

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Solve for the unknown. Rewrite each phrase as a multiplication sentence. Circle the scaling factor and put a box around the number of meters.

- a.  $\frac{1}{3}$  as long as 6 meters = \_\_\_\_\_ meters      b. 6 times as long as  $\frac{1}{3}$  meter = \_\_\_\_\_ meters

2. Draw a tape diagram to model each situation in Problem 1, and describe what happened to the number of meters when it was multiplied by the scaling factor.

- a. \_\_\_\_\_      b. \_\_\_\_\_

3. Fill in the blank with a numerator or denominator to make the number sentence true.

- a.  $5 \times \frac{\quad}{3} > 9$       b.  $\frac{6}{\quad} \times 12 < 13$       c.  $4 \times \frac{\quad}{5} = 4$

4. Look at the inequalities in each box. Choose a single fraction to write in all three blanks that would make all three number sentences true. Explain how you know.

a. 

$\frac{2}{3} \times \underline{\quad} > \frac{2}{3}$	$4 \times \underline{\quad} > 4$	$\frac{5}{3} \times \underline{\quad} > \frac{5}{3}$
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b. 

$\frac{2}{3} \times \underline{\quad} < \frac{2}{3}$	$4 \times \underline{\quad} < 4$	$\frac{5}{3} \times \underline{\quad} < \frac{5}{3}$
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5. Write a number in the blank that will make the number sentence true.
- a.  $3 \times \underline{\hspace{1cm}} < 1$
- b. Explain how multiplying by a whole number can result in a product less than 1.
6. In a sketch, a fountain is drawn  $\frac{1}{4}$  yard tall. The actual fountain will be 68 times as tall. How tall will the fountain be?
7. In blueprints, an architect's firm drew everything  $\frac{1}{24}$  of the actual size. The windows will actually measure 4 ft by 6 ft and doors measure 12 ft by 8 ft. What are the dimensions of the windows and the doors in the drawing?