

Precalculus Section 1.1 Exercises

- For each of the following, find the distance d between the points and the midpoint M of the line segment connecting them.
 - $(-\frac{4}{5}, \frac{2}{3}), (\frac{6}{5}, -\frac{1}{3})$
 - $(2\sqrt{2}, \sqrt{3}), (3\sqrt{2}, -\sqrt{3})$
- Draw the line segment from $(1, 1)$ to $(2, 3)$. Then draw its reflections over the x -axis, y -axis, and origin.
- Students in Matt and Adam's Cartography class create a rough map of Marlboro College on the Cartesian plane. The dining hall sits at the origin. The positive x -axis points east of the dining hall and the positive y -axis points north of the dining hall. If Mather is located 100 feet east and 20 feet north of the dining hall, what are its coordinates? According to the map, how far is Mather from the Dining Hall? The maintenance building is located at 500 feet south of the dining hall and 200 feet east. What are its coordinates? According to the map, how far is maintenance from Mather?
- Show that the points $(3, -2)$, $(6, -4)$, and $(-1, -8)$ are the vertices of a right triangle.