

Apprenticeship Math 12
ASSIGNMENT: Triangle Review

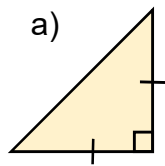
Name: _____

Date: _____

1. Match the following terms with the correct definition:

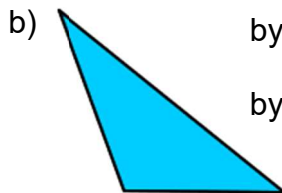
- | | |
|----------------------------|---|
| _____ equilateral triangle | A. a triangle with two sides of equal length and two equal angles |
| _____ isosceles triangle | B. a triangle with three angles less than 90° |
| _____ scalene triangle | C. a triangle with one angle greater than 90° |
| _____ acute triangle | D. a triangle with one angle equal to 90° |
| _____ right triangle | E. a triangle with three sides of equal length and three equal angles |
| _____ obtuse triangle | F. a triangle with all sides of different length and no equal angles |

2. Classify each triangle by side length and angle size.



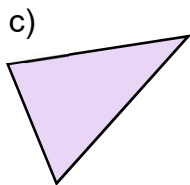
by side length: _____

by angle size: _____



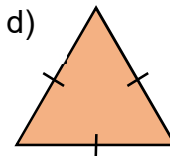
by side length: _____

by angle size: _____



by side length: _____

by angle size: _____



by side length: _____

by angle size: _____

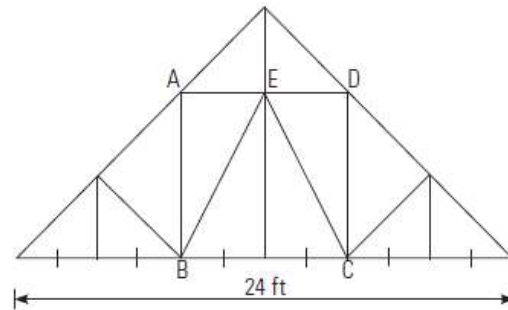


by side length: _____

by angle size: _____

3. A roof truss for a garage is designed as shown. ABCD is a square.

- a) Calculate the length of BE. Round your answer to the nearest tenth.



- b) Classify $\triangle ABE$ by side length and angle measure.

- _____ triangle
- _____ triangle

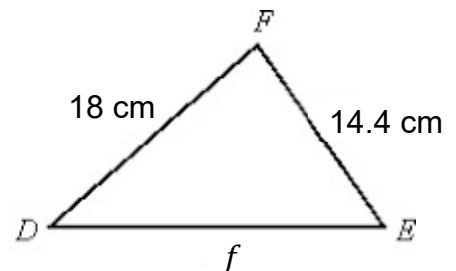
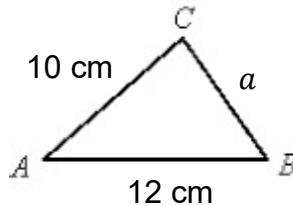
- c) Classify $\triangle BEC$ by side length and angle measure.

- _____ triangle
- _____ triangle

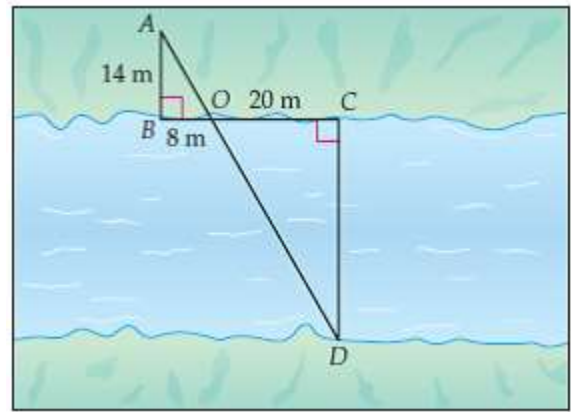
4. Given that the two triangles are similar, find the length of a and f . Round your answers to the nearest tenth.

$a =$ _____

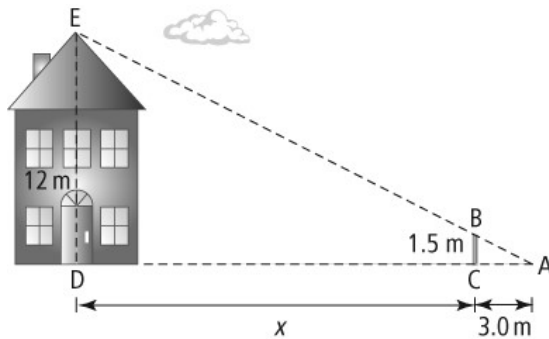
$f =$ _____



5. A surveyor took the measurements shown. Find the distance across the river.

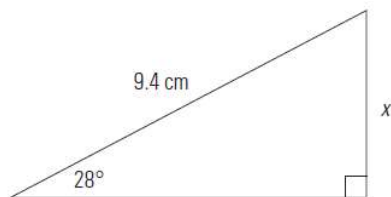


6. A diagram of a house on a street is shown below. Determine the distance between Point D and Point C. Round your answer to the nearest tenth.



7. Calculate the length of the indicated side or the size of the indicated angle. Round side lengths to the nearest tenth and angles to the nearest degree.

a)



$x =$ _____

$$\angle X = \underline{\hspace{2cm}}$$

A right-angled triangle is shown. The hypotenuse is labeled 16.5 cm. The angle at the bottom-left vertex is labeled 42° . The side opposite this angle, which is the vertical side, is labeled x . A right-angle symbol is at the bottom-right vertex.

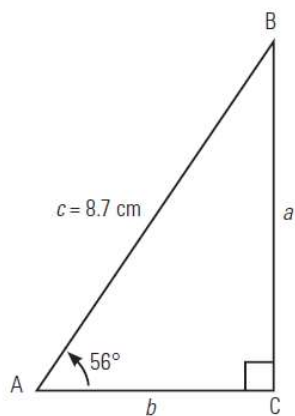
X = _____

$\angle X =$ _____

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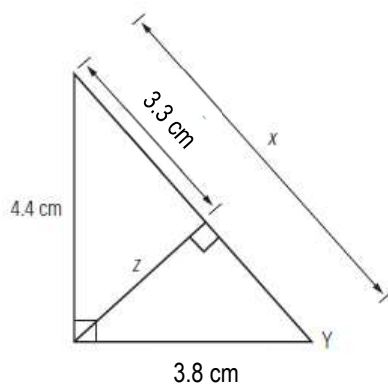
9. A cliff is 80 feet above the sea. From the cliff the angle of depression to a boat is 35° . How far is the boat from the base of the cliff? Round your answer to the nearest tenth.

10. Solve the triangle. Round side lengths to the nearest tenth and angles to the nearest degree.



$a =$ _____
 $b =$ _____
 $\angle B =$ _____

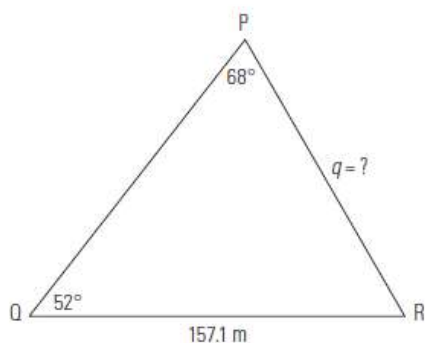
11. Find the indicated values. Round lengths to the nearest hundredth and angles to the nearest degree.



$x =$ _____
 $z =$ _____
 $\angle Y =$ _____

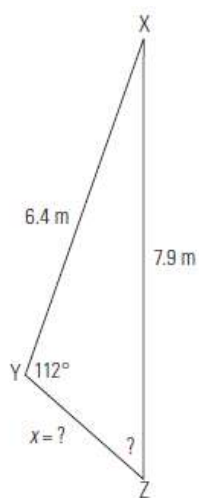
12. Calculate the length of the indicated side and/or the size of the indicated angle.
Round lengths to the nearest tenth and angles to the nearest degree.

a)



$q =$ _____

b)



$x =$ _____

$\angle Z =$ _____

1. E A F B D C
2. a) isosceles, right b) scalene, obtuse c) scalene, acute d) equilateral, acute e) isosceles, obtuse
3. a) 8.9 ft b) scalene, right c) isosceles, acute
4. $a = 8 \text{ cm}$, $f = 21.6 \text{ cm}$
5. 35 m
6. 21 m
7. a) 4.4 cm b) 41° c) 12.3 cm d) 40°
8. 37°
9. 114.3 ft
10. a) $a = 7.2 \text{ cm}$, $b = 4.9 \text{ cm}$, $\angle B = 34^\circ$
11. $x = 5.8 \text{ cm}$, $z = 2.9 \text{ cm}$, $\angle Y = 49^\circ$
12. a) $q = 133.5 \text{ m}$ b) $x = 2.8 \text{ m}$, $\angle Z = 49^\circ$