

Chapter 3 Graphical Vector Addition

Graphical Vector Addition Practice Problems

Directions: Draw scaled vector diagrams on graph paper using a pencil

1. A car drives 30.0 miles at an angle of 49 degrees north of west. Find the d_{north} and d_{west} component vectors of this motion.
 - A. Make a scale
 - B. Draw and label your coordinate axis system – set an origin
 - C. Draw and label your vectors
 - D. Make the final conversions to answer the problem
2. A person drops a package from a hot air balloon. The distance from the hot air balloon to the ground is 1000ft. If the package encounters a crosswind that pushes it 300ft to the west, what is the resultant vector of this motion? What is the angle of the resultant from the y-axis? (*don't forget to choose an origin*)
3. A person walks 20.0m south, then turns 90 degrees and walks 30.0m west, then turns 90 degrees again and walks 60.0m north. Draw the resultant vector and determine its magnitude.
4. A hiker walks 4.5km west, then makes a 33 degree turn north and walks another 6.4km. Find the magnitude and direction of the walkers displacement.

