

Draw a picture and solve.

1. A piece of sheet metal is to be cut using a blowtorch so that it forms a triangle with the side lengths of 6 feet, 5 feet, and 9 feet. Find the measures of the angles.
2. A triangular parcel of ground has sides of lengths 725 feet, 650 feet, 575 feet. Find the measure of the largest angle.
4. Two ships leave a port at 9:00AM. One travels at a bearing of $N53^\circ W$ at 12 mph and the other travels at a bearing of $S67^\circ W$ at 16 mph. Approximate how far apart they are at noon that day.
5. Two rangers, one at Station A and one at Station B, observe a fire in the forest. The angle at Station A formed by the lines of sight to Station B and to the fire is 65.23° . The angle at Station B formed by the lines of sight to Station A and to the fire is 56.47° . The stations are 10 km apart.
 - a. How far from Station A is the fire?
 - b. How far from Station B is the fire?
6. A boat is sailing due east parallel to the given shoreline at a speed of 10 mph. At a given time the bearing to the lighthouse is $S70^\circ E$, and 15 minutes later the bearing is $S63^\circ E$. Find the distance from the boat to the lighthouse.

