

---

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  $[0^\circ, 360^\circ)$ .

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

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

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

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

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

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

---

answers:

1)  $\|\vec{v}\| = 2$ ;  $\theta = 30^\circ$

2)  $\|\vec{v}\| = 8\sqrt{2}$ ;  $\theta = 135^\circ$

3)  $\|\vec{v}\| = 2\sqrt{2}$ ;  $\theta = 300^\circ$

4)  $\|\vec{v}\| = \sqrt{41}$ ;  $\theta = 231.34^\circ$

5)  $\|\vec{v}\| = \sqrt{13}$ ;  $\theta = 123.69^\circ$

6)  $\|\vec{v}\| = \sqrt{85}$ ;  $\theta = 310.60^\circ$