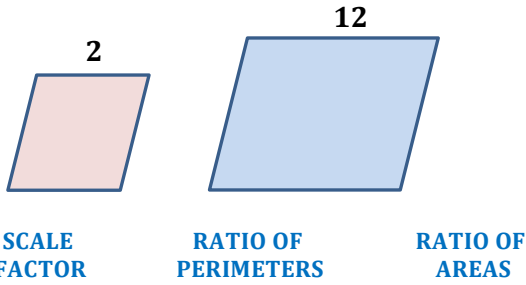


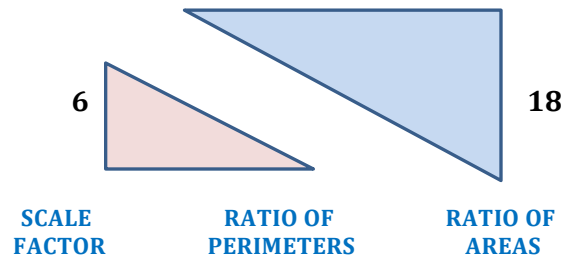
Perimeters and Areas of Similar Figures Assignment

The figures in each pair are similar. Compare the first figure to the second. Find the scale factor and give the ratio of the perimeters and the ratio of the areas.

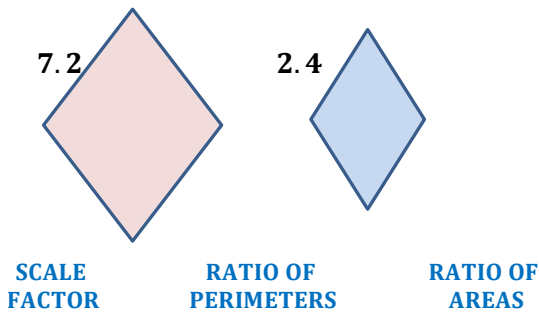
1.



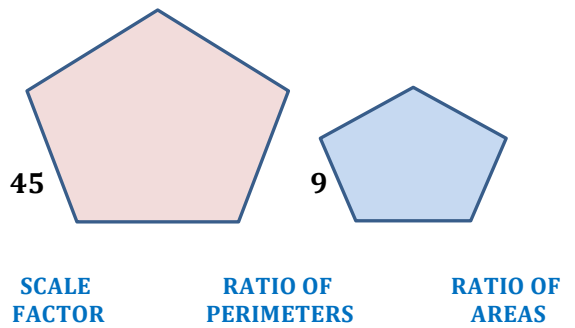
2.



3.

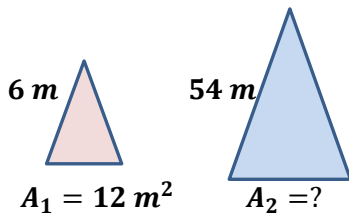


4.

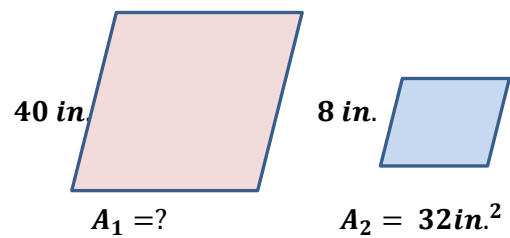


The figures in each pair are similar. The area of one figure is given. Find the area of the other figure.

5.

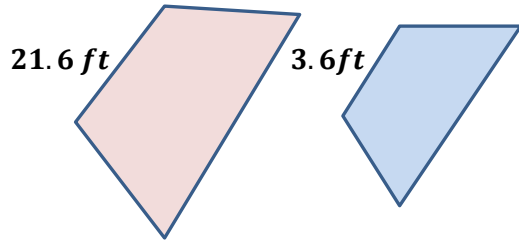


6.



Perimeters and Areas of Similar Figures Assignment

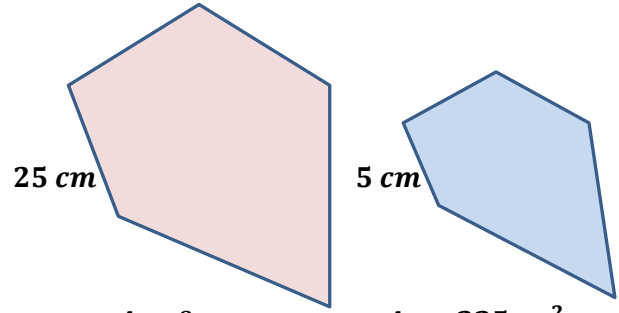
7.



$A_1 = 2160ft^2$

$A_2 = ?$

8.

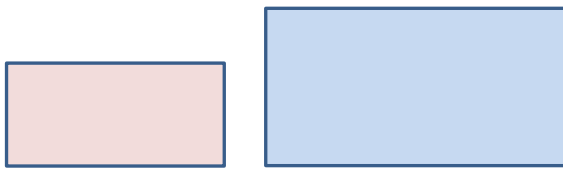


$A_1 = ?$

$A_2 = 225cm^2$

Find the scale factor and the ratio of perimeters for each pair of similar figures.

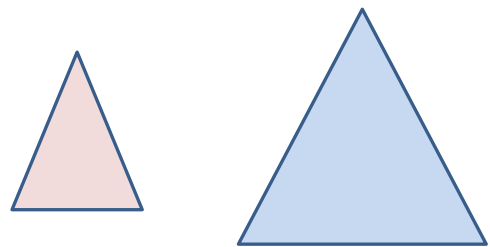
9.



$A_1 = 36cm^2$

$A_2 = 144cm^2$

10.



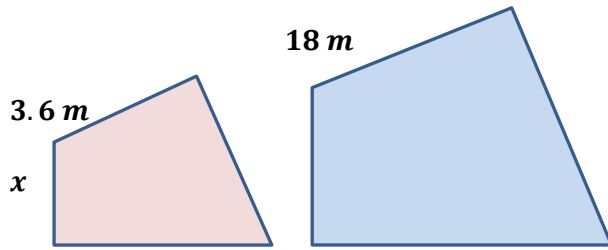
$A_1 = 9\sqrt{3}cm^2$

$A_2 = 121\sqrt{3}cm^2$

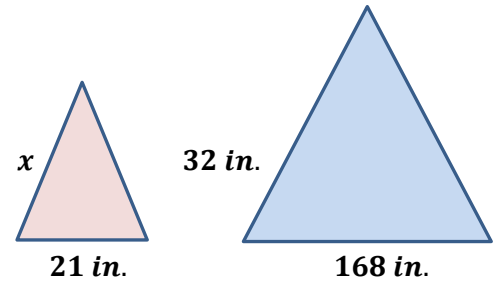
Perimeters and Areas of Similar Figures Assignment

Find the value of x .

11.



12.



Find the scale factor and the ratio of perimeters for each pair of similar figures.

13. Two regular hexagons with areas:

$$A_1 = 72\text{ cm}^2 \quad A_2 = 50\text{ cm}^2$$

14. Two regular octagons with areas:

$$A_1 = 144\text{ m}^2 \quad A_2 = 64\text{ m}^2$$

15. Two equilateral triangles with areas:

$$A_1 = 196\sqrt{3}\text{ ft}^2 \quad A_2 = 225\sqrt{3}\text{ ft}^2$$

Perimeters and Areas of Similar Figures Assignment

Solve each problem.

16. The area of a regular octagon is $45 m^2$. What is the area of a regular octagon with sides $\frac{1}{3}$ the length of sides of the larger octagon?

17. The similarity ratio of two similar polygons is **3: 5**. The perimeter of the larger polygon is **150 cm**. What is the perimeter of the smaller polygon?

18. The lengths of the sides of two triangles are in the similarity ratio of **4: 5**. If the area of the larger triangle is **125 m²**, find the area of the smallest triangle.

19. The ratio of the perimeters of two similar hexagons is **5: 8**. The area of larger hexagon is **320 in.²** What is the area of the smaller hexagon?

Name: _____ Period: _____ Date: _____

Perimeters and Areas of Similar Figures Assignment

20. Two similar parallelograms have areas 72 m^2 and 32 m^2 . The height of the larger parallelogram is 12 m . What are the lengths of the bases of both parallelograms?