The Unit Vector

Practice Your Understanding

Name:	
Date:	

1. What is a unit vector? How do unit vectors help understand the orientation of vectors of magnitude greater than 1?

2. Let a unit vector have an angle of 30° . Since we know a unit vector always has a magnitude of 1, calculate the x and y components of the vector. Show all work in the box below.

3. Let a vector $\overrightarrow{B} = 4.2$ and have an angle of 67.3°. What is the magnitude of the unit vector \overrightarrow{b} ? What is the angle of the unit vector?

4. On the graph below draw the vector along with angle orientation of \vec{B} , and the unit vector \vec{b} . Make sure to label which vector is which.

