Multiplying Fractions by Whole Numbers: Recipes

Final Assignment Instructions

In this lesson, you have learned how to multiply a fraction by a whole number. You will now answer a question that shows what you have learned. You will need a printout of your notes.
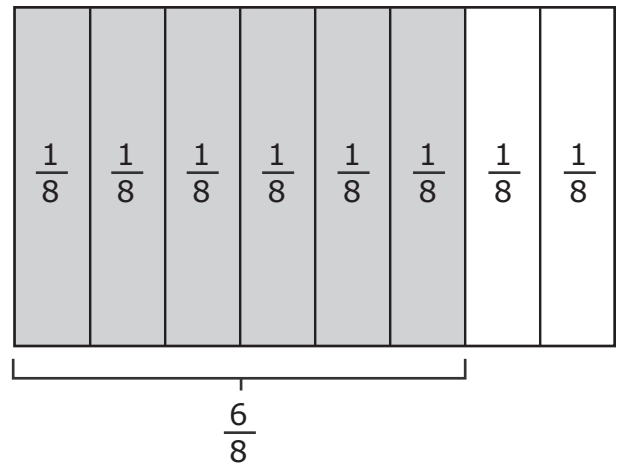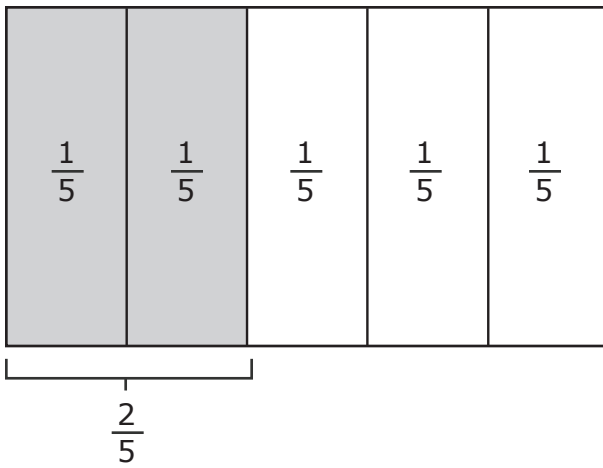
- **Choose** <u>one</u> of the topics below and **write** an essay.

- **Organize** your response so that it includes at least <u>three</u> supporting details that you have learned from the reading passage, video(s), and other materials in this lesson.

- **Use** at least <u>three</u> vocabulary words (or a form of the words) as part of your supporting details. For example, for the word *jump*, you could use *jumps*, *jumped*, or *jumping*.

Essay Topics

1. A student is struggling to understand how to triple the ingredients in a blueberry cake recipe. The recipe calls for $\frac{1}{2}$ cup of butter, $\frac{3}{4}$ cup of blueberries, and $\frac{2}{3}$ cup of milk.

   a. Explain how to multiply a fraction by the number 3.

   b. Figure out how much of each ingredient she needs. (When you are writing your answer, you can write your fractions like this: $\frac{1}{2}$, $\frac{1}{4}$, or $\frac{6}{2}$.)

2. A friend of yours says that he has a shortcut to increase the size of any recipe. "If I need to double the size of a recipe, I just add 2 to every ingredient," he says. "So if the recipe calls for 1 egg, I add 2 and use 3 eggs. And if the recipe calls for $\frac{1}{2}$ cup of sugar, I add 2 and use $2\frac{1}{2}$ cups of sugar."

   Write a response to your friend, nicely telling him:

   a. Why this method will not work.

   b. Why adding the same amount to each ingredient is not the same as doubling.

   c. What he should do instead if he wants to double a recipe.

3. In this lesson, you learned that multiplication and addition are related operations. Look at one of the two area models on the next page. Then do the following:

   a. Write both an addition problem and a related multiplication problem.

   b. Explain how adding fractions can help you multiply fractions.

$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$

$$\frac{2}{5}$$

$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$

$$\frac{6}{8}$$

Vocabulary Words

denominator

double

fraction

model

numerator

product

triple