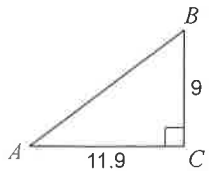
Precalculus Name_____

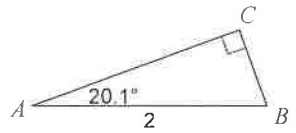
T13 Review

Solve each triangle. Round answers to the nearest tenth.

1)



2)



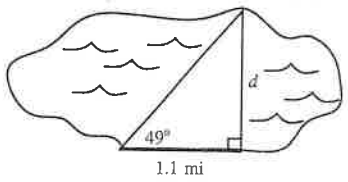
In each problem, angle C is a right angle. Draw the right triangle ABC and label all angles and sides with the correct letters. Solve each triangle rounding answers to the nearest tenth.

3) $a = 4,\ c = 11$

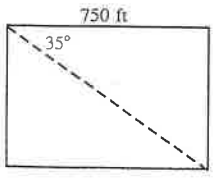
4) $c = 11,\ m\angle A = 68.2°$

Draw and label the picture described if a picture is not provided. Then answer the question. Show all equations used to solve the problem.

5) To find the distance d across a pond, a surveyor determined the measurements shown below. How far is it across the pond?



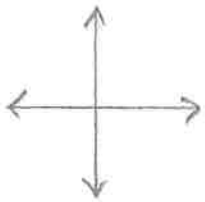
6) To find the length of a diagonal of a rectangular city block, a surveyor determined the measurements shown below. How long is the diagonal?



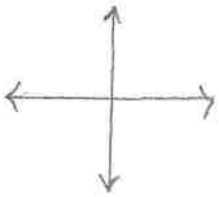
7) Standing on top of a 235 foot tall building, you spot your friend on the ground who is 94 feet away from the building.
   a. What is the angle of depression you had to look to spot your friend?
   b. What is the distance between you and your friend?

Given the NORTH-SOUTH lines, draw the following bearings.

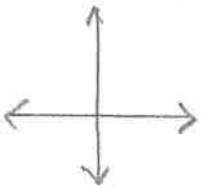
8) Bearing of 250°



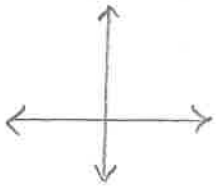
9) Bearing of 64°



10) N 35° E



11) S 315° W



Draw a diagram first, the obtain the desired information.

12) A ship leaves port at 1:00 PM and has a bearing of 37°. The ship sails at 25 knots. How many nautical miles north and how many nautical miles east will the ship have traveled by 5:00PM?

13) An airplane traveling at 500 miles per hour has a bearing of N 60° W. After flying for two hours, how far north and how far west has the plane traveled from its point of departure?

14) A boat is 25 miles east and 30 miles north of port. Port is at the origin. The captain wants to sail directly to port. What bearing should he take?