

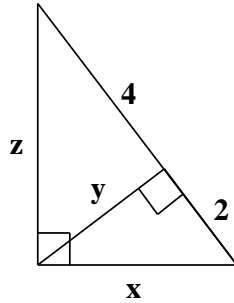
Geometry
Chapter 6 Practice Test

Name: _____

1. What is the geometric mean between 8 and 4 ?
2. $\triangle ABC$ has side lengths $a = 4$ and $b = 5$ and $m\angle A = 42^\circ$. Draw a diagram of the triangle and then determine the values of the remaining sides and angles.

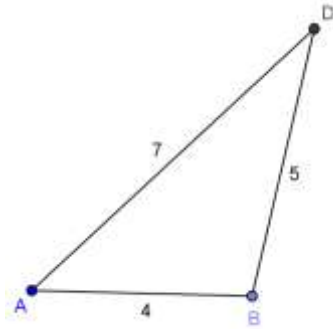
Find the values of the missing variables in the following diagrams.

3.

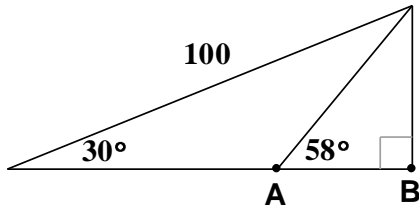


$x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$ $z = \underline{\hspace{2cm}}$

4. Determine the value of $\angle A$

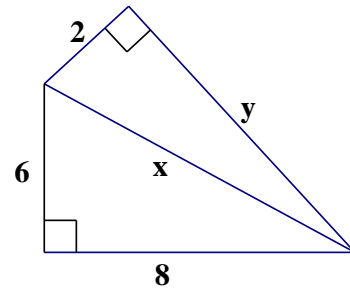


5.



$AB = \underline{\hspace{2cm}}$

6.



$x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$

SOH-CAH-TOA

$$c^2 = a^2 + b^2 - 2ab \cdot \cos C$$

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

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Simplify the following terms. (NO DECIMAL ANSWERS!!)

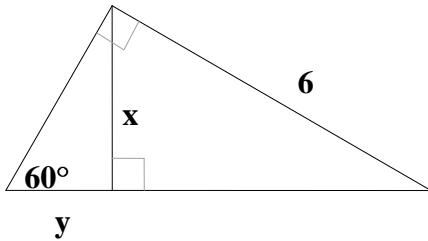
8. $\sqrt{48} = \underline{\hspace{2cm}}$

9. $(2\sqrt{3})^2 = \underline{\hspace{2cm}}$

10. $\frac{5}{\sqrt{10}} = \underline{\hspace{2cm}}$

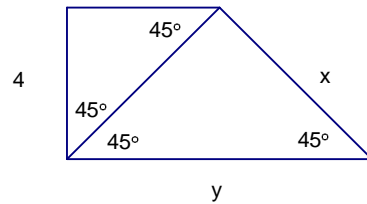
Find the **EXACT VALUES** of x and y in each diagram. No decimals.

11.



x = _____ y = _____

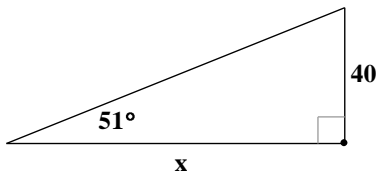
12.



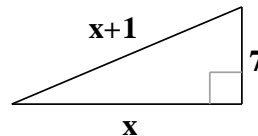
x = _____ y = _____

For the following problems, write the correct equation used to find the value of x and then solve for x. Round all lengths of sides to the nearest tenth and round each angle to the nearest whole value.

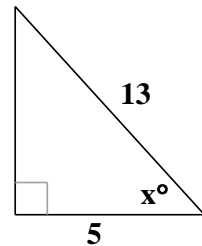
13.



16.



17.



Draw a picture, write an equation, and solve for the desired value in problem 18.

18. A plane climbs at an angle of 18° with the ground. Find the ground distance the plane travels after it has moved 2500 meters through the air. Round to the nearest whole number.

SOH-CAH-TOA

$$c^2 = a^2 + b^2 - 2ab \cdot \cos C$$

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$