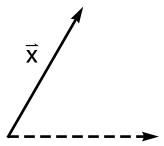
8-1

Practice

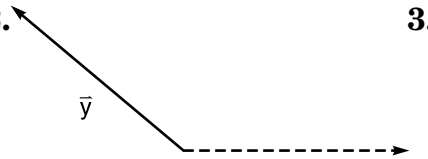
Geometric Vectors

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

1.



2.



3.

Find the magnitude and direction of each resultant.

4. $\vec{\mathbf{x}} + \vec{\mathbf{y}}$

5. $\vec{\mathbf{x}} - \vec{\mathbf{z}}$

6. $2\vec{\mathbf{x}} + \vec{\mathbf{y}}$

7. $\vec{\mathbf{y}} + 3\vec{\mathbf{z}}$

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

8. $\vec{\mathbf{x}}$

9. $\vec{\mathbf{y}}$

10. $\vec{\mathbf{z}}$

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?