

Dear Family,

In this module, *Compute with Multi-Digit Numbers and Fractions*, students will build fluency with whole-number division and decimal operations. They will develop understanding of division of fractions. By building fluency with computation, they will be better prepared to study more advanced mathematical concepts in later courses, without being weighed down by the lack of these skills.

What Did Students Learn Previously?

In elementary grades, students developed understanding of division with whole numbers and decimal operations. They also learned what division with a unit fraction means.

For example, the fraction $\frac{1}{4}$ is a unit fraction because the numerator is 1. Students used models to divide a whole number by a unit fraction, such as $2 \div \frac{1}{4}$, and a unit fraction by a whole number, such as $\frac{1}{4} \div 2$.

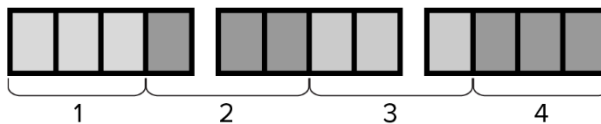
What Will Students Learn in This Module?

Building Fluency with Division of Whole Numbers and Decimal Operations

- Students previously divided whole numbers. They will build fluency with dividing multi-digit whole numbers, including annexing zeros.
- Students previously added, subtracted, multiplied, and divided with decimals. They will build fluency with these operations involving multi-digit decimals.

Division with Fractions

- Students will understand what division of a whole number by a non-unit fraction means, and use models and equations to represent the division and find the quotient.
- For example, to divide 3 by $\frac{3}{4}$, three bars are drawn to represent the dividend, 3.
- Each bar is divided into four equal-size sections because the denominator of the divisor, $\frac{3}{4}$, is 4.
- Because division can be thought of as finding how many groups of the divisor are in the dividend, count the number of groups of $\frac{3}{4}$ that are in the entire diagram.
- There are four groups of $\frac{3}{4}$ in the diagram. So, $3 \div \frac{3}{4} = 4$.
- Students will build upon this understanding to use models and equations to divide fractions by fractions, including mixed numbers.

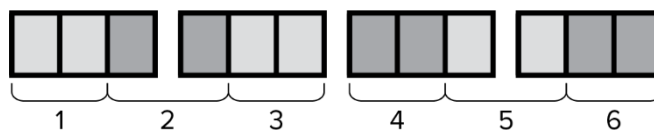


What Vocabulary Terms Will Students Use?

Term	Definition
quotient	The result of a division problem.
dividend	The number that is divided.
divisor	The number that is used to divide the dividend.
multiplicative inverses, or reciprocals	Two numbers whose product is 1
Inverse Property of Multiplication	The property that states the product of a number and its multiplicative inverse is 1.

How You Can Provide Support

- It can be challenging to understand how the result of multiplying or dividing a number by a fraction compares to the original number.
 - Students may think that dividing a number always decreases its value.
 - Ask your child to explain how the diagram illustrates that this is not always true. Here are some questions you can use.
 - What is the dividend? **4**
 - How do you know? **There are 4 bars drawn.**
 - What is the divisor? $\frac{2}{3}$
 - How do you know? **Each group represents $\frac{2}{3}$ of one bar.**
 - How many groups of the divisor are there? **6**
 - Is the quotient less than, greater than, or equal to the dividend? **greater than**
- Encourage your child to have a positive, growth-oriented attitude towards mathematics and their learning.
 - Encourage them to ask questions – both at home and in class. Sometimes, an answer to a question will generate more questions. That’s how you know they are learning!
 - Encourage your child to embrace challenges and remind them that every challenge is an opportunity to learn something new.
 - Celebrate successes – both small and large.
- Contact me to arrange a time to discuss the specifics of your child’s performance and how we can work together to help them succeed in this module.



Sincerely,

(Teacher's Name)

(Email/Phone)