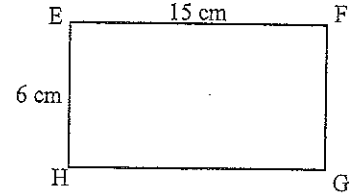
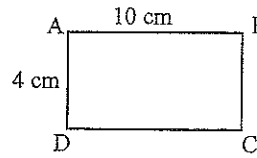


Scale Factor Worksheet (Similarity)

Use the figures below to answer questions #1 - 9.

1. Find the scale factor of the sides. (EFGH / ABCD)

$$\begin{array}{r} \rightarrow \\ * 1.5 \\ \hline \frac{3}{2} \end{array} \quad \begin{array}{r} \leftarrow \\ \cdot 0.6 \\ \hline \frac{2}{3} \end{array}$$



2. Find the perimeter of ABCD

28

3. Find the perimeter of EFGH

42

4. Find the scale factor of the perimeters (EFGH / ABCD)

$$\frac{3}{2} \rightarrow \quad \leftarrow \frac{2}{3}$$

5. How does the scale factor of the sides compare to the scale factor of the perimeter?

Same

6. Find the area of ABCD

40

7. Find the area of EFGH

90

8. Find the scale factor of the areas (EFGH/ABCD)

$$\frac{9}{4} \quad \frac{4}{9}$$

9. How does the scale factor of the sides compare to the scale factor of the area?

(Side SF)² = Area scale factor

Try these on for size!

Answer the following problems. Use a separate sheet of paper if you need more room:

A pentagon has a perimeter of 20 ft. If every side is halved, find the new perimeter.

$$20 \div 2 = 10 \div 2 = 5 \times 2 = 10 \text{ ft}$$

Tony and Edwin each built a rectangular garden. Tony's garden is twice as long and twice as wide as Edwin's garden. If the area of Edwin's garden is 600 square feet, what is the area of Tony's garden?



The ratio of two similar polygons is 3:5. The perimeter of the larger polygon is 150 centimeters. What is the perimeter of the smaller polygon?

$$\frac{3}{5} = \frac{90}{150}$$

The scale of two similar quadrilaterals is 1:4. The perimeter of the smaller quadrilateral is 80 centimeters. What is the perimeter of the larger quadrilateral?

$$\frac{1}{4} = \frac{80}{320 \text{ cm}}$$

If the dimensions of a rectangle with a perimeter of 24 inches are tripled, what will be the perimeter in inches of the new rectangle?



If the volume of a cube is increased by a factor of 8, what is the change in the length of the sides of the cube?

