

Chapter C2: MDI Vectors

Consider the following vectors:

- \vec{a} = the displacement from COA to the Bar Harbor airport.
- \vec{b} = the displacement from MDI High School to Thunder Hole.
- \vec{c} = the displacement from Somesville to The Jackson Lab.

1. Specify vectors \vec{a} , \vec{b} , \vec{c} by giving their magnitude and direction. Use units of centimeters.
2. On a separate sheet of paper, draw (to scale) the following:

(a) $\vec{a} + \vec{b}$

(b) $\vec{b} + \vec{c}$

(c) $\vec{c} - \vec{a}$

3. Using your ruler and protractor, determine the magnitude and direction of three vectors you drew for the previous problem.
4. Specify vectors \vec{a} , \vec{b} , \vec{c} by giving their components. Do not use trigonometry.
5. Give the components of the following:

(a) $\vec{a} + \vec{b}$

(b) $\vec{c} - \vec{a}$

6. On a separate sheet of paper draw (to scale) the following:

(a) $3\vec{a}$

(b) $2\vec{b} - 3\vec{c}$

7. Give the magnitude, direction, and components, of two vectors you drew for the previous problem.