Lesson 2 Practice Problems

1. When Han makes chocolate milk, he mixes 2 cups of milk with 3 tablespoons of chocolate syrup. Here is a table that shows how to make batches of different sizes. Use the information in the table to complete the statements. Some terms are used more than once.

cups of milk	tablespoons of chocolate syrup
2	3
8	12
1	$\frac{3}{2}$
10	15

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a. The table shows a proportional relationship between _____ and _____.

b. The scale factor shown is _____.

c. The constant of proportionality for this relationship is_____.

d. The units for the constant of proportionality are _____ per _____.

Bank of Terms: tablespoons of chocolate syrup, 4, cups of milk, cup of milk, $\frac{3}{2}$

2. A certain shade of pink is created by adding 3 cups of red paint to 7 cups of white paint.

a. How many cups of red paint should be added to 1 cup of white paint?

cups of white paint	cups of red paint
1	
7	3

b. What is the constant of proportionality?

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3. A map of a rectangular park has a length of 4 inches and a width of 6 inches. It uses a scale of 1 inch for every 30 miles.

    a. What is the actual area of the park? Show how you know.

    b. The map needs to be reproduced at a different scale so that it has an area of 6 square inches and can fit in a brochure. At what scale should the map be reproduced so that it fits on the brochure? Show your reasoning.

(From Unit 1, Lesson 12.)

4. Noah drew a scaled copy of Polygon P and labeled it Polygon Q.
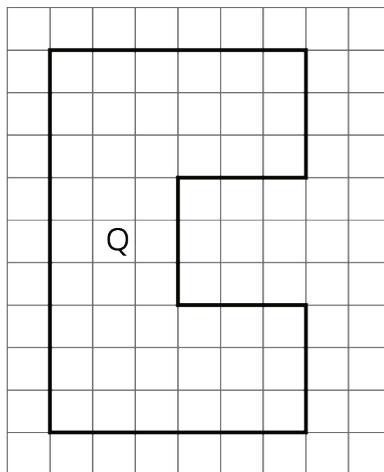
If the area of Polygon P is 5 square units, what scale factor did Noah apply to Polygon P to create Polygon Q? Explain or show how you know.

(From Unit 1, Lesson 6.)

5. Select **all** the ratios that are equivalent to each other.

 A. 4 : 7

 B. 8 : 15

 C. 16 : 28

 D. 2 : 3

 E. 20 : 35