Name _____ Date_____

An Exercise in Changing Scales

The school is building a new wheelchair ramp for one of the remodeled bathrooms. The original drawing was created by the contractor, but the principal drew another scale drawing to see the size of the ramp relative to the walkways surrounding it. Find the missing values on the table.

Original Scale Drawing

12 in.

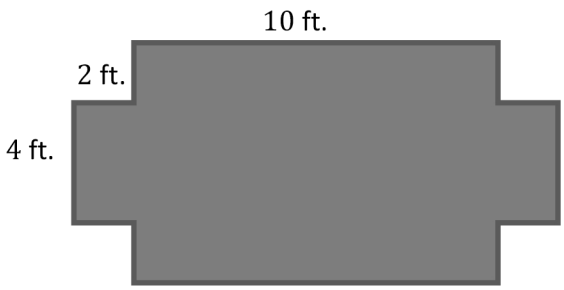
Principal's Scale Drawing

New Scale Factor of $SD2$ to the actual ramp: $\frac{1}{700}$

3 in.

	Actual Ramp	Original Scale Drawing	Principal's Scale Drawing
Actual Ramp	1		
Original Scale Drawing		1	4
Principals' Scale Drawing			

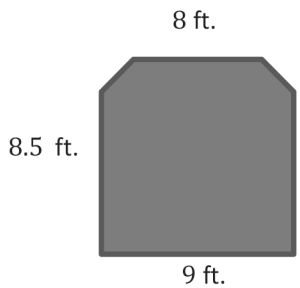
1. For the scale drawing, the actual lengths are labeled onto the scale drawing. Measure the lengths, in centimeters, of the scale drawing with a ruler, and draw a new scale drawing with a scale factor ($SD2$ to $SD1$) of $\frac{1}{2}$.

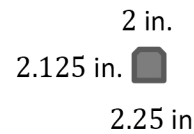


2. Compute the scale factor of the new scale drawing ($SD2$) to the first scale drawing ($SD1$) using the information from the given scale drawings.

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

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

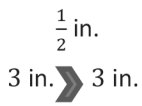


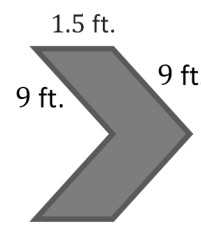


Scale Factor: _____

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

New Scale Factor: 3

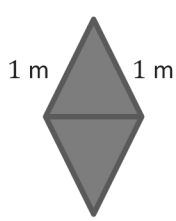


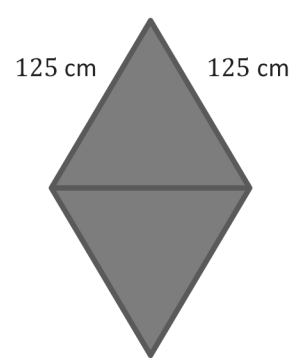


Scale Factor: _____

c. Original Scale Factor: 20

New Scale Factor: 25





Scale Factor: _____

The school is building a new wheelchair ramp for one of the remodeled bathrooms. The original drawing was created by the contractor, but the principal drew another scale drawing to see the size of the ramp relative to the walkways surrounding it. Find the missing values on the table.

Original Scale Drawing

12 in.

Principal's Scale Drawing

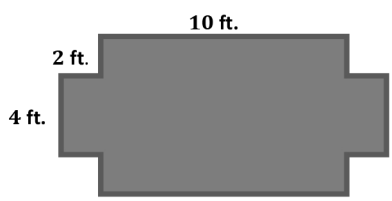
New Scale Factor of SD2 to the actual ramp: $\frac{1}{700}$

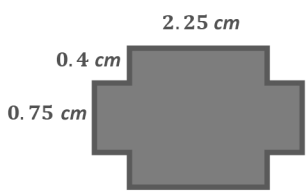
3 in.

Scale Factor Table

	Actual Ramp	Original Scale Drawing	Principals' Scale Drawing
Actual Ramp	1	175	700
Original Scale Drawing	$\frac{1}{175}$	1	4
Principal's' Scale Drawing	$\frac{1}{700}$	$\frac{1}{4}$	1

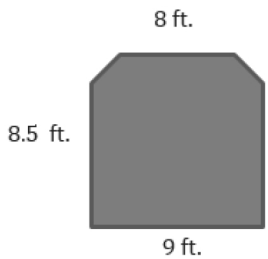
1. For the scale drawing, the actual lengths are labeled onto the scale drawing. Measure the lengths, in centimeters, of the scale drawing with a ruler, and draw a new scale drawing with a scale factor (SD2 to SD1) of $\frac{1}{2}$.



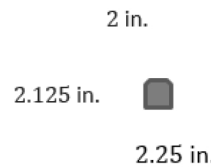


2. Compute the scale factor of the new scale drawing ($SD2$) to the first scale drawing ($SD1$) using the information from the given scale drawings.

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

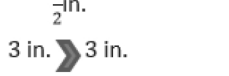


New Scale Factor: $\frac{1}{280}$

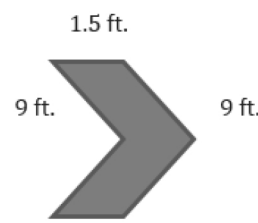


Scale Factor: ___$\frac{1}{48}$_____

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

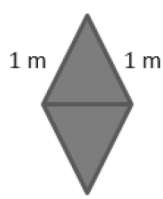


New Scale Factor: 3

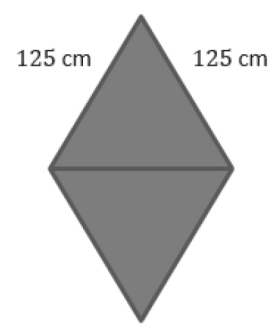


Scale Factor:_____ 36 _____

c. Original Scale Factor: 20



New Scale Factor: 25



Scale Factor:_____$\frac{5}{4}$_____