Geometry Honors   Mathematician: _____
Unit 3: Similar Figures and Dilation   Period:_____
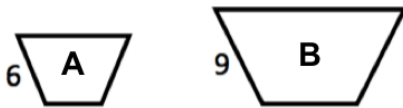3.3b Day 1 - Scale Factor, Unknown Lengths, Perimeter, Area

LEVEL: EMERGING

Directions: Given the ratio of two similar figures, find the two missing ratios.

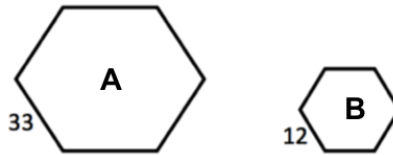|	Similarity Ratio	Perimeter Ratio	Area Ratio
1)	$\dfrac{5}{7}$		
2)		$\dfrac{3}{8}$	
3)			$\dfrac{4}{169}$
4)	$\dfrac{11}{4}$		

Directions: Find the missing values for each pair of similar figures

5) Perimeter of A = 20 in,   Area of B = 45 in^2

6 \ A /   9 \ B /

Area of A: _____   Perimeter of B: _____

6) Area of A = 484 in^2,   Perimeter of B = 60 in

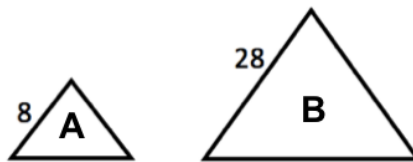33 — A   12 — B

Perimeter of A: _____   Area of B: _____

7) Area of A = 1152 ft^2,   Perimeter of B = 90 ft

A
48   B
            30

Perimeter of A: _____   Area of B: _____

8) Perimeter of A = 28 m,   Area of B = 294 m^2

8 — A   28 — B

Area of A: _____   Perimeter of B: _____

LEVEL: PROFICIENT

Directions: Find the indicated length, perimeter or area, given that the two figures are similar.

9) The width of the first rectangle is 18 cm and the width of the second rectangle is 45 cm. If the perimeter of the first rectangle is 84 cm, what is the perimeter of the second rectangle?

10) The perimeter of the smaller rectangle is 15.75 cm. The perimeter of the larger rectangle is 21 cm. The length of the smaller rectangle is 6, what is the length of the larger rectangle?

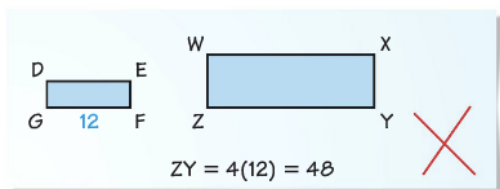|	
11) The ratio of the perimeters of two triangles is 2:3. If the area of the larger triangle is 54 in², what is the area of the smaller triangle?	12) The ratio of the areas of two squares is 4:9. If the perimeter of the smaller square is 30 m, what is the perimeter of the larger square?
13) The ratio of the corresponding sides of two rectangles is 2:7. If the perimeter of the smaller rectangle is 46 in, what is the perimeter of the larger rectangle?	14) The ratio of the circumferences of two circles is 3:4. If the area of the larger circle is 68 ft², what is the area of the smaller circle?

15) In the diagram, Rectangles *DEFG* and *WXYZ* are similar. The ratio of the area of *DEFG* to the area of *WXYZ* is 1:4. Describe and correct the error in finding $\overline{ZY}$.

$ZY = 4(12) = 48$

Describe error:

Correct the error:

16) The ratio of the corresponding sides of two similar rectangles is a:b. The perimeter of the first rectangle is 188 units. The perimeter of the second rectangle is 362 units. Find the values of a and b, and then find the sum of a and b.	17) The ratio of the corresponding sides of two similar triangles is a:b. The area of the first triangle is 80 square units and the area of the second triangle is 245 square units. Find the values of a and b, and then find the sum of a and b.
a = _____ b = _____ sum = _____	a = _____ b = _____ sum = _____