1 A blue print for a house has a scale of 1 in: 5 feet. The living room has a length of 2.5 inches and a width of 3 inches. What is the actual area of the living room?

12.5 ft x 15 ft

187.5 feet^2

2 Find the area of the square below when it is increased by a scale factor of 3.

3.2 cm

9.6 cm x 9.6 cm

92.2 feet^2

3 Brianna had a garden box in her back yard that is 8 feet by 12 feet. This summer she decides that it is too big and wants to reduce it by a scale factor of ½. Find the area of her new

4 x 6 = 24 feet^2

Last summer, Brianna planted 2 plants per square foot in her garden box. How many plants will she plant this summer?

48 plants

4 In a scale drawing of a rectangular swimming pool, the scale is ½ inch: 4 feet. Find the perimeter and area of the swimming pool.

1.5 in.

3.5 in.

12 in x 28 in

Perimeter: 80 ft
Area: 336 ft^2

5 What scale factor would increase the size of the rectangle so that it has an area of 96 cm^2?

2cm

3 cm

8 x 12 = 96

Scale factor = 4

6 A blue print of a house has a scale of 1.5 in: 5 feet. Would a ping pong table that is 9 feet by 5 feet fit in a space that has drawing dimensions of 3 inches and 4.8 inches? If so, how much space (in ft^2) will remain after the table is put in the room?

Yes
The dimensions of the basement are 10 ft by 16 feet

There will be 115 sq. feet left

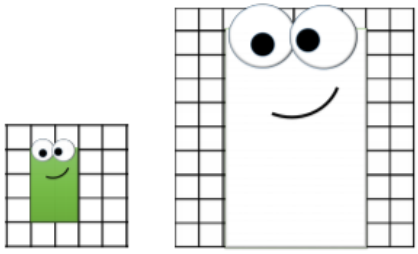
Scale Drawings

Name KEY

(Reproducing a scale drawing)

For each problem, draw a new figure using the given scale. The calculate and compare the given measurements for both the original figure and the scale drawings.

1 **Scale factor = 3**

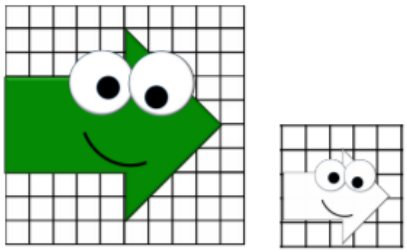


Calculate the perimeters of the original figure (not including the eyes) and the scale drawing. Write a statement comparing the perimeters.

Original: P = 10 units
Scale Drawing: P = 30 units

The perimeter of the scale drawing is 3 times the perimeter of the original image

2 **Scale factor = ½**

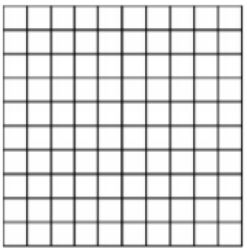


Estimate the areas of the original figure (not including the eyes) and the scale drawing. Write a statement comparing the areas.

Original: A = 36 units^2
Scale Drawing: A = 9 units^2

The area of the scale drawing is one fourth the area of the original image

3 Draw your own picture and reduce it using a scale factor of ½. Be neat and creative!



Answers will vary

4 Draw your own picture and enlarge it using a scale factor of 2. Be neat and creative!