

Lesson Summary

The scale drawing of a different scale is a scale drawing of the original scale drawing.

To find the scale factor for the original drawing, write a ratio to compare the drawing length from the original drawing to its corresponding actual length from the second scale drawing.

Refer to the example below where we compare the drawing length from the Original Scale drawing to its corresponding actual length from the New Scale drawing:

6 inches represents 12 feet or 0.5 feet represent 12 feet

This gives an equivalent ratio of $\frac{1}{24}$ for the scale factor of the original drawing.

Original Scale drawing:

(unknown SF)



Length is 6 inches on drawing

New Scale drawing (different scale):

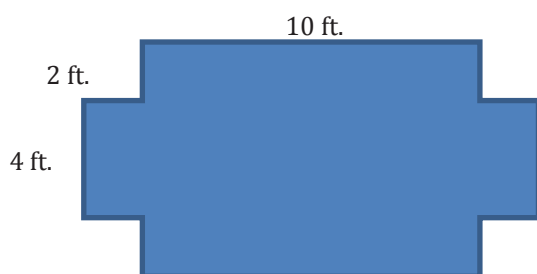
1 inch represents 6 feet



Length is 2 inches on drawing, or **12 feet actual** length using given scale

Problem Set

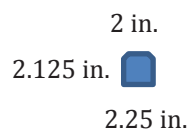
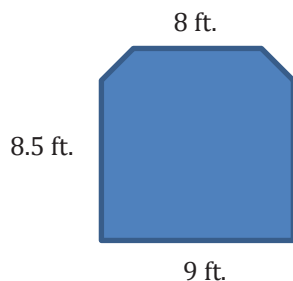
- For the scale drawing, the actual lengths are labeled onto the scale drawing. Measure the lengths, in centimeters, of the scale drawing with a ruler, and draw a new scale drawing with a scale factor ($SD2$ to $SD1$) of $\frac{1}{2}$.



2. Compute the scale factor of the new scale drawing (*SD2*) to the first scale drawing (*SD1*) using the information from the given scale drawings.

a. Original Scale Factor: $\frac{6}{35}$

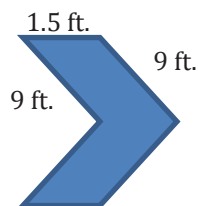
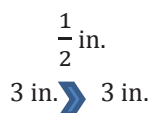
New Scale Factor: $\frac{1}{280}$



Scale Factor: _____

b. Original Scale Factor: $\frac{1}{12}$

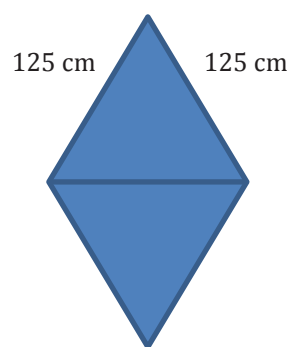
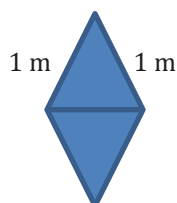
New Scale Factor: 3



Scale Factor: _____

c. Original Scale Factor: 20

New Scale Factor: 25



Scale Factor: _____