

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

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

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?

Answer Key

- a. $\frac{1}{3} \times 6 = 2$; $\frac{1}{3}$ circled, 6 boxed; 2
- b. $6 \times \frac{1}{3} = 2$; 6 circled, $\frac{1}{3}$ boxed; 2
- a. Accurate tape diagram shown
- b. Accurate tape diagram shown
- a. Any number greater than 3; answers will vary.
- b. Any number less than 6; answers will vary.
- c. 5
- 4. a. Any fraction greater than 1; answers will vary.
- b. Any fraction less than 1; answers will vary.
- 5. a. Any number less than $\frac{1}{3}$
- b. Explanations will vary.
- 6. 17 yd
- 7. 2 in by 3 in; 6 in by 4 in