|\vec{v}\| = 8\sqrt{2}$; $\theta = 135°$ 3) $\|\vec{v}\| = 2\sqrt{2}$; $\theta = 300°$

4) $\|\vec{v}\| = \sqrt{41}$; $\theta = 231.34°$ 5) $\|\vec{v}\| = \sqrt{13}$; $\theta = 123.69°$ 6) $\|\vec{v}\| = \sqrt{85}$; $\theta = 310.60°$