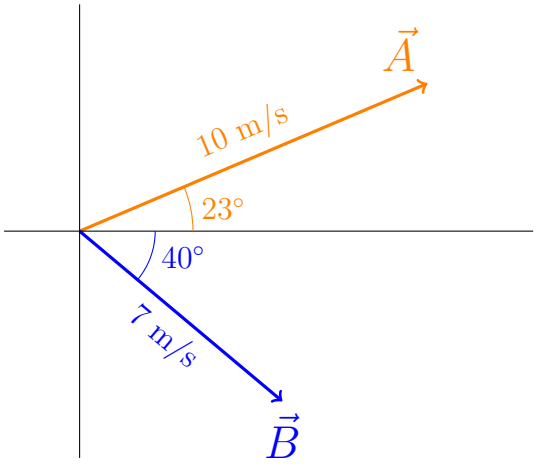
Task #1

Vectors $\vec{A}$ and $\vec{B}$ are shown below.

(a) Find the components of $\vec{A}$ and $\vec{B}$. ROTATE MARKER

(b) Sketch out what $\vec{R} = \vec{A} - 2\vec{B}$ would look like. ROTATE MARKER

(c) Calculate the magnitude and direction of $\vec{R}$



Task #2

The summit of a mountain, 2450 m above base camp, is measured on a map to be 4580 m horizontally from the camp in a direction 38.4° west of north.

(a) Find the x-, y-, and z- components of the displacement vector from camp to summit. (Use $+x$ as east, $+y$ as north and $+z$ as up.) ROTATE MARKER

(b) Find the magnitude of the displacement vector.

Task #3

You are at a location 3600 meters at a direction 35° south of east from a watchtower. Your endpoint is 2300 meters due west of the watchtower. How far and in what direction should you travel to get to your endpoint?