Unit 5 Chapter 08 Fraction Division

Content Area: **Mathematics**
Course(s): **Math 5**
Time Period: **January**
Length: **MP - 2**
Status: **Published**

Unit Summary

In this unit, students will begin to think about fraction division by starting with division of whole numbers and unit fractions. Students will use models to conceptualize dividing a whole number by a unit fraction and dividing a unit fraction by a whole number. Then they will use the inverse relationship between division and multiplication to write related multiplication expressions for given division expressions. Finally, students learn to represent division expressions with diagrams, equations, and word problems.

Student Learning Objectives

Students will learn to:

- divide a whole number by a fraction and divide a fraction by a whole number.

- solve problems using the strategy *draw a diagram.*

- interpret a fraction as division and solve whole-number division problems that result in a fraction or mixed number.

- divide a whole number by a fraction and divide a fraction by a whole number.

- represent division by drawing diagrams and writing story problems and equations.

Essential Questions

What strategies can you use to solve division problems involving fractions?
How do you divide a whole number by a fraction and divide a fraction by a whole number?
How can the strategy draw a diagram help you solve fraction division problems by writing a multiplication sentence?
How does a fraction represent division?
How can you divide fractions by solving a related multiplication sentence?
How can you use diagrams, equations, and story problems to represent division?

Enduring Understandings

Students will understand that:

- a fraction can be interpreted as division of the numerator by the denominator.

- previous understandings of division can be applied and extended in order to divide unit fractions by whole numbers and whole numbers by unit fractions, including using concrete models such as fraction strips or number lines.

- unit fractions can be divided by a non-zero whole number.

- a whole number can be divided by a unit fraction.

Application

Students will be able to independently use their learning to:

- solve a division equation of unit fractions by whole numbers and whole numbers by unit fractions, using reciprocals.
- solve real world problems with modeling.
- find the reciprocal of a number.
- use strategies to divide fractions by using the relationship between multiplication and division.

Skills

Students will be skilled at:

- Dividing a unit fraction by a whole number and whole number by a fraction.
- Understanding a fraction is a division problem, as numerator (dividend) over denominator (divisor).
- Solving real world problems with modeling.
- Finding the reciprocal of a number.
- Developing strategies to divide fractions by using the relationship between multiplication and division.