### 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.
* 
	1. The table shows a proportional relationship between \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	2. The scale factor shown is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	3. The constant of proportionality for this relationship is\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	4. The units for the constant of proportionality are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ per \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Bank of Terms: tablespoons of chocolate syrup, 4, cups of milk, cup of milk, $\frac{3}{2}$
1. A certain shade of pink is created by adding 3 cups of red paint to 7 cups of white paint.
	1. 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
 |

* 1. What is the constant of proportionality?
1. 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.
	1. What is the actual area of the park? Show how you know.
	2. 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.)
1. Noah drew a scaled copy of Polygon P and labeled it Polygon Q.
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* 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.)
1. Select **all** the ratios that are equivalent to each other.
	1. $4:7$
	2. $8:15$
	3. $16:28$
	4. $2:3$
	5. $20:35$



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