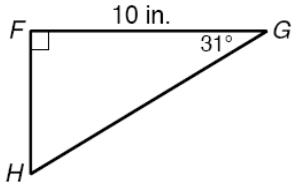
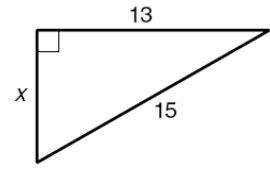


ASSIGNMENT

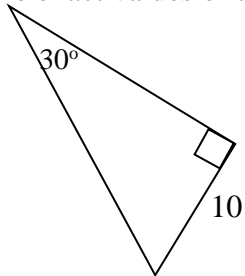
1. Find the length of  $GH$  to 2 decimal places.



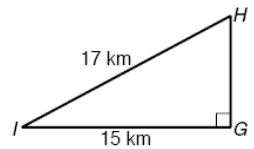
2. Find the value of  $x$  to 2 decimal places.



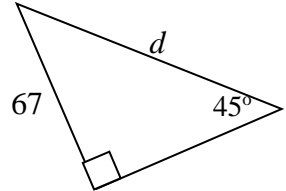
3. Find the exact values of the missing side lengths.



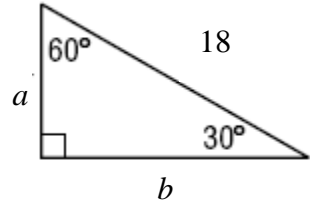
4. Find the measure of angle  $I$  to 2 decimal places.



5. Find the exact value of  $d$ .



6. Find the exact values of  $a$  and  $b$ .



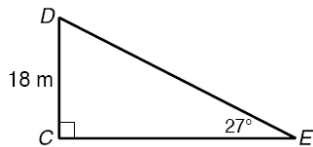
7. Do 90, 106, 56 form a Pythagorean triple? Why or why not?

8. Do 38, 17, 29 form a Pythagorean triple? Why or why not?

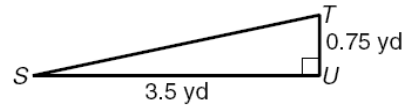
9. A square has a diagonal of 24 inches. What is the perimeter of the square?

10. An equilateral triangle has a perimeter of 60 cm. Find the exact length of the altitude of the triangle.

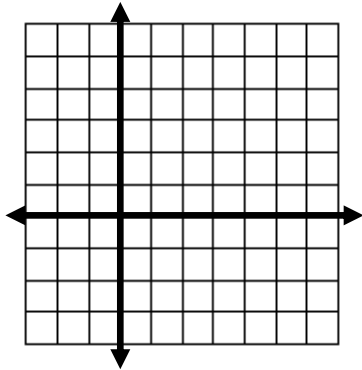
11. Find the length of  $DE$  to 2 decimal places.



12. Find the measure of angle  $S$  to 2 decimal places.



13. Determine whether  $J(2, 0)$ ,  $K(6, 2)$  and  $A(0, 4)$  are the vertices of a right triangle. Justify your answer mathematically.



14. Suppose the sun casts a shadow off a 48-foot tall building. What is the angle of elevation to the sun if the shadow is 31 feet long? Round to the nearest tenth of a degree.

15. A ladder leaning against a building makes an angle of  $78^\circ$  with the ground. If the ladder is 15 feet long, how far up the building will the ladder reach? Round to the nearest tenth.

16. A boat ties to a dock with a rope that is 12 feet long. If the water level is 3 feet below the top of the dock, how far from the dock is the boat? Round to the nearest tenth.



17. For each triangle below, determine whether the 3 parts of the triangle labeled are related by sine, cosine, or tangent.

