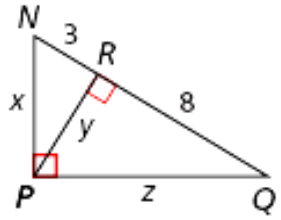
CC Geometry Second Semester Review Name_____
Chapter 8

SHOW WORK.

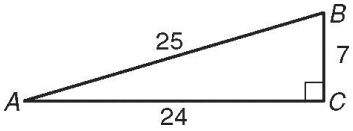
#1- 11: Give exact answers in simplest form—no decimals.

1. Find the geometric mean between 32 and 3.

2. Find *x*, *y*, and *z*.



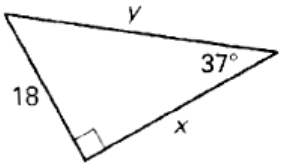
3. Write each trigonometric ratio as a fraction.



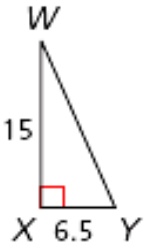
a. sin *B* b. cos *B*

c. tan *B*

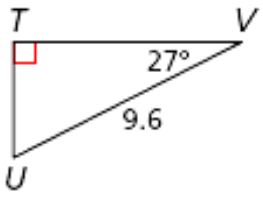
4. Find *x* and *y*. Round to the nearest tenth.



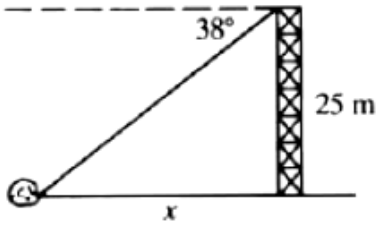
5. Find m∠*Y*. Round to the nearest degree.



6. Find *TV*. Round to the nearest tenth.



7. The angle of depression from the top of a tower to a boulder on the ground is 38°. If the tower is 25 meters high, what is the horizontal distance from the base of the tower to the boulder? Round to the nearest tenth of a meter.



8. Jesse is building a ramp for loading motorcycles into a trailer. The trailer is 2.8 ft off the ground. The angle of elevation between the ramp and the ground is 15°. To the nearest tenth of a foot, how long is the ramp?

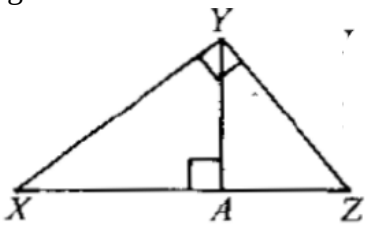
9. The top of a 20-foot ladder leans against the side of a building. If the base of the ladder is 5 feet from the wall, what is the measure of the angle formed by the ladder and the ground? Round to the nearest degree.

If a number x is the geometric mean between 2 positive numbers a and b, then $\frac{a}{x} = \frac{x}{b}$.

When the altitude to the hypotenuse is drawn in a right triangle, the following theorems are true.

1. the altitude to the hypotenuse is the geometric mean between the segments of the hypotenuse

$$\frac{seg\ 1}{alt} = \frac{alt}{seg\ 2}$$

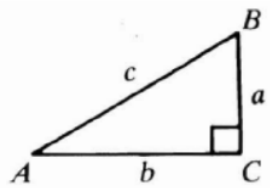


2. a leg of the right triangle is the geometric mean between the hypotenuse and the segment of the hypotenuse adjacent to the leg

$$\frac{hyp}{leg} = \frac{leg}{adj.\ seg.}$$

Trigonometry ratios: sine, cosine, tangent

S$\frac{O}{H}$ **C**$\frac{A}{H}$**T**$\frac{O}{A}$



$\sin A = \frac{opp.\ leg}{hypotenuse} =$

$\cos A = \frac{adj.\ leg}{hypotenuse} =$

$\tan A = \frac{opp.\ leg}{adj.\ leg} =$