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 doesn't serve enought people. Use proportions to increase the recipe to serve all the people in class including your teacher. 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, must have the number of portions it makes (must serve greater than 4 people and less than 10).

3. Use proportions to increase the recipe to serve the number of people in your class, including your teacher (1 serving per person).

4. Create a brochure that includes the following: (*Use attached table to assist you*)

   - Original Recipe

   - Ratio for one serving,
     for example: if the recipe uses 1 cup of sugar, and the recipe serves 8, the ratio for one serving equals 1/8 c. sugar (**THINK UNIT RATE!**)

   - Proportion used to increase recipe to number of servings to give one portion to each person in the class including the teacher. For example, if there were 30 people in class than 1/8 servings=x/30 servings

   - Show ALL 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 ½ teaspoons).

   - Scaled Recipe– Ingredient and new amount needed to give one serving per person in class.

   - 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!Extra credit: Make the new recipe for the class!**

Table - Proportions to Increase a Recipe

Original Recipe serves: _____   New Recipe serves (# of people in class): _____

Original Recipe Ingredients	Ratio for one serving	Proportion used to increase recipe to serve classmates	Work to solve proportion	Scaled Recipe- Amount needed to feed class
1 Cup Sugar (serves 8)	*1/8*	$\frac{1}{8} = \frac{x}{30}$	$\frac{8x}{8} = \frac{30}{8}$	*3 ¾ Cups of Sugar*

Write About Your Strategies:

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

_____
_____DO NOT USE THIS SPACE!_____
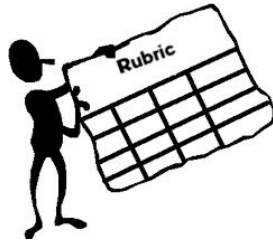_____TYPE ON A SEPARATE SHEET OF PAPER_____
_____PRINT AND TURN IN WITH YOUR RECIPE_____

_____

Rubric for Recipe Project

	0-9	10-14	15-19	20
Using Proportions	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 1-2 minor errors.	Correctly set up proportions to increase a recipe.
Using Cross Products or Equal Ratios	Fails to use cross products or equal ratios to solve proportions. More than 5 errors and/or missing work.	Use cross products or equal ratios to solve proportions, however contains 3-5 errors	Reasonably use cross products or equal ratios to solve proportions? Only 1-2 minor errors	Demonstrate the ability to use cross products or equal ratios efficiently and accurately to solve proportions. No errors in cacluations.
Increasing A Recipe	Includes a significantly flawed calculation of the amounts needed to increase a recipe. Does not round correctly to nearest half.	Includes a calculation of the amounts needed to increase a recipe that contains some errors. Inaccurately rounded some measurements.	Includes a reasonable calculation of the amounts needed to increase a recipe Rounded to nearest half with only a couple of minor errors.	Includes an accurate and complete calculation of the amounts needed to increase a recipe. Correctly rounded measurements to nearest half.
Conceptual Understanding	Describes strategies for setting up and solving proportions that shows little understanding of 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.
Brochure Presentation	Brochure lacks both organization and required information. Brochure looks messy and is difficult to understand.	Brochure lacks organization but includes most of the required information. Overall appearance could be improved.	Organized brochure with all required information. Overall appearance looks good.	Creative, neat, organized poster with all required information, at least 8 ingredients, typed, with pictures or drawings.

Total Points _____ = _____
Total possible points   *100*