

DUE DATE: \_\_\_\_\_

7<sup>th</sup> Grade Math  
Ratios & Proportions Project  
Mrs. Clenaghan

## **RATIOS AND PROPORTIONS**

### **RECIPE PROJECT**

You will apply ratios and proportions to help you convert a recipe to serve more people.

*You have found your favorite recipe for a dessert or appetizer and want to bring it to the class party. The problem is your recipe only serves 8 people. Use proportions to increase the recipe to serve 30 people. Make 1 serving per person.*

For this project you will need to:

1. Choose one recipe from the internet, cookbook or home.
2. The recipe must have at least 8 ingredients.
3. Use proportions to increase the recipe to serve 30 people (1 serving per person).
4. Create a poster board that includes the following: *(Use attached table to assist you)*
  - Original Recipe
  - Ratio for one serving,  
(i.e. if the recipe uses 1 cup of sugar, and the recipe serves 8, the ratio for one serving equals  $\frac{1}{8}$  c. sugar).
  - Proportion used to increase recipe to 30 servings.  $\frac{1}{8}$  servings =  $\frac{x}{30}$  servings
  - Show the work to solve proportion.
  - Round your measurements to the nearest **half** (i.e. 3.222 teaspoons, rounds to 3 teaspoons, 3.666 teaspoons rounds to  $3\frac{1}{2}$  teaspoons).
  - Scaled Recipe– Ingredient and new amount needed for 30 servings.
  - Explain the math you used to solve this problem. Your strategies!
  - Directions how to make the recipe.
  - Be creative! Use drawings, pictures, etc. to demonstrate your knowledge of ratios and proportions.
5. **Review attached rubric for grading!**
6. **Extra credit: Make the new recipe for the class!**

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**Table - Proportions to Increase a Recipe**

Original Recipe serves: \_\_\_\_\_

Original Recipe Ingredients	Ratio for one serving	Proportion used to increase recipe to 30 servings	Work to solve proportion	Scaled Recipe- Amount needed for 30 servings
<b><i>1 Cup Sugar (serves 8)</i></b>	<b><i>1/8</i></b>	<b><i><math>\frac{1}{8} = \frac{x}{30}</math></i></b>	<b><i><math>\frac{8x}{8} = \frac{30}{8}</math></i></b>	<b><i>3 <math>\frac{3}{4}</math> Cups of Sugar</i></b>
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**Write About Your Strategies:**

Using complete sentences, describe the math you used to solve this problem.

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**Rubric for Recipe Project**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Using Proportions</b>	Fails to use proportions to increase a recipe?	Set up proportions that are incorrect for increasing a recipe?	Correctly set up proportions to increase a recipe with one minor error?	Correctly set up proportions to increase a recipe?
<b>Using Cross Products or Equal Ratios</b>	Fails to use cross products or equal ratios to solve proportions?	Use cross products or equal ratios inaccurately to solve proportions?	Reasonably use cross products or equal ratios to solve proportions? (No more than one minor error )	Demonstrate the ability to use cross products or equal ratios efficiently and accurately to solve proportions?
<b>Increasing A Recipe</b>	Includes a significantly flawed calculation of the amounts needed to increase a recipe? Fails to use rounding of measurements correctly	Includes a calculation of the amounts needed to increase a recipe that contains minor errors? Inaccurately rounded most measurements?	Includes a reasonable calculation of the amounts needed to increase a recipe? Rounded to nearest half (No more than one minor error )	Includes an accurate and complete calculation of the amounts needed to increase a recipe? Correctly rounded measurements to nearest half.
<b>Conceptual Understanding</b>	Describes strategies for setting up and solving proportions that shows no understanding of the concepts?	Describes strategies for setting up and solving proportions that shows some understanding of the concepts?	Describes strategies for setting up and solving proportions that show a good understanding of the concepts?	Describes strategies for setting up and solving proportions that show a strong understanding of the concepts?
<b>Poster Presentation</b>	Poster lacks both organization and required information?	Poster lacks organization but includes most of the required information?	Organized poster with all required information?	Creative, neat, organized poster with all required information, at least 8 ingredients, typed, with pictures or drawings?

*Total Points* \_\_\_\_\_ = \_\_\_\_\_  
*Total possible points*      20

*Adapted from EDC, 2002 – Buyer Beware*