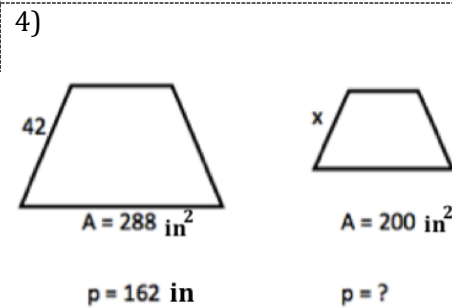
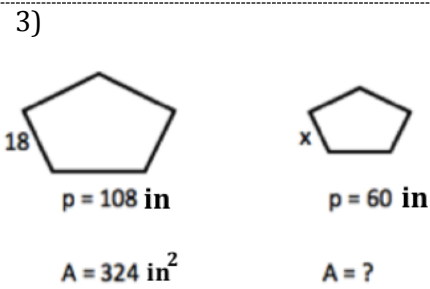
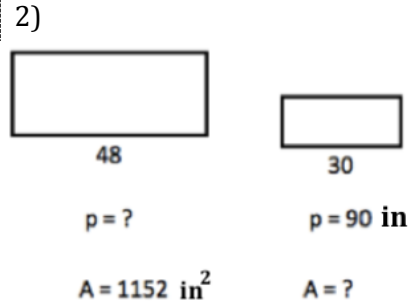
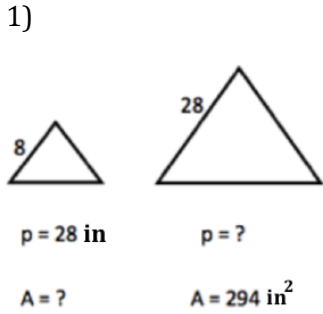


LEVEL: EMERGING

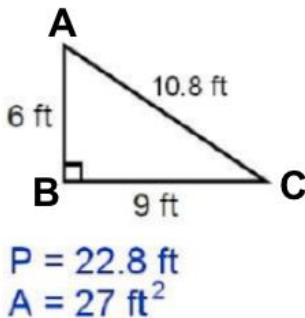
Directions: For each pair of similar figures, find the missing information.



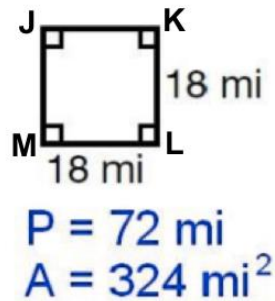
LEVEL: PROFICIENT

Directions: Given the following the scale factor, perimeter, and area of each polygon, find the perimeter and area of each polygon AFTER the given dilation. Make sure to include units.

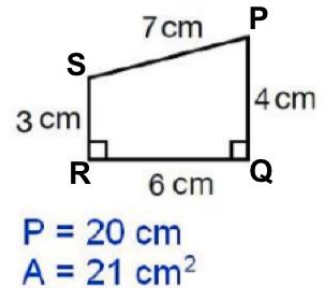
5) Scale factor of  $ABC$ :  $\frac{1}{2}$



6) Scale Factor of  $JKLM$ : 7



7) Scale factor of  $PQRS$ : 1.2



Perimeter  $A'B'C'$ : \_\_\_\_\_

Area of  $A'B'C'$ : \_\_\_\_\_

Perimeter  $J'K'L'M'$ : \_\_\_\_\_

Area of  $J'K'L'M'$ : \_\_\_\_\_

Perimeter  $P'Q'R'S'$ : \_\_\_\_\_

Area of  $P'Q'R'S'$ : \_\_\_\_\_

LEVEL: MASTERY

8) Smith's Bakery is baking several large cakes for a community festival. The cakes consist of two similar rectangles with a linear scale factor of  $\frac{1}{2}$ . If 50 pieces of cake can be cut from the smaller rectangular cake, then how many pieces of the same size can be cut from the larger cake?

9) Sam's neighbor has a rectangular garden with the dimensions 12 ft by 6 ft. Sam wants to build a garden similar to it but wants to increase the area by a scale factor of 2.25. What are the dimensions of the new garden going to be?

Directions: Find the indicated area, perimeter or corresponding side length using the given ratio.

10) The ratio of the corresponding sides of two trapezoids is 7:3. If the area of the smaller trapezoid is  $23 \text{ m}^2$ , what is the area of the larger trapezoid?

11) The ratio of the circumferences of two circles is 5:8. If the area of the larger circle is  $70 \text{ in}^2$ , what is the area of the smaller circle?

12) The area of the first triangle is  $150 \text{ cm}^2$  and the area of the second triangle is  $294 \text{ cm}^2$ . If the perimeter of the first triangle is 18 cm, what is the perimeter of the second?

13) The perimeter of the first trapezoid is 35 in and the perimeter of the second trapezoid is 80 in. If the area of the second trapezoid is  $1024 \text{ in}^2$ , what is the area of the first trapezoid?

14) The ratio of the corresponding sides of two similar rectangles is a:b. The area of the first rectangle is 432 square units. The area of the second rectangle is 147 square units. Find the values of a and b, and then find the product of a and b.

15) The ratio of the corresponding sides of two similar triangles is a:b. The perimeter of the first triangle is 84 units. The perimeter of the second triangle is 50 units. Find the values of a and b, and then find the sum of a and b.

a = \_\_\_\_\_ b = \_\_\_\_\_ product = \_\_\_\_\_ a = \_\_\_\_\_ b = \_\_\_\_\_ sum = \_\_\_\_\_