Name_____

Chapter
3

Fractions and Decimals

Dear Family,

Many of us have a number of recipes that we enjoy preparing. Perhaps they are old family recipes or simply someone's favorite meal. Some recipes we can prepare without much effort: a quarter cup of butter, a quarter cup of flour, and two cups of milk for a white sauce.

Homemade Macaroni & Cheese

1/4 c butter	2 1/2 c grated cheese
1/4 c flour	1/2 16 oz box of macaroni
2 c milk	salt & pepper

Make the macaroni using instructions on the box. Make a roux of the butter and flour. Add the milk over low heat while stirring until smooth. Add cheese to thickened sauce. Salt & pepper to taste. Stir in macaroni and serve.

However, when we have guests over for dinner, we find these familiar recipes have to be adjusted. Maybe we have to make three times as many servings. Now we need three quarter cups of butter, three quarter cups of flour, and so on.

Sometimes we want to make a smaller portion, such as when part of the family is away. Now we find ourselves using half a quarter cup of butter, half a quarter cup of flour, and so on.

You and your student can discuss strategies for preparing a meal when you have to change the recipe. For example, you might ask your student:

- "We have to use two quarter cups of sugar. Should we use the 1/4 cup measure twice, or use the 1/2 cup measure?" Your student may answer, "The amount will be the same either way."

- "The recipe calls for 2/3 cup of milk, but we only want a half batch. What measuring cup should we use?" Your student may answer, "Use the 1/3 cup measure, but only once."

- "Grandma's brownie muffin recipe makes enough for three dozen muffins, but we only want one dozen. What should we do?" Your student may answer, "We can divide the recipe measures by three."

Sometimes you have to make a judgment call. How do you cut the recipe in half, if it calls for three eggs? Talk with your student about different strategies for changing a recipe like this.

Enjoy your cooking time together!

Fractions and Decimals (continued)

Lesson	Learning Target	Success Criteria
3.1 Adding and Subtracting Fractions	Add and subtract fractions and mixed numbers.	• I can draw a model to explain fraction addition and subtraction. • I can add and subtract fractions. • I can write a mixed number as an improper fraction. • I can add and subtract mixed numbers.
3.2 Multiplying Fractions	Find products involving fractions and mixed numbers.	• I can draw a model to explain fraction multiplications. • I can multiply fractions. • I can find products involving mixed numbers. • I can interpret products involving fractions and mixed numbers to solve real-life problems.
3.3 Dividing Fractions	Compute quotients of fractions and solve problems involving division by fractions.	• I can draw a model to explain division of fractions. • I can find reciprocals of numbers. • I can divide fractions by fractions. • I can divide fractions and whole numbers.
3.4 Dividing Mixed Numbers	Compute quotients with mixed numbers and solve problems involving division with mixed numbers.	• I can draw a model to explain division of mixed numbers. • I can write a mixed number as an improper fraction. • I can divide with mixed numbers. • I can evaluate expressions involving mixed numbers using the order of operations.
3.5 Adding and Subtracting Decimals	Add and subtract decimals and solve problems involving addition and subtraction of decimals.	• I can explain why it is necessary to line up the decimal points when adding and subtracting decimals. • I can add decimals. • I can subtract decimals. • I can evaluate expressions involving addition and subtraction of decimals.
3.6 Multiplying Decimals and Whole Numbers	Multiply decimals and whole numbers.	• I can use repeated addition and models to multiply. • I can use place value to multiply decimals by whole numbers. • I can use partial products to multiply.
3.7 Multiplying Decimals	Multiply decimals and solve problems involving multiplication of decimals.	• I can use models to multiply decimals. • I can multiply decimals using place value. • I can multiply decimals using partial products.
3.8 Dividing Whole Numbers	Divide whole numbers and solve problems involving division of whole numbers.	• I can use partial quotients to divide whole numbers. • I can use long division to divide whole numbers. • I can write a remainder as a fraction. • I can interpret quotients in real-life problems.
3.9 Dividing Decimals by Whole Numbers	Divide decimals by whole numbers.	• I can use models to divide. • I can use partial quotients to divide. • I can use place value to divide a decimal by a whole number. • I can check a quotient using estimation or multiplication.
3.10 Dividing Decimals	Divide decimals and solve problems involving division of decimals.	• I can use models to divide decimals. • I can divide decimals by decimals. • I can divide whole numbers by decimals.