Pre Calculus
Chapter 8 Study Guide

1) Write the ordered pair that represents the vector from $A\ (-8, 9)$ to $B\ (5, -3)$. Then find the magnitude of $\overrightarrow{AB}$.

2) Find an ordered triple to represent $\vec{k} = \frac{1}{3}\vec{t} + 4\vec{c}$ if $\vec{t} = \langle 6, -3, 2\rangle$ and $\vec{c} = \langle 1, 8, -2\rangle$.

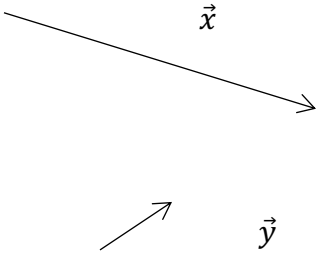
3) Write $\overrightarrow{AB}$ as the sum of unit vectors for $A\ (5, -7, 9)$ and $B\ (0, -4, -6)$.

4) Find the dot product of $\vec{m}$ and $\vec{n}$ if $\vec{m} = \langle 5, -6, 0\rangle$ and $\vec{n} = \langle 3, 2, -7\rangle$ and state whether the 2 vectors are perpendicular.

5) Find the cross product of $\vec{x}$ and $\vec{y}$ if $\vec{m} = \langle 8, -5, -1\rangle$ and $\vec{y} = \langle 6, 0, -2\rangle$.

6) Kat pulls a cart along level ground with a force of 35 Newton on the handle. If the handle makes an angle of 35°, find the vertical and horizontal components of the force.

For #7 – 8. Use the vectors below.



7) Use a ruler and protractor to determine the magnitude (in centimeters) and direction (angle) of $\vec{x}$ and $\vec{y}$.

8) Then find the magnitude and direction of the resultant $\vec{x} - 3\vec{y}$.

9) Identify the magnitude and direction of the resultant of a 113 Newton force along the x – axis and a 100 Newton force at an angle of 52^0 north of due west.