

UNIT 2 OVERVIEW

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SECTION	CORE PROBLEMS	VIDEOS	Lesson Objectives	CCSS Standards
2.1.1	2-1 thru 2-5	Portion web	Fraction to decimal conversion Diamond Problems (parent guide) Operations with Decimals (parent guide)	7.NS.2d
2.1.2	2-18 thru 2-23		Rewriting decimal as fractions and percents Fractions Decimal Percent Equivalents (parent guide)	
2.2.1	2-31 thru 2-34	Modeling on a number line	Composing Integers Addition of Integers (parent guide)	Preparation for 7.NS.1d in Lesson 2.2.2
2.2.2	2-42 thru 1-48		Adding Integers	Adding Integers and rational numbers Multiplication and Division of Integers (parent guide)
2.2.3	2-56 thru 2-60	7.RP.1a, 7.NS.1b, 7.NS.1d		
2.2.4	2-67 thru 2-75	Multiplication & Repeated Addition		
3.2.1	3-24 thru 3-29		Subtraction of Integers	7.NS.1c, 7.NS.1d
3.2.2	3-39 thru 3-43	Adding and Subtracting Integers	Connecting Addition and Subtraction of Integers	7.NS.1c, 7.NS.1d
3.2.3	3-51 thru 3-55 & 3-57		Multiplication as Repeated Subtraction	7.NS.2a, 7.NS.2b, 7.NS.2c
3.2.4	3-64 thru 3-68	Multiplication of Decimals	Multiplication of Decimals Operations with Decimals (parent guide)	7.NS.2a, 7.NS.2c
3.2.5	3-78 thru 3-80	Add,sub, multi, & div integers	Addition, Subtraction, Multiplication, and Division of Integers Operations with Integers (parent guide)	7.NS.2c, 7.NS.3

3.3.1	3-87 thru 3-89 & 3-91		Division with Rational Numbers Operations with Fractions (parent guide)	7.NS.2b, 7.NS.2c, 7.NS.3
3.3.2	3-98 thru 3-103	Division with Decimals	Division with Decimals	7.NS.2c, 7.NS.3
3.3.3	3-112 thru 3-116 3-118 thru 3-119		Arithmetic Properties Properties of Addition and Multiplication (parent guide)	7.NS.1d, 7.NS.2c, 7.NS.3
Review Material from Prior Grades				
<div> <div> 5.NF.A.1 Add and subtract fractions. 6.NS.C.5 Explain the meaning of zero. 6.NS.C.6a Recognize opposites on a number line. 6.NS.C.7c Understand absolute value is the distance from zero on a number line. 5.NF.B.4 Multiplying a fraction and a whole number. 6.NS.B.3 Operations with decimals. </div> <div> 5.NF.B.3 Dividing whole numbers whose product is a fraction. 6.RP.A.2 Understand the concept of unit rate. 6.RP.A.3 Ratio and rate reasoning. 5.NF.A.1 Add and subtract fractions. 6.NS.A.1 Calculating quotients of fractions. 6.NS.C.7c Understand absolute value is the distance from zero on a number line. </div> </div>				
7th Grade CCSS Standards				
7.NS.A.1a Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged. 7.NS.A.1b Understand $p + q$ as the number located a distance $ q $ from p , in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. 7.NS.A.1c Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.				

7.NS.A.1d

Apply properties of operations as strategies to add and subtract rational numbers.

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.

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.

7.NS.A.2c

Apply properties of operations as strategies to multiply and divide rational numbers.

7.NS.A.3

Solve real-world and mathematical problems involving the four operations with rational numbers.

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.

7.RP.A.1

Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks $1/2$ mile in each $1/4$ hour, compute the unit rate as the complex fraction $1/2/1/4$ miles per hour, equivalently 2 miles per hour.*

Mathematical Vocabulary

The following is a list of vocabulary found in this chapter. It is a good idea to make sure you are familiar with these words and to know what they mean. For the words you do not know, refer to the glossary or index. You might also want to add these words to your Toolkit for a way to reference them in the future.

absolute value
Distributive Property
four-quadrant graph
mixed number
scaling

additive identity
equivalent
integers
rational numbers
terminating decimal

additive inverse
fraction greater than one
interval
repeating decimal

additive inverse
Commutative Property
multiplicative inverse
quotient
simplify

algebraic expression
evaluate
numerical term
rational numbers
substitution

Associative Property
integers
Order of Operations
reciprocals
terms

** Please note this is a comprehensive curriculum and will include additional mathematical content and standards. This is ONLY an overview of Unit 2.