

Fundamental Math explores foundational concepts in math. Students master basic skills and extend their knowledge as they prepare for more advanced work. Topics include basic number concepts such as whole numbers, counting, place value, rounding, exponents, and negative numbers; addition and subtraction; and multiplication and division. The course also covers fractions, operations with fractions, decimals, percents, ratios, problem solving, basic concepts in geometry, and measuring shapes.

This course is built to National Council of Teachers of Mathematics (NCTM) standards and is aligned to state standards.

Length: Two semesters

UNIT 1: BASIC NUMBER CONCEPTS

LESSON 1: WHOLE NUMBERS

Study: Whole Numbers

Review the learning objectives and key concepts covered in this unit. Includes Think About It printable essay questions.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Study: Creation of Numbers

A brief history of the development of number systems in various cultures through time

Duration: 0 hrs 10 mins

Quiz: Whole Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 2: READING AND WRITING WHOLE NUMBERS

Study: Reading and Writing Whole Numbers

Place value, naming whole numbers, lumping large numbers, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Study: Numeric Systems

Provides examples of numeric systems in other cultures, such as Hindu, Roman, Arabic, Mayan, and Egyptian systems

Duration: 0 hrs 10 mins

Quiz: Reading and Writing Whole Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 3: ODD AND EVEN NUMBERS

Study: Odd and Even Numbers

Dividing into even groups, counting by twos, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Odd and Even Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 4: USING ODD AND EVEN NUMBERS

Study: Using Odd and Even Numbers

Adding and subtracting like and unlike numbers and the sums and differences, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Using Odd and Even Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 5: COUNTING BY 2'S, 3'S, 4'S, 5'S AND 10'S

Study: Counting by 2's, 3's, 4's, 5's and 10's

Using the number line to count, skip counting, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Counting by 2's, 3's, 4's, 5's and 10's

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 6: NUMBER PATTERNS

Study: Number Patterns

Patterns in everyday life, patterns in numbers, repeating sequences, finding the missing number, using patterns to predict, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Number Patterns

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 7: PUTTING NUMBERS IN ORDER

Study: Putting Numbers in Order

Ordering numbers on the number line, using place value, greater than and less than symbols, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Putting Numbers in Order

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 8: IDENTIFYING GREATER THAN AND LESS THAN

Study: Identifying Greater than and Less than

Comparing numbers--comparing digits, comparing numbers of equal place value, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Identifying Greater than and Less than

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 9: INTRODUCTION TO NUMBER LINES AND INEQUALITIES

Study: Introduction to Number Lines and Inequalities

Building a number line--spacing, units, equations and inequalities, reading mathematical sentences, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Introduction to Number Lines and Inequalities

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 10: PLACE VALUE

Study: Place Value

Use periods to figure out a digit's place value. Determine place value up to the hundred-millions place.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Place Value

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 11: PLACE VALUE BEYOND A THOUSAND

Study: Place Value Beyond a Thousand

Learn to interpret place values up to the millions place. Understand the importance of periods within the base-ten system.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Practice: Place Value Scale Tool

Use the Place-Value Scale tool to explore the base-ten numbering system.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Place Value Beyond a Thousand

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 12: STANDARD, EXPANDED AND WORD FORM

Study: Standard, Expanded and Word Form

Writing numbers in three different forms using place value and periods, sample problem.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Standard, Expanded and Word Form

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 13: ORDINAL NUMBERS**Study: Ordinal Numbers**

Counting with cardinals, naming and ordering with ordinals, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Ordinal Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 14: BASIC NUMBER CONCEPTS WRAP-UP**Review: Basic Number Concepts**

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Basic Number Concepts

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 60 points

Test (TS): Basic Number Concepts

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 2: ADVANCED NUMBER CONCEPTS**LESSON 1: PROPERTIES OF ADDITION****Study: Properties of Addition**

Commutative and associative properties, using the properties to solve addition (but NOT subtraction) problems, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Properties of Addition

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 2: PROPERTIES OF MULTIPLICATION**Study: Properties of Multiplication**

Learn about commutative and associative properties and using the properties to solve multiplication (but not division) problems. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Properties of Multiplication

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 3: ROUNDING TO THE 10'S, 100'S, AND 1000'S**Study: Rounding to the 10's, 100's, and 1000's**

Identify key words that ask you to round a number. Learn the steps to round a given number to the 10s, 100s, or 1000s place.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Rounding to the 10's, 100's, and 1000's

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 4: ROUNDING TO THE 10,000'S, 100,000'S AND 1,000,000'S**Study: Rounding to the 10,000's, 100,000's and 1,000,000's**

Using place value to round numbers to the millions, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Rounding to the 10,000's, 100,000's and 1,000,000's

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 5: GROUPING WITH PARENTHESES**Study: Grouping with Parentheses**

Learn about using grouping to define order of operations. Practice this skill using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Grouping With Parentheses

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 6: ROUNDING WITH A NUMBER LINE**Study: Rounding with a Number Line**

Rules for rounding to the nearest ten, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Rounding with a Number Line

Take a quiz to assess your understanding of the material.

LESSON 7: PRIME NUMBERS

Study: Prime Numbers

Learn about number factors, the definition of a prime number, and using a rectangle to find primes. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Prime Factorization Tool

Use the Prime Factorization Tool to break down whole numbers into products of prime factors by making factor trees.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Prime Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 8: INVERSE OPERATIONS

Study: Inverse Operations

Explore how to reverse the action of one operation with another operation. Use the number line tool to experiment with inverse operations, such as addition and subtraction, or multiplication and division. Learn about the exception of zero in division. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: Codes through History

Exploration and examples of codes throughout history, from the ancient Egyptians, through the time of Maty Queen of Scots, the two world wars, and up to the present computers.

Duration: 0 hrs 10 mins Scoring: 0 points

Quiz: Inverse Operations

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 9: EXPONENTS

Study: Exponents

Review of factors and products, exponents as repeated factors, function of bases and exponents, converting between exponential and standard form, reading exponential expressions, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Exponents

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 10: SQUARE NUMBERS

Study: Square Numbers

Building squares, multiplying sides, squares as numbers with identical factors

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Practice: Tile Tool

Use the Tile Tool to explore patterns.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Square Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 11: ROMAN NUMERALS**Study: Roman Numerals**

Arabic v. other numbers systems through history, symbols for Roman numerals, rules for finding values of Roman numerals.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Practice: Roman Numeral Converter

Use the Roman Numeral Converter to convert Roman numerals to Arabic numerals.

Duration: 0 hrs 30 mins Scoring: 25 points

Study: Naming the Olympic Games

Explore how Roman numerals are used to number the Olympic Games.

Duration: 0 hrs 10 mins

Study: History of the Olympics

Numbers to the left of zero on the number line, definition of integers, sign and values of negative integers, sample problems.

Duration: 0 hrs 10 mins

Quiz: Roman Numerals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 12: NEGATIVE NUMBERS**Study: Negative Numbers**

Learn about positive, negative, and opposite numbers, as well as integers and signs.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Negative Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 9 points

LESSON 13: ADVANCED NUMBER CONCEPTS WRAP-UP**Review: Advanced Number Concepts**

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Advanced Number Concepts

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 60 points

Test (TS): Advanced Number Concepts

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 3: ADDITION AND SUBTRACTION

LESSON 1: ADDING WHOLE NUMBERS

Study: Adding Whole Numbers

Parts of an addition sentence, adding on the number line, a table of addition facts to 1-9

Duration: 0 hrs 40 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Practice: Frog Tool

Use the Frog Tool to investigate addition and subtraction on the number line.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Adding Whole Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 2: ADDITION FACTS WITH TABLE

Study: Addition Facts with Table

Counting v. adding, memorizing the addition table 1-9, flashcard practice.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Practice: Addition Table Tool

Use the Addition Table Tool to find patterns in addition facts.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Addition Facts with Table

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 3: COLUMN ADDITION

Study: Column Addition

Lining up by place value, adding more than two numbers, sample problems.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Study: Counting Tools

Examples of counting tools through time and across cultures, including tally sticks, tokens, and the abacus, Babbage's mechanical calculator, and modern computers.

Duration: 0 hrs 10 mins

Quiz: Column Addition

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 4: ADDITION WITH REGROUPING

Study: Addition with Regrouping

Regrouping by place value, carrying numbers, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Addition with Regrouping

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 5: HORIZONTAL ADDITION

Study: Horizontal Addition

Mental math, addition shortcuts, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Horizontal Addition

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 6: SUBTRACTING WHOLE NUMBERS

Study: Subtracting Whole Numbers

Nine eggs take away two eggs, parts of a subtraction sentence, using the number line to subtract, a subtraction table 1-9, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Subtracting Whole Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 7: SUBTRACTION FACTS WITH TABLE

Study: Subtraction Facts with Table

Counting backwards v. subtracting, memorizing the subtraction table 1-9, flashcard practice.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Subtraction Facts with Table

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 8: COLUMN SUBTRACTION

Study: Column Subtraction

Lining up by place value, subtracting large numbers, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Column Subtraction

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 9: SUBTRACTION REGROUPING FOR TWO-DIGIT NUMBERS**Study: Subtraction Regrouping for Two-Digit Numbers**

Regrouping by place value, borrowing numbers, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Subtraction Regrouping for Two-Digit Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 10: SUBTRACTION REGROUPING FOR THREE-DIGIT NUMBERS**Study: Subtraction Regrouping for Three-Digit Numbers**

Regrouping in the hundreds place, regrouping more than once, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Subtraction Regrouping for Three-Digit Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 11: ADDING AND SUBTRACTING ZERO**Study: Adding and Subtracting Zero**

Zero does not change the sum or difference, sample problem.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Study: The "Invention" of Zero

A brief history of the first discovery of zero in the Hindu numeric system and its adoption in the Arabic system.

Duration: 0 hrs 10 mins

Quiz: Adding and Subtracting Zero

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 12: ADDITION AND SUBTRACTION FACT FAMILIES**Study: Addition and Subtraction Fact Families**

Building addition and subtraction sentences with fact families, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Addition and Subtraction Fact Families

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 13: ESTIMATING SUMS**Study: Estimating Sums**

Words that denote estimation, rounding to estimate sums, using estimation to test for reasonableness, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Estimating Sums

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 14: ESTIMATING DIFFERENCES**Study: Estimating Differences**

Applying rounding to estimate numbers in subtraction problems and estimating differences

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Estimating Differences

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 15: ADDITION AND SUBTRACTION WITH VARIABLES**Study: Addition and Subtraction with Variables**

Unknown numbers, definition of variable.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Addition and Subtraction with Variables

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 16: ADDITION AND SUBTRACTION WRAP-UP**Review: Addition and Subtraction**

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Addition and Subtraction

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 60 points

Test (TS): Addition and Subtraction

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 4: MULTIPLICATION AND DIVISION

LESSON 1: INTRODUCTION TO MULTIPLICATION

Study: Introduction to Multiplication

Learn about multiplication as repeated addition, the multiplication symbol, sentences, factors, and products.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Introduction to Multiplication

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 2: MULTIPLYING BY 0 AND 1

Study: Multiplying by 0 and 1

Learn how zero times any number equals zero and one times any number equals the number itself. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Multiplying by 0 and 1

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 3: MULTIPLICATION ARRAYS

Study: Multiplication Arrays

Show multiplication problems using a rectangular array, find arrays in a multiplication table, and solve problems using a multiplication array.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Multiplication Array Tool

Use the Multiplication Array Tool to investigate arrays and their related multiplication facts.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Multiplication Arrays

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 4: MULTIPLICATION FACTS WITH TABLE

Study: Multiplication Facts with Table

Review the connection between multiplication and addition and create a multiplication table. Use this table to practice and learn multiplication facts.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Multiplication Table Tool

Use the Multiplication Table Tool to find patterns in multiplication facts.

Duration: 0 hrs 30 mins Scoring: 25 points

Practice: Scrolling Multiplication Table Tool

Use the Scrolling Multiplication Table Tool to find patterns in products up to 30 times 30.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Multiplication Facts with Table

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 5: TWO-DIGIT BY ONE-DIGIT MULTIPLICATION**Study: Two-Digit by One-Digit Multiplication**

Learn about lining up by place value and about carrying numbers. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Two-Digit by One-Digit Multiplication

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 6: TWO-DIGIT BY TWO-DIGIT MULTIPLICATION**Study: Two-Digit by Two-Digit Multiplication**

Learn about lining up by place value, starting with partial answers, and adding partial answers. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Two-Digit by Two-Digit Multiplication

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 7: THREE-DIGIT BY ONE-DIGIT MULTIPLICATION**Study: Three-Digit by One-Digit Multiplication**

Learn about multiplication as repeated addition, lining up by place value, and starting with partial answers. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Three-Digit by One-Digit Multiplication

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 8: THREE-DIGIT MULTIPLICATION**Study: Three-Digit Multiplication**

Learn about three-digit by two-digit problems, lining up by place value, partial answers and their sums, and three-digit by three-digit problems.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Three-Digit Multiplication

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 9: MULTIPLYING THREE OR MORE FACTORS**Study: Multiplying Three or More Factors**

Learn to use the commutative and associative properties to multiply more than two single-digit factors. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Multiplying Three or More Factors

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 10: INTRODUCTION TO DIVISION**Study: Introduction to Division**

Learn about separating equal amounts, symbols and parts of a division sentence, division as the reverse of multiplication, and using the multiplication table to solve division problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Introduction to Division

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 11: DIVISION WITH 0 AND 1**Study: Division with 0 and 1**

Explore what happens when you divide a number by zero or zero by another number. Investigate what happens when dividing a number by one or by itself. Practice your division skills.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Division with 0 and 1

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 12: DIVISION FACTS WITH TABLE**Study: Division Facts with Table**

Learn how to use the multiplication table to solve division problems. Practice this skill using flash cards.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Division Facts with Table

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 13: UNDERSTANDING REMAINDERS

Study: Understanding Remainders

Review how to divide numbers into equal amounts. Discover what happens when you have something left over after making equal groups. Study division problems that have remainders.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Understanding Remainders

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 14: INTRODUCTION TO LONG DIVISION

Study: Introduction to Long Division

Learn about setting up a long-division problem. Observe a demonstration of steps with problems having single-digit divisors. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Introduction to Long Division

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 15: LONG DIVISION WITH REMAINDERS

Study: Long Division with Remainders

Observe a demonstration of estimating the divisor using multiplication and noting the remainder. Practice these skills using sample problems that have single-digit divisors and remainders.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Long Division with Remainders

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 16: LONG DIVISION WITH TWO-DIGIT DIVISORS

Study: Long Division with Two-Digit Divisors

Learn how to break down a dividend when dividing larger numbers. Study the steps for dividing by a two-digit divisor. Practice solving problems with two-digit divisors.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Long Division with Two-Digit Divisors

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 17: LONG DIVISION WITH THREE-DIGIT DIVISORS

Study: Long Division with Three-Digit Divisors

Learn to apply the steps of long division to problems with three-digit divisors and dividends. Practice this skill using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Long Division with Three-Digit Divisors

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 18: CHECKING DIVISION

Study: Checking Division

Learn about using multiplication to check division problems and about adding remainders. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Checking Division

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 19: MULTIPLICATION AND DIVISION WRAP-UP

Review: Multiplication and Division

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Multiplication and Division

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 60 points

Test (TS): Multiplication and Division

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 5: MULTIPLICATION AND DIVISION CONCEPTS

LESSON 1: FACTORS

Study: Factors

Learn about factor pairs and using factor pairs to find all factors of a given number.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Factors

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 2: 2, 4 AND 8 AS FACTORS

Study: 2, 4 and 8 as Factors

Finding numbers with 2, 4, and 8 as factors on the multiplication table, factor patterns, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: 2, 4 and 8 as Factors

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 3: 3, 6 AND 9 AS FACTORS**Study: 3, 6 and 9 as Factors**

Finding numbers with 3, 6, and 9 as factors on the multiplication table, factor patterns, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: 3, 6 and 9 as Factors

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 4: 5 AND 10 AS FACTORS**Study: 5 and 10 as Factors**

Finding numbers with 5 and 10 as factors on the multiplication table, factor patterns, sample problems

Duration: 0 hrs 40 mins Scoring: 0 points

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: 5 and 10 as Factors

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 5: COMMON FACTORS**Study: Common Factors**

Observe a demonstration of the steps for finding the greatest common factor, or GCF. Practice this skill using a sample problem.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Common Factors

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 6: PRIME FACTORIZATION**Study: Prime Factorization**

Learn about prime and composite numbers and how the "footprint" of a composite number ("factorprint!") is its prime factorization. Practice these skills using factor-tree sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Prime Factorization Tool

Use the Prime Factorization Tool to explore factorizations of whole numbers.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Prime Factorization

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 7: MULTIPLES

Study: Multiples

Learn about finding multiples using skip-counting, division, or multiplication. Explore common multiples and steps for finding the least common multiple, or LCM. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Multiples

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 8: MULTIPLYING BY 10 AND 100

Study: Multiplying by 10 and 100

Learn about adding one or two zeros to the number being multiplied. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Multiplying by 10 and 100

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 9: DIVIDING BY 10 AND 100

Study: Dividing by 10 and 100

Dropping one or two zeros from dividend, sample problem

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Dividing by 10 and 100

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 10: POWERS OF TEN

Study: Powers of Ten

Review of parts of an exponential expression, examples with 10 as the base (powers of ten in the base 10 number system), writing powers of ten in standard form (how many zeros), practice.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Powers of Ten

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 11: MULTIPLYING AND DIVIDING BY POWERS OF TEN

Study: Multiplying and Dividing by Powers of Ten

Moving the decimal point left or right, zeros as place holders, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Multiplying and Dividing by Powers of Ten

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 12: ESTIMATING PRODUCTS

Study: Estimating Products

Review when to use estimation. Compare products produced by overestimating and underestimating. Use the concept of rounding to find the best product estimates.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Estimating Products

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 13: ESTIMATING QUOTIENTS

Study: Estimating Quotients

Under and overestimating, range estimates, rounding dividends and divisors, sample problems

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Estimating Quotients

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 14: MULTIPLICATION AND DIVISION FACT FAMILIES

Study: Multiplication and Division Fact Families

Demonstration of using fact families to build multiplication and division sentences, rules for doing same

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Multiplication and Division Fact Families

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 15: MULTIPLICATION AND DIVISION WITH VARIABLES

Study: Multiplication and Division with Variables

Finding unknowns using the multiplication table, finding unknowns in word problems, sample problems.

Duration: 0 hrs 40 mins

Checkout: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Multiplication and Division with Variables

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 16: MULTIPLICATION AND DIVISION CONCEPTS WRAP-UP

Review: Multiplication and Division Concepts

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Multiplication and Division Concepts

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 60 points

Test (TS): Multiplication and Division Concepts

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 6: FRACTIONS

LESSON 1: THE MEANING OF FRACTIONS

Study: The Meaning of Fractions

Learn about writing fractions and about the numerator and denominator. Learn to read fractions.

Duration: 0 hrs 25 mins

Checkout: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Fraction Tool

Use the Fraction Tool to visualize relationships between numerators and denominators.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: The Meaning of Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 2: THE MEANING OF FRACTIONS: PART OF A GROUP

Study: The Meaning of Fractions: Part of a Group

Learn about the role of the numerator and denominator in fractions. Learn about representing parts of groups.

Duration: 0 hrs 25 mins

Checkout: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: The Meaning of Fractions: Part of a Group

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 3: FRACTIONS WITH ZEROS

Study: Fractions with Zeros

Learn about how fractions with zero as the numerator equal zero and how fractions with zero as the denominator are undefined.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Fractions with Zeros

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 4: ESTIMATING FRACTIONS

Study: Estimating Fractions

Learn about comparing common fractions and estimating fractional amounts and mixed numbers. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Estimating Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 5: LOCATING FRACTIONS ON A NUMBER LINE

Study: Locating Fractions on a Number Line

Learn about the parts of the number line that are between units, dividing the number line by a denominator, and finding improper fractions on the number line. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Locating Fractions on a Number Line

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 6: COMPARING LIKE FRACTIONS

Study: Comparing Like Fractions

Learn about comparing numerators. Practice this skill using a sample problem.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Comparing Like Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 7: EQUIVALENT FRACTIONS

Study: Equivalent Fractions

Compare pairs of fractions and identify different fractions that represent the same amount. Find equivalent fractions using fraction pieces and multiplication.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Equivalent Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 8: SIMPLIFYING FRACTIONS

Study: Simplifying Fractions

Learn to reduce a fraction by dividing the numerator and denominator by the same nonzero number greater than 1. Learn to divide by the GCF to get a fraction's simplest form. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: Flash Cards

Participate in a flash card activity to practice simplifying fractions.

Duration: 0 hrs 10 mins

Quiz: Simplifying Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 9: FINDING COMMON DENOMINATORS

Study: Finding Common Denominators

Learn about rewriting fractions to get common denominators, finding the LCM, and multiplying denominators. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Finding Common Denominators

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 10: COMPARING UNLIKE FRACTIONS

Study: Comparing Unlike Fractions

Learn about finding the LCD in order to compare fractions. Practice this skill using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Comparing Unlike Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 11: FRACTIONS OF WHOLE NUMBERS

Study: Fractions of Whole Numbers

Learn about dividing more than one item or number and renaming improper fractions as whole numbers. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Fractions of Whole Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 12: MIXED NUMBERS AND IMPROPER FRACTIONS

Study: Mixed Numbers and Improper Fractions

Learn about the combination of a whole number and a fraction, reading mixed numbers, and writing improper fractions. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Mixed Numbers and Improper Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 13: COMPARING AND ORDERING MIXED NUMBERS

Study: Comparing and Ordering Mixed Numbers

Learn about comparing whole number parts first, rewriting fractional parts to get common denominators, and ordering more than two mixed numbers. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Comparing and Ordering Mixed Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 14: CONVERTING MIXED NUMBERS AND IMPROPER FRACTIONS

Study: Converting Mixed Numbers and Improper Fractions

Learn about finding the numerator in order to convert from a mixed number to an improper fraction and dividing in order to convert from an improper fraction to a mixed number. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Converting Mixed Numbers and Improper Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 15: FRACTIONS WRAP-UP

Review: Fractions

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 30 mins

Test (CS): Fractions

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 40 mins Scoring: 60 points

Test (TS): Fractions

Take a teacher-scored test to assess what you have learned in this unit.

UNIT 7: SEMESTER WRAP-UP

LESSON 1: PREPARING FOR THE SEMESTER EXAM

Review: Semester Review

Review this semester in preparation for the exam.

Duration: 0 hrs 40 mins

Exam: Semester Exam

Final exam covering the entire semester.

Duration: 0 hrs 50 mins Scoring: 215 points

UNIT 8: OPERATIONS WITH FRACTIONS

LESSON 1: WORD PROBLEMS WITH FRACTIONS

Study: Word Problems With Fractions

Review the meaning of fractions and four steps to solving word problems. Practice solving word problems involving fractions.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Word Problems With Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 14 points

LESSON 2: ADDING AND SUBTRACTING LIKE FRACTIONS

Study: Adding and Subtracting Like Fractions

Review addition and subtraction with whole numbers. Practice these skills using sample problems in which you must add and subtract fractions with like denominators.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Adding and Subtracting Like Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 15 points

LESSON 3: ADDING AND SUBTRACTING LIKE FRACTIONS IN WORD PROBLEMS

Study: Adding and Subtracting Like Fractions in Word Problems

Review the four steps of problem-solving, applying problem-solving strategies in order to analyze word problems with fractions, and rewriting word problems as number problems. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Adding and Subtracting Like Fractions in Word Problems

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 11 points

LESSON 4: ADDING AND SUBTRACTING UNLIKE FRACTIONS

Study: Adding and Subtracting Unlike Fractions

Learn about rewriting fractions in order to get equivalent fractions, using the least common denominator, or LCD, and adding and subtracting equivalent fractions. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: Reading and Writing Music

Exploration of musical notes as fractions of wholes, time signature as a fraction, and how the fractional value of each note in a measure adds up to the number of beats in that measure.

Duration: 0 hrs 10 mins

Study: Math and Musical Instruments

Exploration of the development of different musical instruments and how mathematical relationships such as the speed of the vibrations an instrument generates determine pitch.

Duration: 0 hrs 10 mins

Quiz: Adding and Subtracting Unlike Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 14 points

LESSON 5: ADDING AND SUBTRACTING UNLIKE FRACTIONS IN WORD PROBLEMS

Study: Adding and Subtracting Unlike Fractions in Word Problems

Review the four steps of problem-solving, applying problem-solving strategies in order to analyze word problems with fractions, rewriting word problems as number problems, and rewriting fractions in order to get equivalent fractions. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Adding and Subtracting Unlike Fractions in Word Problems

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 15 points

LESSON 6: ADDING MIXED NUMBERS

Study: Adding Mixed Numbers

Learn the definition of a mixed number. Learn about adding components, the order of addition with mixed numbers, adding mixed numbers whose fractions have different denominators, and when and how to carry over whole numbers. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Adding Mixed Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 15 points

LESSON 7: SUBTRACTING MIXED NUMBERS

Study: Subtracting Mixed Numbers

Learn about the order of subtraction with mixed numbers, subtracting mixed numbers whose fractions have different denominators, and when and how to borrow from whole numbers. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Subtracting Mixed Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 15 points

LESSON 8: ADDING AND SUBTRACTING FRACTIONS AND WHOLE NUMBERS**Study: Adding and Subtracting Fractions and Whole Numbers**

Learn about adding and subtracting different combinations of fractions and whole numbers with like or unlike denominators. Learn about changing improper fractions to mixed numbers and about borrowing fractions from whole numbers in order to solve problems. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Adding and Subtracting Fractions and Whole Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 15 points

LESSON 9: MULTIPLYING FRACTIONS**Study: Multiplying Fractions**

Multiplying fractions by whole numbers and fractions, multiplying across numerator and denominator, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Multiplying Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 14 points

LESSON 10: MULTIPLYING FRACTIONS IN WORD PROBLEMS**Study: Multiplying Fractions in Word Problems**

Review of four steps in problem-solving, application of problem-solving strategies to analyze word problems with fractions, rewriting word problems as number problems, sample problems worked through.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Multiplying Fractions in Word Problems

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 15 points

LESSON 11: MULTIPLYING MIXED NUMBERS**Study: Multiplying Mixed Numbers**

Converting mixed numbers to improper fractions, converting products back into mixed numbers, sample problem worked through.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Multiplying Mixed Numbers

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 14 points

LESSON 12: OPERATIONS WITH FRACTIONS WRAP-UP

Practice: Assignment

Solve mathematical and word problems involving fractions.

Duration: 0 hrs 30 mins Scoring: 25 points

Review: Operations with Fractions

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Operations with Fractions

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 60 points

Test (TS): Operations with Fractions

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 9: DECIMALS, PERCENTS, AND RATIOS

LESSON 1: THE MEANING OF DECIMALS

Study: The Meaning of Decimals

Identify the dot in decimal numbers and learn how to read them aloud. Explore how decimal points separate whole units from parts of a unit.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: The Meaning of Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 15 points

LESSON 2: PLACE VALUE WITH DECIMALS

Study: Place Value with Decimals

Learn about place names for numbers to the right of a decimal point, how value decreases when moving to the right of a decimal point, and comparing and reading decimal values. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Place Value with Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 15 points

LESSON 3: LOCATING DECIMALS ON A NUMBER LINE

Study: Locating Decimals on a Number Line

Learn about finding parts of a whole on the number line and writing fractions from the number line in decimal form.

Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Locating Decimals on a Number Line

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 4: COMPARING AND ORDERING DECIMALS**Study: Comparing and Ordering Decimals**

Discover how to line up decimal numbers to compare them. Learn how to compare each place in a decimal number. Put decimal numbers in order from greatest to least.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: Scoring Sporting Events

Overview of how some Olympic sports are scored, more detailed analysis of Olympic gymnastic events scoring.

Duration: 0 hrs 10 mins

Study: Timing Sporting Events

History and degree of accuracy of timing methods and tools used in sporting events, including the chronometer, electronic and quartz tools, photo finishes, and the latest computer programs.

Duration: 0 hrs 10 mins

Study: Photo Finishes

Examples of "photo finishes," or closely won events, in recent Olympic and other sporting events.

Duration: 0 hrs 10 mins

Practice: Stopwatch Tool

Use the Stopwatch Tool to experiment with time estimation.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Comparing and Ordering Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 5: ROUNDING WITH DECIMALS**Study: Rounding with Decimals**

Review rounding whole numbers, applying the same rules to rounding decimals, and how rounding can affect higher place values. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Rounding with Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 6: THE MEANING OF PERCENT**Study: The Meaning of Percent**

Learn about the definition of percent. Learn about percent as a fraction in which the denominator is always 100% as a ratio of part to whole.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Flower Garden Tool

Use the Flower Garden Tool to investigate percentages.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: The Meaning of Percent

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 7: ESTIMATING PERCENT**Study: Estimating Percent**

Learn about common percents and where they appear, converting percents to fractions, and estimating amounts using common percents. Practice these skills using sample problems.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Estimating Percent

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 8: WORKING WITH PERCENTS**Study: Working with Percents**

Learn about how the sum of a whole always equals 100% and about finding missing percents. Explore real-world problems finding percents.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Working with Percents

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 9: RELATING FRACTIONS, DECIMALS, AND PERCENTS**Study: Relating Fractions, Decimals, and Percents**

Learn about writing values as fractions, decimals, and percents. Practice finding the missing percent, decimal, or fraction using sample problems.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Relating Fractions, Decimals, and Percents

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 10: COMMON FRACTIONS, DECIMALS, AND PERCENTS**Study: Common Fractions, Decimals, and Percents**

Learn about converting among common fractions, decimals, and percents, such as 25, 50, 75, and 100. Learn about common fractions with 10 in the denominator and how they appear as decimals and percents. Practice these skills

using a sample problem.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Common Fractions, Decimals, and Percents

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 11: INTRODUCTION TO RATIOS

Study: Introduction to Ratios

Learn about writing fractions as ratios, simplifying ratios, other ways to write ratios, and the order of numbers in a ratio. Practice these skills using sample problems.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Introduction to Ratios

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 12: DECIMALS, PERCENTS, AND RATIOS WRAP-UP

Review: Decimals, Percents, and Ratios

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Fractions, Decimals and Percents I

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 60 points

Test (TS): Decimals, Percents, and Ratios

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 10: OPERATIONS WITH DECIMALS

LESSON 1: ADDING AND SUBTRACTING DECIMALS

Study: Adding and Subtracting Decimals

Review place value to the right of a decimal point, lining up decimal points to add and subtract, and regrouping using zeros as place value holders. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Adding and Subtracting Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 2: DECIMALS AND MONEY

Study: Decimals and Money

Learn about writing values of bills and coins as decimals, adding and subtracting money using coins and bills, and using decimals. Practice these skills using sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: History of Money

Evolution of modern money systems from earlier bartering through token economies to official government currency.

Duration: 0 hrs 10 mins

Study: U.S. Coins and Bills

History of development of U.S. currency, the dollar as a base of the decimal system, establishment of national mint.

Duration: 0 hrs 10 mins

Quiz: Decimals and Money

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 3: MULTIPLYING DECIMALS**Study: Multiplying Decimals**

Estimate products of decimal numbers by rounding to a whole number. Learn where to place the decimal point after multiplying decimal numbers. Practice finding the product of decimal numbers.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Multiplying Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 4: MULTIPLYING DECIMALS AND ADDING ZEROS**Study: Multiplying Decimals and Adding Zeros**

Learn about using zero as a place value holder. Practice this skill using a sample problem.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Multiplying Decimals and Adding Zeros

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 5: REPEATING DECIMALS**Study: Repeating Decimals**

Use division to convert a fraction to a decimal. Identify repeating decimals and repeating patterns. Learn how to write a repeating decimal so that it has the exact value as its corresponding fraction.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Repeating Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 6: DIVIDING DECIMALS**Study: Dividing Decimals**

Review long division, placing the decimal point in order to divide, adding zeros in order to hold place value, using decimals in order to display remainders, and dividing decimals by decimals. Practice these skills using sample problems.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Dividing Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 7: ADDING AND SUBTRACTING DECIMALS IN WORD PROBLEMS

Study: Adding and Subtracting Decimals in Word Problems

Review problem-solving steps and converting word problems into number problems with decimals. Practice adding and subtracting decimals using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Adding and Subtracting Decimals in Word Problems

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 8: WORD PROBLEMS WITH DECIMALS - ALL OPERATIONS

Study: Word Problems with Decimals - All Operations

Using real-world items in a grocery store, practice adding, subtracting, multiplying, and dividing decimals.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Word Problems with Decimals - All Operations

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 9: ESTIMATING SUMS AND DIFFERENCES WITH DECIMALS

Study: Estimating Sums and Differences with Decimals

Learn about rounding decimal values to the nearest whole number and using larger place values for larger numbers. Understand how rounding to different place values affects estimates. Practice estimating decimal sums and differences using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Estimating Sums and Differences with Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 10: ESTIMATING PRODUCTS AND QUOTIENTS OF DECIMALS

Study: Estimating Products and Quotients of Decimals

Learn about rounding decimal numbers to the highest place value in order to multiply or divide, rounding decimal values of less than 1, and estimating products and quotients of less than 1. Practice these skills using sample problems.

Duration: 0 hrs 30 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Estimating Products and Quotients of Decimals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 11: OPERATIONS WITH DECIMALS WRAP-UP

Review: Operations with Decimals

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Operations with Decimals

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 60 points

Test (TS): Operations with Decimals

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 11: PROBLEM SOLVING

LESSON 1: BUILDING BASIC WORD PROBLEMS

Study: Building Basic Word Problems

Learn how to convert number sentences into addition or subtraction word problems. Practice this skill using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Building Basic Word Problems

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 2: A FOUR-STEP APPROACH

Study: A Four-Step Approach

Learn the four steps for solving word problems. Apply the four steps to sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: A Four-Step Approach

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 3: TOO MUCH OR TOO LITTLE INFORMATION

Study: Too Much or Too Little Information

Learn about determining if there is enough information to solve a given problem, identifying missing information, and separating relevant from irrelevant information. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Too Much or Too Little Information

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 4: CHOOSING THE OPERATION IN WORD PROBLEMS

Study: Choosing the Operation in Word Problems

Selecting which operations to use in building a math sentence, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: Choosing the Operation in Word Problems

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 5: DRAW A DIAGRAM

Study: Draw a Diagram

Learn what information to include in a diagram of a problem. Practice this skill using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Draw a Diagram

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 6: USE A MODEL OR ACT IT OUT

Study: Use a Model or Act it Out

Use sample problems to learn when and how to act out a problem or make a model.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Use a Model or Act it Out

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 7: MAKE A LIST

Study: Make a List

Learn the steps for making a list in order to solve a word problem. Explore strategies for checking your answers.

Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Make a List

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 8: BUILD A CHART AND FIND A PATTERN

Study: Build a Chart and Find a Pattern

Learn about collecting data in charts, identifying patterns in order to solve word problems, and completing charts in order to answer questions. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Build a Chart and Find a Pattern

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 9: GUESS AND CHECK

Study: Guess and Check

Review the four problem solving steps. Learn how to make logical guesses to solve a problem. Solve word problems using this strategy.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Guess and Check

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 10: WORK BACKWARD

Study: Work Backward

Learn about starting with a solution and working backward to solve a word problem. Learn how to check your answers by working forward. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Work Backward

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 11: BUILDING EQUATIONS

Study: Building Equations

Learn about setting up an equation using information in a word problem and about choosing the correct operation(s). Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Building Equations

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 12: DEDUCTIVE REASONING

Study: Deductive Reasoning

Learn the definition of deductive reasoning. Practice making conclusions and deducing which statements in a problem are true. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: Codes and Ciphers

Description and examples of codes, ciphers, and keys.

Duration: 0 hrs 10 mins

Study: Number Codes and Ciphers

Looking for patterns and using logical reasoning skills to "crack" codes, description of substitution and number ciphers, and using logical guesses to decipher messages.

Duration: 0 hrs 10 mins

Study: Codes through History

Find out about codes and how secret codes have been important throughout history.

Duration: 0 hrs 10 mins

Quiz: Deductive Reasoning

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 13: INDUCTIVE REASONING

Study: Inductive Reasoning

Explore inductive reasoning and using induction to continue a pattern. Practice these skills using sample problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: Not-So-Secret Codes

Learn about non-secret codes and see how binary code uses mathematics.

Duration: 0 hrs 10 mins

Study: Secret Code Talk

Examples of codes in everyday life, such as binary codes used in computers, Morse code, Braille, and American Sign Language.

Duration: 0 hrs 10 mins

Quiz: Inductive Reasoning

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 14: LOGIC PUZZLES

Study: Logic Puzzles

Learn about organizing logic data in a grid and about direct and indirect information. Practice these skills using sample logic problems.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: Math Tricks and Puzzles

Explore and solve math puzzles.

Duration: 0 hrs 10 mins

Study: Benjamin Banneker

Learn about Benjamin Banneker, a famous African-American surveyor who lived in the 1700s.

Duration: 0 hrs 10 mins

Quiz: Logic Puzzles

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 6 points

LESSON 15: PROBLEM SOLVING WRAP-UP

Review: Problem Solving

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Problem Solving

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 60 points

Test (TS): Problem Solving

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 12: BASIC CONCEPTS IN GEOMETRY

LESSON 1: POINTS, SEGMENTS, RAYS, AND LINES

Study: Points, Segments, Rays, and Lines

Discover the meaning of the word *geometry*. Identify basic geometric objects. Learn how to name points, segments, rays, and lines.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Points, Segments, Rays, and Lines

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 2: IDENTIFYING PARTS OF ANGLES

Study: Identifying Parts of Angles

Explore the definitions and naming of basic geometric objects.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Identifying Parts of Angles

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 3: CLASSIFYING ANGLES

Study: Classifying Angles

Explore angles, vertices, and sides. Learn about naming angles. Practice naming angles.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Classifying Angles

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 9 points

LESSON 4: MEASURING ANGLES WITH A PROTRACTOR

Study: Measuring Angles with a Protractor

Learn about measuring angles and classifying by degrees. Explore the definitions of acute, right, and obtuse angles. Practice classifying angles by degrees.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Measuring Angles with a Protractor

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 5: PARALLEL, INTERSECTING, AND PERPENDICULAR PATHS

Study: Parallel, Intersecting, and Perpendicular Paths

Learn the steps for measuring angles with a protractor. Practice using a protractor.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Parallel, Intersecting, and Perpendicular Paths

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 6: OPEN AND CLOSED FIGURES

Study: Open and Closed Figures

Explore intersecting, perpendicular, and parallel lines. Practice identifying types of lines.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Open and Closed Figures

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 7: IDENTIFYING POLYGONS

Study: Identifying Polygons

Learn the definitions of open and closed geometric figures.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: Quilts

Find out about quilts, which use geometric shapes to make patterns.

Duration: 0 hrs 10 mins

Quiz: Identifying Polygons

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 8: CLASSIFYING TRIANGLES

Study: Classifying Triangles

Learn the definition of a polygon. Explore different types of polygons, including common examples such as triangles, quadrilaterals, and pentagons. Practice identifying different polygons.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Classifying Triangles

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 9: CLASSIFYING QUADRILATERALS

Study: Classifying Quadrilaterals

Learn about classifying triangles by lengths of sides. Learn what isosceles, equilateral, and scalene triangles are. Practice classifying triangles by side length.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Classifying Quadrilaterals

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 10: IDENTIFYING PARTS OF CIRCLES

Study: Identifying Parts of Circles

Learn the definition of a quadrilateral. Explore examples of common quadrilaterals, such as rectangles, squares, rhombi, and all subsets of parallelogram. Learn the definition of a trapezoid and explore examples of trapezoids. Practice identifying quadrilaterals.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Identifying Parts of Circles

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 11: LINES OF SYMMETRY

Study: Lines of Symmetry

Learn about the definition and parts of a circle, including the center, radius, diameter, chords, and circumference. Practice identifying the parts of a circle.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Lines of Symmetry

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 12: SLIDING, T TURNING, AND FLIPPING SHAPES

Study: Sliding, Turning, and Flipping Shapes

Learn the definition of a line of symmetry and how to find one. Explore examples of objects with one or more lines of symmetry or with no lines of symmetry. Practice identifying lines of symmetry.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Study: Tessellations

Learn about patterns of shapes called tessellations.

Duration: 0 hrs 10 mins

Practice: Slide, Flip, Turn Tool

Use the Slide, Flip, Turn tool to explore different ways to manipulate a shape.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Sliding, Turning, and Flipping Shapes

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 13: CONGRUENCE AND SIMILARITY

Study: Congruence and Similarity

Identify congruent and similar shapes. Slide, turn, and flip shapes to see if they are congruent or similar.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Congruence and Similarity

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 14: USING GEOMETRIC VOCABULARY

Study: Using Geometric Vocabulary

Explore the definition and examples of congruent and similar shapes. Practice determining congruence and similarity.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Using Geometric Vocabulary

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 15: BASIC CONCEPTS IN GEOMETRY WRAP-UP

Review: Basic Concepts in Geometry

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 30 mins

Test (CS): Basic Concepts in Geometry

Take a computer-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 60 points

Test (TS): Basic Concepts in Geometry

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 13: MEASURING SHAPES

LESSON 1: PERIMETER

Study: Perimeter

Find the perimeter of a 2-D shape by measuring its side lengths. Learn shortcuts for finding the perimeter of rectangles and squares. Build rectangles or squares with a given perimeter.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Perimeter Builder Tool

Use the Perimeter Builder Tool to find shortcuts for calculating perimeters of rectangles and squares.

Duration: 0 hrs 30 mins Scoring: 25 points

Study: Flash Cards 1

Participate in a flash card activity to practice finding perimeter.

Duration: 0 hrs 10 mins

Study: Flash Cards 2

Participate in a flash card activity to practice building perimeter.

Duration: 0 hrs 10 mins

Quiz: Perimeter

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 2: INTRODUCTION TO AREA

Study: Introduction to Area

Learn the definition of perimeter and the formula for finding the perimeter of special shapes, such as rectangles and squares. Practice calculating perimeters.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Tile Tool

Use the Tile Tool to find areas of figures by counting squares.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Introduction to Area

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 3: AREA OF RECTANGLES AND SQUARES

Study: Area of Rectangles and Squares

Learn the definition of area and how to measure area with tiles. Practice calculating the area of real-world objects.

Duration: 0 hrs 25 mins

Checkup: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Area Builder Tool

Use the Area Builder Tool to investigate how a rectangle's area is related to its length and width.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Area of Rectangles and Squares

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 4: AREA OF PARALLELOGRAMS**Study: Area of Parallelograms**

Discover the connection between rectangles and parallelograms. Learn a shortcut for finding the area of a parallelogram. Practice building a parallelogram with a given area.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Area of Parallelograms

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 5: AREA OF TRIANGLES**Study: Area of Triangles**

Discover the connection between parallelograms and triangles. Learn a shortcut for finding the area of a triangle. Build a triangle with a given area.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Area of Triangles

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 6: INTRODUCTION TO VOLUME**Study: Introduction to Volume**

Review how to find the area of a flat shape. Learn common units for measuring volume. Use cubes to find the volume of solid shapes.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Practice: Volume Builder Tool

Use the Volume Builder Tool to discover a way to calculate the volume of any rectangular solid.

Duration: 0 hrs 30 mins Scoring: 25 points

Quiz: Comparing Like Fractions

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 7: VOLUME OF RECTANGULAR SOLIDS**Study: Volume of Rectangular Solids**

Learn about the definition of solid shapes, the formula for volume, measuring in cubic units, and comparing volumes.

Duration: 0 hrs 25 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins

Quiz: Volume of Rectangular Solids

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 20 mins Scoring: 10 points

LESSON 8: THE NUMBER PI**Study: The Number Pi**

Formula for calculating volume of rectangular solids, sample problems.

Duration: 0 hrs 40 mins

Checkpoint: Practice Problems

Check your understanding of the lesson.

Duration: 0 hrs 20 mins Scoring: 0 points

Quiz: The Number Pi

Take a quiz to assess your understanding of the material.

Duration: 0 hrs 25 mins Scoring: 10 points

LESSON 9: MEASURING SHAPES WRAP-UP**Review: Measuring Shapes**

Review unit material in preparation for upcoming assessments.

Duration: 0 hrs 10 mins

Test (CS): Measuring Shapes

Relationship between circumference and diameter of a circle, definition of pi, practice relating circumference and diameter.

Duration: 0 hrs 30 mins Scoring: 60 points

Test (TS): Measuring Shapes

Take a teacher-scored test to assess what you have learned in this unit.

Duration: 0 hrs 30 mins Scoring: 50 points

UNIT 14: PREPARING FOR THE SEMESTER EXAM**LESSON 1: PREPARING FOR THE SEMESTER EXAM****Review: Semester Review**

Review this semester in preparation for the exam.

Duration: 0 hrs 40 mins

Exam: Semester Exam

Final exam covering the entire semester.

Duration: 0 hrs 50 mins Scoring: 180 points