Date_____

Lesson 16: Relating Scale Drawings to Ratios and Rates

Exit Ticket

Use the following figure on the graph for Problems 1 and 2.



1.

- a. If the original lengths are multiplied by 2, what are the new coordinates?
- b. Use the table to organize lengths (the vertical and horizontal legs).

	Width	Height
Actual Picture (in units)		
New Picture (in units)		

- c. Is the new picture a reduction or an enlargement?
- d. What is the constant of proportionality?



- 2.
- a. If the original lengths are multiplied by $\frac{1}{3}$, what are the new coordinates?
- b. Use the table to organize lengths (the vertical and horizontal legs).

	Width	Height
Actual Picture (in units)		
New Picture (in units)		

- c. Is the new picture a reduction or an enlargement?
- d. What is the constant of proportionality?



Date_____

Lesson 17: The Unit Rate as the Scale Factor

Exit Ticket

A rectangular pool in your friend's yard is 150 ft. \times 400 ft. Create a scale drawing with a scale factor of $\frac{1}{600}$. Use a table or an equation to show how you computed the scale drawing lengths.



Date_____

Lesson 18: Computing Actual Lengths from a Scale Drawing

Exit Ticket

A drawing of a surfboard in a catalog shows its length as $8\frac{4}{9}$ inches. Find the actual length of the surfboard if $\frac{1}{2}$ inch length on the drawing corresponds to $\frac{3}{8}$ foot of actual length.



Date_____

Lesson 19: Computing Actual Areas from a Scale Drawing

Exit Ticket

A 1-inch length in the scale drawing below corresponds to a length of 12 feet in the actual room.





Date_____

Lesson 20: An Exercise in Creating a Scale Drawing

Exit Ticket

Your sister has just moved into a loft-style apartment in Manhattan and has asked you to be her designer. Indicate the placement of the following objects on the floorplan using the appropriate scale: queen-size bed (60 in. by 80 in.), sofa (36 in. by 64 in.), and dining table (48 in. by 48 in.) In the following scale drawing, 1 cm represents 2 ft. Each square on the grid is 1 cm².

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2. Choose one object and explain the procedure to find the scale lengths.



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Lesson 22: An Exercise in Changing Scales

Exit Ticket

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 Principal's Scale Drawing
New Scale Factor of SD2 to the actual ramp: $\frac{1}{700}$ 12 in. 3 in.

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

