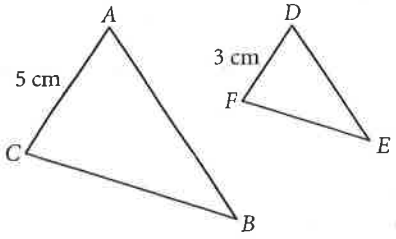
Lesson 11.5 • Proportions with Area

Name Answer Key Period _____ Date _____

All measurements are in centimeters unless otherwise indicated.

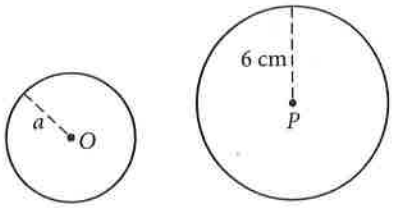
1. $\triangle ABC \sim \triangle DEF$. Area of $\triangle ABC = 15$ cm^2.

Area of $\triangle DEF =$ 5.4 cm^2

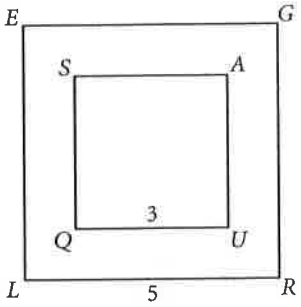


2. $\frac{\text{Area of circle } O}{\text{Area of circle } P} = \frac{4}{9}$.

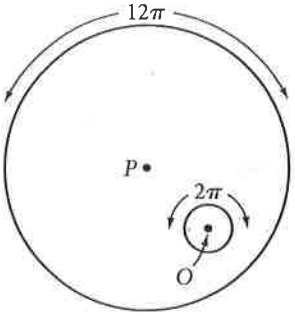
$a =$ 4 cm



3. $\frac{\text{Area of square } SQUA}{\text{Area of square } LRGE} =$ $\frac{9}{25}$

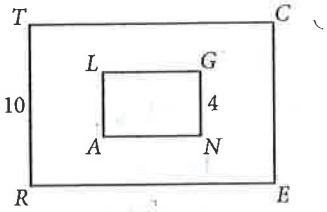


4. $\frac{\text{Area of circle } P}{\text{Area of circle } O} =$ $\frac{36}{1}$



5. $RECT \sim ANGL$

$\frac{\text{Area of } RECT}{\text{Area of } ANGL} =$ $\frac{25}{4}$



6. The ratio of the corresponding midsegments of two similar trapezoids is 4:5. What is the ratio of their areas?

16:25

7. The ratio of the areas of two similar pentagons is 4:9. What is the ratio of their corresponding sides? 2:3

8. If $ABCDE \sim FGHIJ$, $AC = 6$ cm, $FH = 10$ cm, and area of $ABCDE = 320$ cm^2, then area of $FGHIJ =$ 888. $\frac{8}{9}$ cm^2

9. Stefan is helping his mother retile the kitchen floor. The tiles are 4-by-4-inch squares. The kitchen is square, and the area of the floor is 144 square feet. Assuming the tiles fit snugly (don't worry about grout), how many tiles will be needed to cover the floor?

1296 tiles

Lesson 11.4 • Corresponding Parts of Similar Triangles

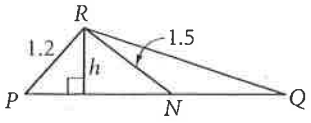
Name Answer Key Period _____ Date _____

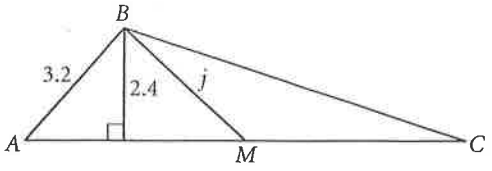
All measurements are in centimeters.

1. $\triangle ABC \sim \triangle PRQ$. M and N are midpoints. Find h and j.

$h = .9$ cm

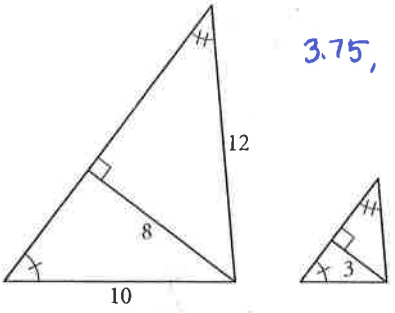
$j = 4.0$ cm





2. The triangles are similar. Find the length of each side of the smaller triangle to the nearest 0.01.

3.75, 4.5, 5.6 cm

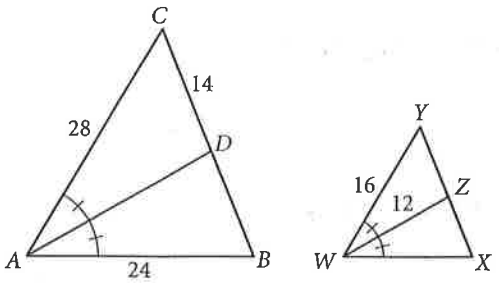


3. $\triangle ABC \sim \triangle WXY$

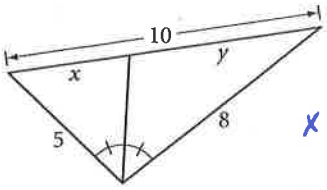
$WX = 13\frac{5}{7}$ cm $\quad AD = 21$ cm

$DB = 12$ cm $\quad YZ = 8$ cm

$XZ = \approx 6.9$ cm



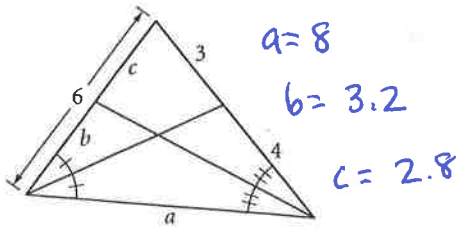
4. Find x and y.



$x = \frac{50}{13}$

$y = \frac{80}{13}$

5. Find a, b, and c.

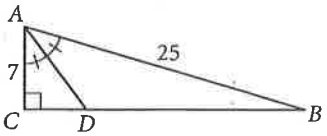


$a = 8$

$b = 3.2$

$c = 2.8$

6. Find CB, CD, and AD.



$CB = 24$

$CD = 5.25$

$AD = 8.75$