

Vectors in the Plane

3-5-08

Unit Vector

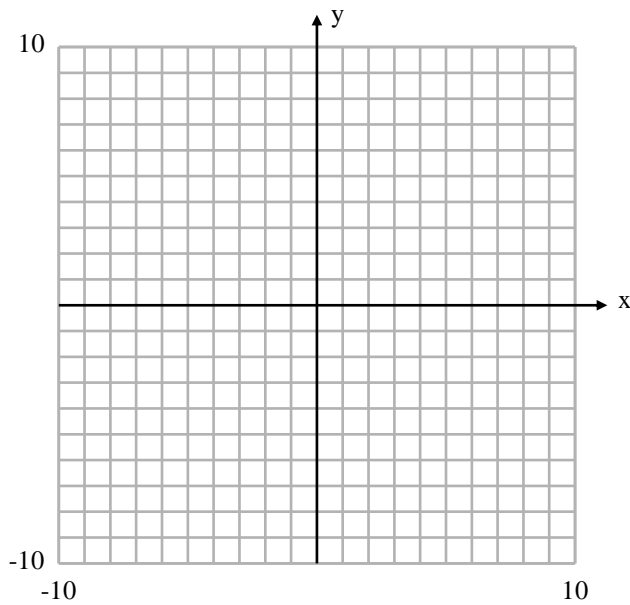
$$\vec{u} = \frac{\vec{v}}{|\vec{v}|} =$$

1. Find a unit vector in the direction of the following vector.

$$\vec{w} = \langle 3, -7 \rangle$$

$$\vec{v} = 3\hat{i} - 5\hat{j}$$

Standard Unit Vectors



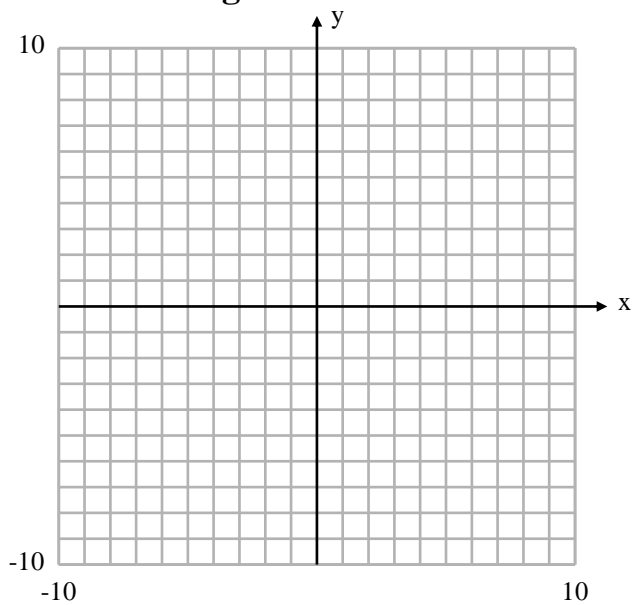
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2. Find the unit vector in the direction of the following vector in
 - a. component form
 - b. standard unit form

$$\vec{a} = \langle 3, -4 \rangle$$

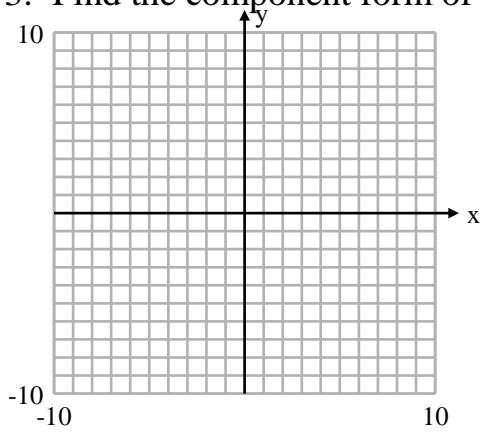
Direction Angles



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3. Find the component form of the vector \vec{a} .



4. Find the magnitude and direction angle of the following vector.

$$-3\hat{i} - 5\hat{j}$$