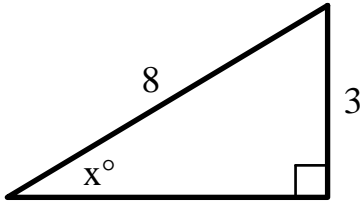


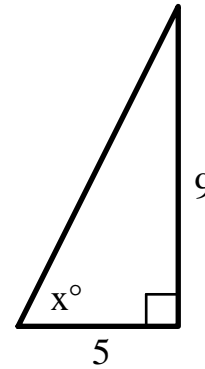
# General Algebra II Review Unit 13 page 1 \_\_\_\_\_

Find the value of  $x$  in each of the following. You must show the equation you used to find  $x$ . The drawings are not to scale. Round your solutions to the nearest hundredth.

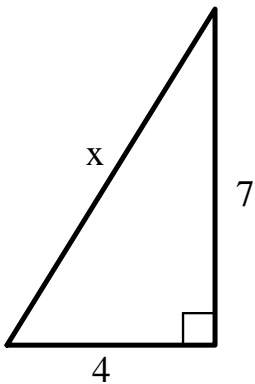
1.  $x \approx$  \_\_\_\_\_



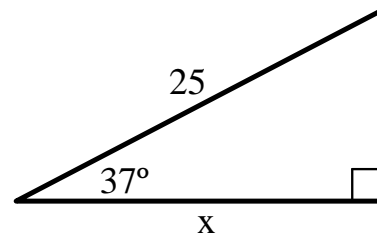
2.  $x \approx$  \_\_\_\_\_



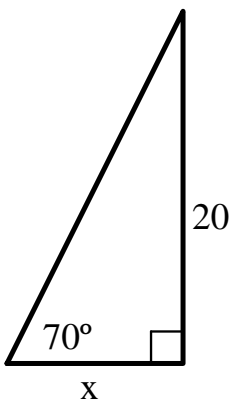
3.  $x \approx$  \_\_\_\_\_



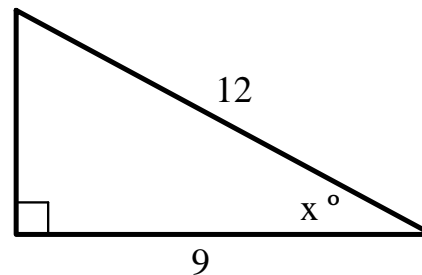
4.  $x \approx$  \_\_\_\_\_



5.  $x \approx$  \_\_\_\_\_



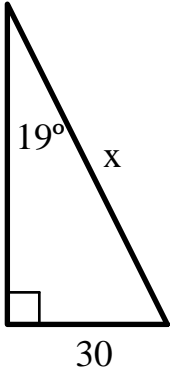
6.  $x \approx$  \_\_\_\_\_



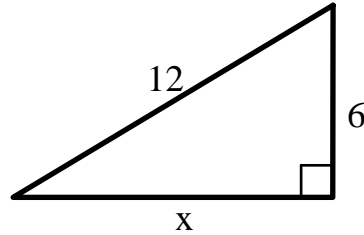
## General Algebra II Review Unit 13 page 2

Find the value of  $x$  in each of the following. You must show the equation you used to find  $x$ . The drawings are not to scale. Round your solutions to the nearest hundredth.

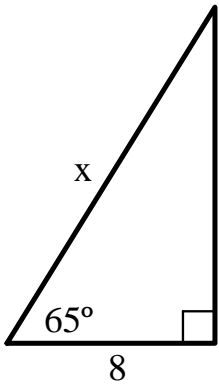
7.  $x \approx$  \_\_\_\_\_



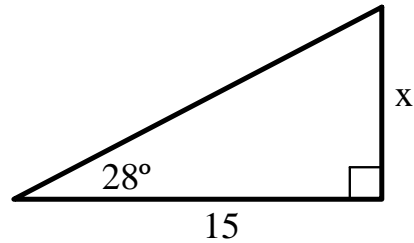
8.  $x \approx$  \_\_\_\_\_



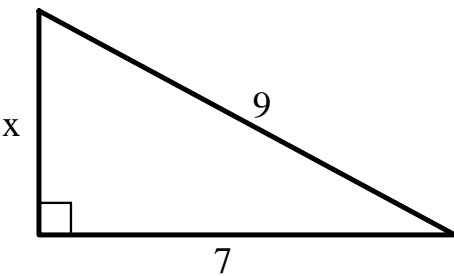
9.  $x \approx$  \_\_\_\_\_



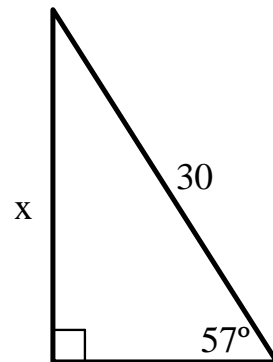
10.  $x \approx$  \_\_\_\_\_



11.  $x \approx$  \_\_\_\_\_



12.  $x \approx$  \_\_\_\_\_



## General Algebra II Review Unit 13 page 3

Solve each of the following problems. Show your complete solution, including an appropriate diagram, neatly organized in the space provided. All answers should be rounded to the nearest tenth.

13. An airplane takes off on level ground with a constant speed of 200 feet per second. If its flight path makes an angle of 17 degrees with the ground, then how high above the ground will it be 8 seconds after lift off?

14. The shadow of a flag pole (on level ground) is 80 feet long when the angle of elevation to the sun is 25 degrees. How tall is the flag pole?

15. A ladder that is 13 feet long leans up against a vertical wall. If the foot of the ladder is 4 feet from the wall on level ground, then what is the angle between the ladder and the ground?

## General Algebra II Review Unit 13 page 4

Solve each of the following problems. Show your complete solution, including an appropriate diagram, neatly organized in the space provided. All answers should be rounded to the nearest tenth.

16. A guy wire goes from the top of a vertical pole to a point that is 18 feet from the base of the pole on level ground. If the wire makes an angle of 70 degrees with the ground, then how long is the wire?

17. A helicopter is flying horizontally at a height of 100 feet above level ground. If the helicopter is moving at a constant speed of 80 feet per second, then what is the angle of elevation to the helicopter exactly 10 seconds after it flies directly overhead?