Unit 3b-Apply Understanding Of Division To Divide Fractions

Content Area: **Math**
Course(s): **Math 5**
Time Period: **Marking Period 3**
Length: **MP3 Topic 9 9-1 to 9-8**
Status: **Published**

Essential Questions

- How are fractions related to division?
- How can you divide whole numbers and unit fractions?

Big Ideas

- **Fractions and Division:** Students will learn that a fraction can be interpreted as the numerator divided by the denominator. They will find quotients that are fractions and extend this understanding to find quotients that are mixed numbers.
- **Divide Whole Numbers and Unit Fractions:** Students will use models and the relationship between multiplication and division to divide a whole number by a unit fraction. Students will use the meanings of division along with models to find quotients.
- **Word Problems Involving Fractions:** Students apply their knowledge of fraction division to solve real-world problems.

Enduring Understandings

Number and Operations—Fractions

5.NF.B.3 [M] Interpret a fraction as division of the numerator by the denominator (a/b=a÷b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret ¾ as the result of dividing 3 by 4, noting that ¾ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size ¾. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?

5.NF.B.7 [M] 1. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.

5.NF.B.7a [M] Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for (⅓) / 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (⅓) / 4 = 1/12 because 1/12 x 4 = ⅓.

5.NF.B.7b [M] Interpret division of a whole number by a unit fraction, and compute such quotients. For

example, create a story context for 4 / (⅕), and use a visual fraction model to show

the quotient. Use the relationship between multiplication and division to explain that 4 / (⅕)=20 because 20 x (⅕)=4.

5.NF.B.7c [M] Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share ½ lb. of chocolate equally? How many ⅓-cup servings are in 2 cups of raisins?

Mathematical Practices Focus

8. Look for and express regularity in repeated reasoning