

8-1

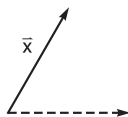
NAME _____ DATE _____ PERIOD _____

Practice

Geometric Vectors

Use a ruler and a protractor to determine the magnitude (in centimeters) and direction of each vector.

1.

2 cm; 60°

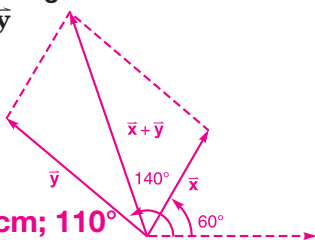
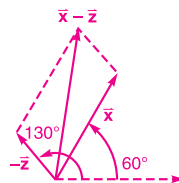
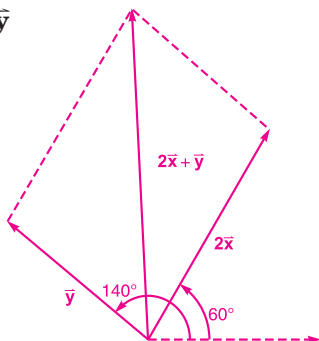
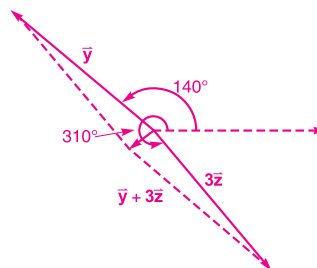
2.

3 cm; 140°

3.

1 cm; 310°

Find the magnitude and direction of each resultant.

4. $\vec{x} + \vec{y}$ 3.9 cm; 110° 5. $\vec{x} - \vec{z}$ 2.5 cm; 83° 6. $2\vec{x} + \vec{y}$ 5.4 cm; 93° 7. $\vec{y} + 3\vec{z}$ 0.6 cm; 217°

Find the magnitude of the horizontal and vertical components of each vector shown in Exercises 1-3.

8. \vec{x}

1.00 cm, 1.73 cm

9. \vec{y}

2.30 cm, 1.93 cm

10. \vec{z}

0.64 cm, 0.77 cm

11. **Aviation** An airplane is flying at a velocity of 500 miles per hour due north when it encounters a wind blowing out of the west at 50 miles per hour. What is the magnitude of the airplane's resultant velocity? **502.49 mph**