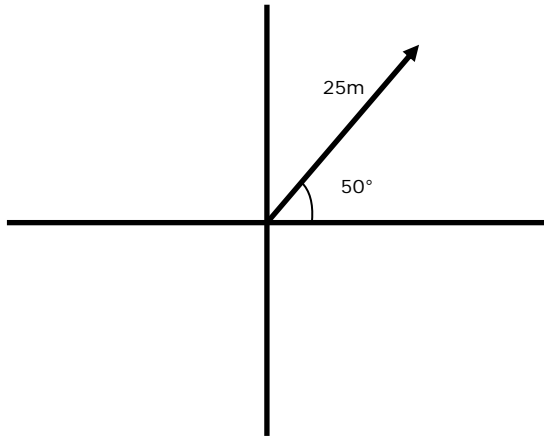


Name _____

Date _____

Finding the Components of a Vector - Step-by-Step Lesson

Find the x and y components of the following vector.



Explanation:

You can find the x and y coordinates using the formulas:

$$x = r \cos \theta \qquad y = r \sin \theta$$

We know that the variables are:

$$r = 25 \text{ m}, \quad \cos 50^\circ, \quad \sin 50^\circ$$

Plug the numbers into the formulas complete finding the coordinates.

$$x = r \cos 50^\circ$$

$$x = 25 \times .642$$

$$x = 16.05$$

$$y = r \sin 50^\circ$$

$$y = 25 \times .766$$

$$y = 19.15$$

Answer is: $x = 16.05 \text{ m}$, $y = 19.15 \text{ m}$

