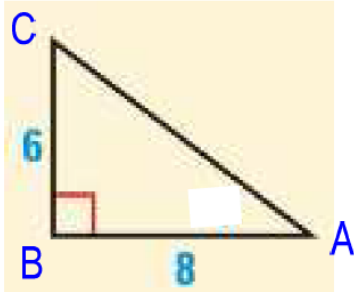Name: _____   Date: _____   Block: _____
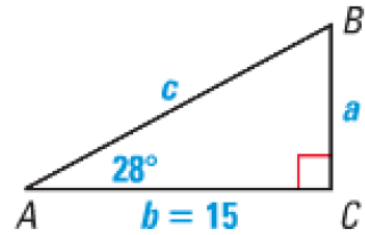
Honors Algebra 2 Trig 7-1,7-2, and 5-2: Geometric Trig Review

Solve the triangle. Round answers to the nearest tenth.
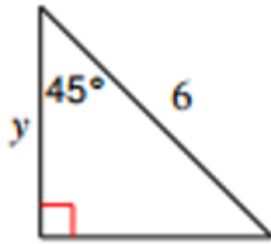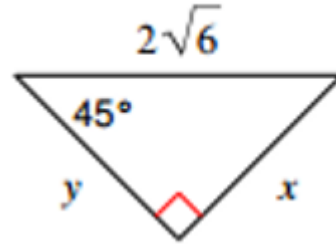
1.

2.

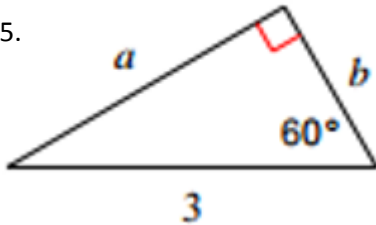Use special right triangle rules to find the missing side lengths. **Leave the answer in radical form.**
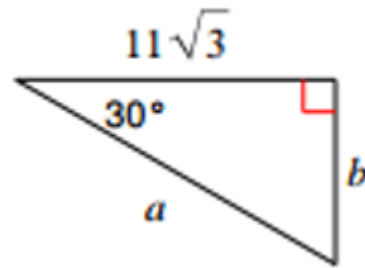
3.

4. $2\sqrt{6}$

5.

6. $11\sqrt{3}$

7. You are standing 50 meters from a hot air balloon that is preparing to take off. The angle of elevation to the top of the balloon is 28°. Find the height of the balloon.

8. You use a 12 foot ramp to load items into a van. If the floor of the van is 4 feet off the ground, what is the angle of elevation of the ramp?

In the blank provided, state the acronym applicable to the given measurements. Solve the triangle or triangles, if possible. If there is no triangle, state, "no triangle possible" and **provide the math work necessary to support your answer.** Round to the nearest tenth. **PLEASE BOX ALL ANSWERS!**

9. A = 47°, C = 32°, c = 12 _____

10. a = 24, b = 12, c = 17 _____

11. B = 63°, a = 11, b = 8 _____

12. C = 101°, a = 23, b = 19 _____
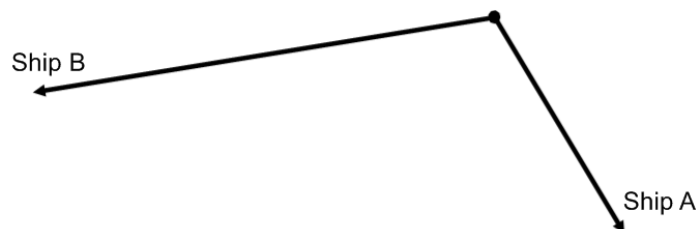
13. a = 30, c = 37, A = 21° _____

14. A = 26°, B = 77°, c = 50 _____

15. You are on the observation deck of the Empire State Building looking at the Chrysler Building. When you turn 145° clockwise, you see the Statue of Liberty. You know that they Chrysler Building and the Empire State Building are about 0.6 miles apart, and that the Chrysler Building and the Statue of Liberty are about 5.7 miles apart. Estimate the distance between the Empire State Building and the Statue of Liberty.

16. A golfer hits a drive 260 yards on a hole that is 400 yards long. The shot is 15° off target. What is the distance from the ball to the hole?

17. Two ships left a port at 2:00 PM. Ship A traveled at a speed of 20 mph at **S 55° E.** Ship B traveled at a speed of 25 mph at **S 70° W.** What is the distance between the ships at 5:00 PM that night? Round to the nearest tenth.

Find the area.

18. a = 8, b= 6, c = 7

19. C = 111°, a = 7, b = 13

20. B = 61°, c = 18, C = 80°