

Name _____ Per _____ Date _____

More or Less: Fraction Recipes

Directions: Use this recipe for Jam Thumbprints to answer the following questions.

JAM THUMBPRINTS

1 1/2 cups all purpose flour	1/4 teaspoon salt
2/3 cup butter or margarine	1/3 cup sugar
2 egg yolks	1 teaspoon vanilla
2 slightly beaten egg whites	3/4 finely chopped walnuts
1/3 cup cherry or strawberry preserves	

Oven: 350 degrees

Stir together flour and salt. Beat butter for 30 seconds. Add sugar and beat until fluffy. Add egg yolks and vanilla; beat well. Add dry ingredients to beaten mixture, beating until well combined. Cover and chill 1 hour. Shape into 1 inch ball, roll in egg whites, then roll in finely chopped walnuts. Place 1 inch apart on ungreased cookie sheet. Press down centers with thumb. Bake in preheated oven for 15-17 minutes. Cool on a wire rack. Just before serving, fill centers with preserves. Makes 36

Part I:

1. How many cookies does the original recipe make? _____
2. How many cookies will you have if you triple the recipe? _____
- 3a. What do you need to do to each of the ingredients to make enough cookies? (Think mathematical operation.)
- 3b. Will you end up with more of each ingredient or less? _____
4. For each ingredient, write the new amount needed to make enough cookies:

_____ cups all purpose flour	_____ teaspoon salt
_____ cup butter or margarine	_____ cup sugar
_____ egg yolks	_____ teaspoon vanilla
_____ slightly beaten egg whites	_____ finely chopped walnuts
_____ cup cherry or strawberry preserves	

Part II: Now you only want to make 12 cookies.

5a. What can you do to the recipe to change the amount of the ingredients to make 12 cookies? (Think mathematical operations.)

5b. Will you end up with more of each ingredient or less? _____

6. For each ingredient, write the new amount needed to make 12 cookies:

_____ cups all purpose flour	_____ teaspoon salt
_____ cup butter or margarine	_____ cup sugar
_____ egg yolks	_____ teaspoon vanilla
_____ slightly beaten egg whites	_____ finely chopped walnuts
_____ cup cherry or strawberry preserves	

7. For each ingredient in the original recipe, multiply the amount by $\frac{1}{3}$. Write the new amount after you multiply by $\frac{1}{3}$. (Remember: Change any mixed numbers to an improper fraction, then multiply.)

_____ cups all purpose flour	_____ teaspoon salt
_____ cup butter or margarine	_____ cup sugar
_____ egg yolks	_____ teaspoon vanilla
_____ slightly beaten egg whites	_____ finely chopped walnuts
_____ cup cherry or strawberry preserves	

8. Compare the results from questions 6 and 7. What do you notice?

9. What do you think is the relationship between dividing by 3 and multiplying by $\frac{1}{3}$? Why?
