

Name \_\_\_\_\_

Date \_\_\_\_\_

## Drawing Vectors - Step-by-Step Lesson

Draw the indicated vector and show the components into which it is resolved. Calculate (after estimating) all your answers.

Every Sunday, Sandy goes for a morning walk in West of South at  $55^\circ$ . She walks at least 3 km.



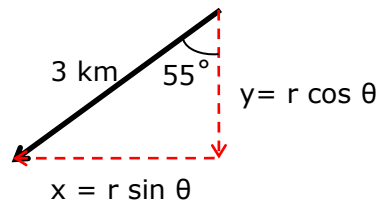
### Explanation:

Draw the indicated vector.

Start with an arrow going in a southwesterly direction.

The arrow should be at a  $55^\circ$  angle.

The length of the arrow should indicate that it equal to 3 km in distance.



We will insert negative sign "-" in both x and y-components as both are in direction of negative x-axis and negative y-axis.

$$x = -3 \sin 55^\circ$$

$$= -3 \times .817$$

$$= -2.451$$

$$y = -3 \cos 55^\circ$$

$$= -3 \times .573$$

$$= -1.719$$

So,  $x = -2.451$  km and  $y = -1.719$  km