

Name _____ Date _____ Period _____

DIRECTIONS: For #1-3, find the geometric means of the given two numbers. **SHOW WORK** and use simplified radicals where necessary.

1. The geometric mean of 3 and 8 _____

2. The geometric mean of 5 and 15 _____

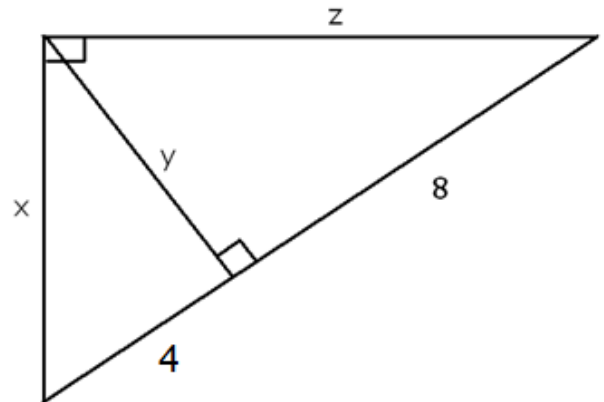
3. The geometric mean of $\frac{1}{3}$ and $\frac{3}{5}$ _____

DIRECTIONS: For #4-6, use the following diagram to solve for x , y , and z . **SHOW WORK** and use simplified radicals where necessary.

4. $x =$ _____

5. $y =$ _____

6. $z =$ _____

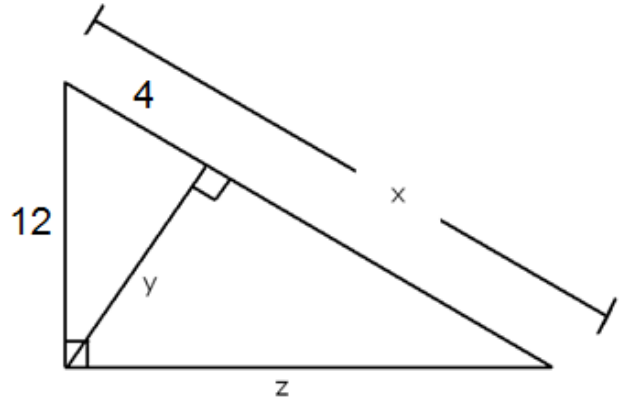


DIRECTIONS: For #7-9, use the following diagram to solve for x , y , and z . SHOW WORK and use simplified radicals where necessary.

7. $x =$ _____

8. $y =$ _____

9. $z =$ _____



DIRECTIONS: For #10-12, use the following diagram and the Pythagorean Theorem to find the answer. SHOW WORK and use simplified radicals where necessary.

10. If $r = 15$ and $f = 8$, then

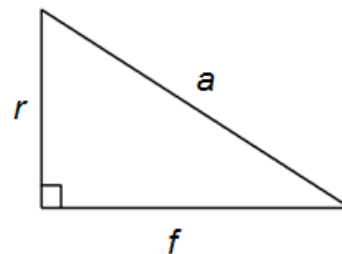
$a =$ _____.

11. If $a = 5\sqrt{2}$ and $f = \sqrt{2}$, then

$r =$ _____.

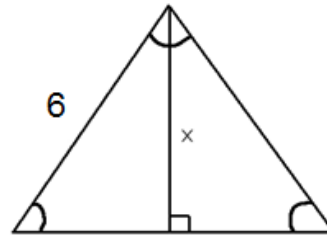
12. If $a = 14$ and $r = 7\sqrt{3}$, then

$f =$ _____.

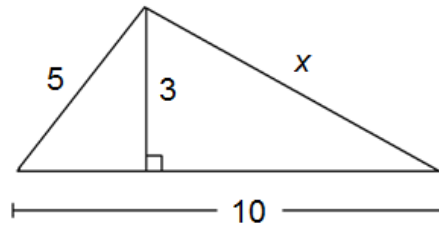


DIRECTIONS: For #13-14, solve for x . The Pythagorean Theorem will help. **SHOW WORK** and use simplified radicals where necessary.

13. $x =$ _____



14. $x =$ _____



DIRECTIONS: For #15-20, the lengths of three sides of a possible triangle are given. **SHOW WORK** to determine the kind of triangle that is formed with those lengths – your choices are **obtuse**, **acute**, **right**, or **none**.

<u>Lengths of sides</u>	<u>Type of Δ formed</u>
15. $3, \sqrt{10}, 4$	_____
16. $3\sqrt{2}, 3\sqrt{2}, 6$	_____
17. $7, 24, 25$	_____
18. $4, 4, 5$	_____
19. $1, 2, 3$	_____
20. $6, 10, 14$	_____