Unit 2: Multiplying and Dividing Integers and Rational Numbers

Content Area: **Math**
Course(s): **Math**
Time Period: **October**
Length: **3-4 weeks**
Status: **Published**

Enduring Understandings

SWBAT:

- explain the rules for multiplying integers.
- explain the rules for dividing integers.
- evaluate expressions involving rational numbers.
- solve real-life problems involving multiplication and division of rational numbers

Essential Questions

How can we:

- understand absolute value, and order and compare rational number

  - Can we graph rational numbers on a number line?
  - Can we find absolute value of a rational number?
  - Can we use a number line to compare rational numbers?

- find sums of integers

  - can we explain how to model addition of integers on a number line?
  - can we find sums of integers by reasoning using absolute value?
  - can students explain why the sum of number and its opposite is zero?

- find sums of rational numbers

  - can we explain how to model addition of rational number on a number line?
  - can we find sums of rational numbers by reasoning about absolute value?
  - can we use properties of addition to efficiently add rational numbers?

- find differences of integers

  - can we explain how subtracting integers is related to adding integers?
  - can we use models to subtract integers on a number line?
  - can we find differences of integers by reasoning about absolute values?

- find differences of rational numbers

  - can we explain how to model subtraction of rational numbers on a number line?
  - can we find differences of rational numbers by reasoning about absolute values?

- can we find distances between integers and rational numbers on a number line?

Benchmark Assessments

Schoolwide Benchmark assessments:

- Linkit Benchmarks (Form A in September, Form B in January, Form C in June): Linked to NJSLA standards

Additional Benchmarks used in this unit:

- IXL Diagnostic + continued practice during IXL periods

Formative Assessments

Formative Assessments used in this unit:

- Kahoot! Games
- Quizizz Games
- Homework
- Q & A
- Scavenger Hunts
- Coloring Activities
- Task Cards
- Partner Activities

Summative Assessments

Summative assessments for this unit:

- Chapter Test

- Quizzes

Instructional Materials

1. Big Ideas Math: Math & You 6th Grade Textbook
2. Quizizz
3. Kahoot!
4. Scavenger Hunts
5. Task Cards
6. Coloring Activities
7. GimKit

Standards

MA.7.NS.A	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.
MA.7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
MA.7.NS.A.2a	Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as (–1)(–1) = 1 and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.
MA.7.NS.A.2b	Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number.If p and q are integers, then $–(p/q) = (–p)/q = p/(–q)$. Interpret quotients of rational numbers by describing real-world contexts.
MA.7.NS.A.2c	Apply properties of operations as strategies to multiply and divide rational numbers.
MA.7.NS.A.2d	Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.
MATH.7.NS.A.3	Solve real-world and mathematical problems involving the four operations with rational numbers. Computations with rational numbers extend the rules for manipulating fractions to complex fractions.