Chapter 1: Whole Numbers

1.1 Introduction to Whole Numbers
- Place Value and Rounding Whole Numbers
  - Identify whole numbers and counting numbers (20)
  - Model whole numbers and identify the place value of a digit
  - Use place value to name and write whole numbers (20)
  - Round a whole number (20)

1.2 Add Whole Numbers
- Adding Whole Numbers
  - Use addition notation (20)
  - Model addition of whole numbers
  - Add whole numbers without models
  - Add whole numbers that may require carrying (20)
- Applications of Adding Whole Numbers
  - Translate word phrases involving addition to math notation (20)
  - Add whole numbers in applications

1.3 Subtract Whole Numbers
- Subtracting Whole Numbers
  - Use subtraction notation (20)
  - Model subtraction of whole numbers
  - Subtract whole numbers
  - Subtract whole numbers that may require borrowing (20)
- Applications of Subtracting Whole Numbers
  - Translate word phrases involving subtraction to math notation (20)
  - Subtract whole numbers in applications (20)

1.4 Multiply Whole Numbers
- Multiplying Whole Numbers
  - Use multiplication notation (20)
  - Model multiplication of whole numbers
  - Multiply whole numbers by single digit numbers (20)
  - Multiply whole numbers by multi-digit numbers (20)
- Applications of Multiplying Whole Numbers
  - Translate word phrases involving multiplication to math notation (20)
  - Multiply whole numbers in applications (20)
1.5 Divide Whole Numbers

- Dividing Whole Numbers
  - Use division notation (20)
  - Model division of whole numbers
  - Divide whole numbers by single digit numbers (20)

- Dividing Whole Numbers with Long Division
  - Divide whole numbers using long division (20)
  - Divide whole numbers using long division where there may be a remainder (20)

- Applications of Dividing Whole Numbers
  - Translate word phrases involving division to math notation (20)
  - Divide whole numbers in applications (20)

Chapter 2: The Language of Algebra

2.1 Use the Language of Algebra

- Variables, Expressions, and Equations
  - Use variables and algebraic symbols (20)
  - Use variables and algebraic symbols to describe inequalities (20)
  - Identify expressions and equations (20)

- Exponents and Order of Operations
  - Use exponent notation and evaluate exponential expressions involving whole numbers (20)
  - Simplify expressions using the order of operations (20)

2.2 Evaluate, Simplify, and Translate Expressions

- Evaluating and Simplifying Expressions
  - Evaluate algebraic expressions (20)
  - Identify terms, coefficients, and like terms (20, 20, 20)
  - Simplify expressions by combining like terms (20)

- Translating Phrases to Algebraic Expressions
  - Translate word phrases to algebraic expressions (20)
  - Write word phrases from applications as algebraic expressions (20)

2.3 Solving Equations Using the Subtraction and Addition Properties of Equality

- The Subtraction and Addition Properties of Equality
  - Determine whether a number is a solution of an equation (20)
  - Model the Subtraction Property of Equality
  - Solve equations using the Subtraction Property of Equality (20)
  - Solve equations using the Addition Property of Equality (20)

- Translating Phrases to Algebraic Equations and Solving
  - Translate word phrases to algebraic equations (20)
2.4 Find Multiples and Factors
- Identify Multiples and Use Divisibility Tests
  - Identify multiples of numbers (20)
  - Use common divisibility tests (20)
- Find Factors and Identify Prime and Composite Numbers
  - Find all the factors of a number (20)
  - Identify prime and composite numbers (20)

2.5 Prime Factorization and the Least Common Multiple
- Prime Factorization and the Least Common Multiple
  - Find the prime factorization of a composite number using a factor tree
  - Find the prime factorization of a composite number using the ladder method (20)
  - Find the least common multiple (LCM) of two numbers

Chapter 3: Integers
3.1 Introduction to Integers
- Integers on the Number Line and Opposites
  - Locate positive and negative numbers on the number line
  - Order positive and negative numbers
  - Find opposites (20)
  - Translate word phrases to expressions with integers
- Introduction to Absolute Value
  - Understand absolute value
  - Simplify expressions using the order of operations with absolute value

3.2 Add Integers
- Adding Integers and Variable Expressions Involving Integers
  - Model addition of integers
  - Add two integers (20)
  - Simplify expressions involving addition with integers (20)
  - Evaluate variable expressions involving addition with integers (20)
- Adding Integers in Applications
  - Translate word phrases involving addition to algebraic expressions (20)
  - Add integers in applications (20)

3.3 Subtract Integers
- Subtracting Integers and Variable Expressions Involving Integers
  - Model subtraction of integers
  - Subtract two integers (20)
  - Simplify expressions involving subtraction with integers (20)
  - Evaluate variable expressions involving subtraction with integers (20)
Subtracting Integers in Applications
- Translate word phrases involving subtraction to algebraic expressions (20)
- Subtract integers in applications (20)

3.4 Multiply and Divide Integers
- Multiplying and Dividing Integers and Variable Expressions with Integers
  - Multiply two integers
  - Divide two integers
  - Simplify expressions involving multiplication or division with integers
  - Evaluate variable expressions involving multiplication or division with integers (20)
- Multiplying and Dividing Integers in Applications
  - Translate word phrases involving multiplication or division to algebraic expressions (20)

3.5 Solve Equations Using Integers and the Division Property of Equality
- The Subtraction and Addition Properties of Equality with Integers
  - Determine whether an integer is a solution of an equation (20)
  - Solve equations with integers using the Addition and Subtraction Properties of Equality
- The Division Property of Equality
  - Model the Division Property of Equality
  - Solve equations using the Division Property of Equality (20)
- Translating Phrases to Algebraic Equations with Integers and Solving
  - Translate to an equation with integers and solve (20)

Chapter 4: Fractions

4.1 Visualize Fractions
- Introduction to Fractions, Improper Fractions, and Mixed Numbers
  - Understand the meaning of fractions
  - Model improper fractions and mixed numbers
  - Convert between improper fractions and mixed numbers (20, 20)
- Finding Equivalent Fractions
  - Model equivalent fractions
  - Find equivalent fractions (20)
- Ordering Fractions and Mixed Numbers
  - Locate fractions and mixed numbers on the number line
  - Order fractions and mixed numbers
- Operations with Fractions without Variables
  - Add or subtract fractions with a common denominator without variables
  - Add or subtract fractions with different denominators without variables
  - Multiply fractions without variables
  - Divide fractions without variables
4.2 Multiply and Divide Fractions
  ● Simplifying and Multiplying Fractions
    ● Reduce a fraction to lowest terms
    ● Multiply two fractions (20)
  ● Reciprocals and Dividing Fractions
    ● Find reciprocals (20)
    ● Divide two fractions (20)

4.3 Multiply and Divide Mixed Numbers and Complex Fractions
  ● Multiplying and Dividing Mixed Numbers
    ● Multiply mixed numbers (20)
    ● Divide mixed numbers (20)
  ● Simplifying Complex Fractions and Order of Operations with Fractions
    ● Translate phrases to expressions with fractions
    ● Simplify a complex fraction (20)
    ● Simplify an expression written with a fraction bar

4.4 Add and Subtract Fractions with Common Denominators
  ● Adding and Subtracting Fractions with Common Denominators
    ● Model fraction addition
    ● Add fractions with a common denominator (20)
    ● Model fraction subtraction
    ● Subtract fractions with a common denominator (20)

4.5 Add and Subtract Fractions with Different Denominators
  ● Adding and Subtracting Fractions with Different Denominators
    ● Find the least common denominator (LCD)
    ● Convert fractions to equivalent fractions with the LCD (20)
    ● Add and subtract fractions with different denominators
  ● Combining Fraction Operations
    ● Identify and use fraction operations
    ● Use the order of operations to simplify complex fractions
    ● Evaluate a variable expression with fractions

4.6 Add and Subtract Mixed Numbers
  ● Adding and Subtracting Mixed Numbers with Common Denominators
    ● Model addition of mixed numbers with a common denominator
    ● Add mixed numbers with a common denominator (20)
    ● Model subtraction of mixed numbers
    ● Subtract mixed numbers with a common denominator (20)
  ● Adding and Subtracting Mixed Numbers with Different Denominators
    ● Add and subtract mixed numbers with different denominators
4.7 Solve Equations with Fractions
- Solve Equations with Fractions Using the Addition, Subtraction, and Division Properties of Equality
  - Determine whether a fraction is a solution of an equation
  - Solve equations with fractions using the Addition, Subtraction, and Division Properties of Equality (20)
- Solve Equations with Fractions Using the Multiplication Properties of Equality
  - Solve equations using the Multiplication Property of Equality (20)
  - Solve equations with a fraction coefficient using the Multiplication Property of Equality (20)
  - Translate sentences involving fractions to equations and solve

4.8 Operations with Fractions in Applications
- Operations with Fractions in Applications
  - Add or subtract fractions with a common denominator in applications (10, 10)
  - Add or subtract fractions with different denominators in applications (10, 10)
  - Multiply and divide fractions in applications (10, 10)
- Operations with Mixed Numbers in Applications
  - Add or subtract mixed numbers with a common denominator in applications (10, 10, 10)
  - Add or subtract mixed numbers with different denominators in applications (10, 10)
  - Multiply and divide mixed numbers in applications (10, 10)

Chapter 5: Decimals
5.1 Introduction to Decimals
- Naming Decimals and Converting Decimals to Fractions
  - Name decimals (20)
  - Write decimals (20)
  - Convert decimals to fractions or mixed numbers
- Ordering and Rounding Decimals
  - Locate decimals on the number line
  - Order decimals (20)
  - Round a decimal (20)
5.2 Decimal Operations
- Operations with Decimals
  - Add and subtract two decimals
  - Multiply two decimals (20)
  - Divide decimals by a whole number
  - Divide a decimal by another decimal (20)
- Operations with Decimals in a Money Application
  - Use decimals in money applications
5.3 Decimals and Fractions
- Converting Fractions to Decimals and Order of Operations with Decimals
  - Convert fractions to decimals (20)
  - Order decimals and fractions
  - Simplify expressions involving decimals using the order of operations
- Circumference and Area of Circles
  - Find the circumference and area of circles with pi as a decimal approximation (20)
  - Find the circumference and area of circles with pi as a fractional approximation (20)

5.4 Solve Equations with Decimals
- Solving Equations Involving Decimals
  - Determine whether a decimal is a solution of an equation (20)
  - Solve equations with decimals (20)
  - Translate sentences involving decimals to an equation and solve

5.5 Averages and Probability
- Finding the Mean, Median, and Mode of a Set of Numbers
  - Calculate the mean of a set of numbers (20)
  - Find the median of a set of numbers (20)
  - Find the mode of a set of numbers (20)
- Calculating the Probability of an Event
  - Apply the basic definition of probability

5.6 Ratios and Rate
- Writing Ratios and Using Ratios in Applications
  - Write a ratio as a fraction (20)
  - Use ratios in applications
- Unit Rates and Unit Prices
  - Write a rate as a fraction
  - Find unit rates
  - Find unit price
  - Translate phrases to expressions as rates or ratios

5.7 Simplify and Use Square Roots
- Evaluating, Estimating, and Approximating Square Roots
  - Evaluate square root expressions (20)
  - Estimate square roots (20)
  - Approximate square roots (20)
- Simplifying Square Roots with Variables and Square Roots in Applications
  - Simplify a variable expression with square roots (20)
  - Use a square root in applications
Chapter 6: Percents
6.1 Understand Percent
- Definition of Percent and Converting Percents
  - Use the definition of percent
  - Convert percents to fractions (20)
  - Convert percents to decimals (20)
  - Convert decimals and fractions to percents (20, 20)
6.2 Solve General Applications of Percent
- Percent Equations and Percent Increase and Decrease
  - Translate and solve a basic percent equation (20, 20)
  - Solve applications of percent
  - Find percent increase and percent decrease
6.3 Solve Sales Tax, Commission, and Discount Applications
- Using Percents with Sales Tax, Commission, and Discount Applications
  - Solve sales tax applications
  - Solve commission applications
  - Solve discount applications
  - Solve mark-up applications
6.4 Solve Simple Interest Applications
- Solving Simple Interest Applications
  - Use the simple interest formula
  - Solve a simple interest application
6.5 Solve Proportions and Their Applications
- Proportions and Applications Using Proportions
  - Use the definition of proportion
  - Solve problems involving proportions (20)
  - Solve applications using proportions
- Writing and Solving Percent Proportions
  - Write percent equations as proportions
  - Translate and solve percent proportions

Chapter 7: The Properties of Real Numbers
7.1 Rational and Irrational Numbers
- Classifying Real Numbers
  - Identify rational numbers and irrational numbers (20)
  - Classify different types of real numbers
7.2 Commutative and Associative Properties
- Simplifying Expressions with the Commutative and Associative Properties
  - Use the associative and commutative properties
● Evaluate expressions using the commutative and associative properties
● Simplify expressions using the commutative and associative properties
● Simplify expressions involving fractions or decimals using the commutative and associative properties

7.3 Distributive Property
● Simplifying Expressions with the Distributive Property
  ● Use the distributive property to simplify expressions (20)
  ● Simplify expressions involving fractions or decimals with the distributive property (20)
  ● Simplify expressions using the distributive property where a variable needs distributed (20)
  ● Simplify expressions using the distributive property where a negative number needs distributed (20)
● Evaluating Expressions with the Distributive Property
  ● Use the distributive property as a step in the order of operations
  ● Evaluate expressions using the distributive property

7.4 Properties of Identity, Inverses, and Zero
● Use the Properties of Identity, Inverses, and Zero to Simplify Expressions
  ● Recognize the identity properties of addition and multiplication
  ● Use the inverse properties of addition and multiplication
  ● Use the properties of zero
  ● Simplify expressions using the properties of identities, inverses, and zero

7.5 Systems of Measurement
● Unit Conversions in the US System
  ● Make a unit conversion in the US system
  ● Use mixed units in the US System
● Unit Conversions in the Metric System
  ● Make a unit conversion in the metric system
  ● Use mixed units in the metric system
● Unit Conversions Between the US and Metric System
  ● Convert between the US and the metric systems of measurement
  ● Convert between Celsius and Fahrenheit temperatures

Chapter 8: Solving Linear Equations
8.1 Solve Equations Using the Subtraction and Addition Properties of Equality
● Simplifying and Solving Equations Using the Subtraction and Addition Properties of Equality
  ● Solve equations using the Subtraction and Addition Properties of Equality
  ● Solve equations that need to be simplified using the Subtraction and Addition Properties of Equality
Solving Application Problems with the Subtraction and Addition Properties of Equality
  - Translate an equation and solve using the Subtraction and Addition Properties of Equality
  - Translate and solve applications using the Subtraction and Addition Properties of Equality

8.2 Solve Equations Using the Division and Multiplication Properties of Equality
  - Simplifying and Solving Equations Using the Division and Multiplication Properties of Equality
    - Solve equations using the Division and Multiplication Properties of Equality (20, 20)
    - Solve equations that need to be simplified using the Division and Multiplication Properties of Equality (20)

8.3 Solve Equations with Variables and Constants on Both Sides
  - A General Strategy for Solving Equations
    - Solve equations with constants on both sides (20)
    - Solve an equation with variables on each side (20)
    - Solve an equation with variables and constants on both sides (20)
    - Solve equations using a general strategy (20)

8.4 Solve Equations with Fraction or Decimal Coefficients
  - Use a General Strategy for Solving Equations with Fractions
    - Solve equations with fraction coefficients (20)
    - Solve equations with fraction coefficients and the distributive property (20)
  - Use a General Strategy for Solving Equations with Decimals
    - Solve equations with decimal coefficients (20)
    - Solve equations with decimal coefficients and the distributive property (20)

Chapter 9: Math Models and Geometry
9.1 Use a Problem Solving Strategy
  - Introduction to Problem Solving and Number Problems
    - Use a problem solving strategy for word problems
    - Solve number word problems (20)
    - Solve number problems involving multiple numbers (20)
    - Solve number problems involving consecutive integers (20)

9.2 Solve Money Applications
  - Solve Problems Involving Coins, Tickets, or Stamps
    - Solve a coin word problem
    - Solve a ticket or stamp word problem

9.3 Use Properties of Angles, Triangles, and the Pythagorean Theorem
  - Solve Problems with Angle Measures and Similar Triangles
    - Use the definitions of supplementary and complementary angles to solve problems
    - Find the measures of angles of a triangle using properties
    - Use the properties of similar triangles to solve problems
  - Solve Problems with the Pythagorean Theorem
- Use the Pythagorean Theorem to find the length of a missing side of a right triangle
- Use the Pythagorean Theorem to solve application problems

9.4 Use Properties of Rectangles, Triangles, and Trapezoids
- Find the Area and Perimeter of Rectangles
  - Understand linear, square, and cubic measure and the definition of area and perimeter
  - Solve problems involving the area and perimeter of rectangles
  - Use the area or perimeter of a rectangle to find the length or width of a rectangle when one side is given in terms of another
- Find the Area and Perimeter of Triangles
  - Solve problems involving the area and perimeter of triangles
  - Solve problems involving the area and perimeter of isosceles or equilateral triangles

9.5 Solve Geometry Applications with Circles and Irregular Figures
- Find the Area of Trapezoids
  - Use properties of trapezoids
- Area and Circumference of Circles and Area of Irregular Figures
  - Solve problems involving the area and circumference of circles
  - Find the area of irregular figures made from rectangles and triangles
  - Find the area of irregular figures made from circles and other shapes

9.6 Solve Geometry Applications - Volume and Surface Area
- Volume and Surface Area of Rectangular Solids and Spheres
  - Find volume and surface area of rectangular solids and cubes
  - Find volume and surface area of spheres
- Volume and Surface Area of Cylinders and Cones
  - Find volume and surface area of cylinders
  - Find volume of cones

9.7 Solve a Formula for a Specific Variable
- The Distance, Rate, and Time Formula and Solving for a Specific Variable
  - Use the distance, time, and rate formula
  - Solve a given formula for a specific variable
  - Solve a formula for y (20)

Chapter 10: Polynomials

10.1 Add and Subtract Polynomials
- Names and Degrees of Polynomials
  - Identify polynomials, monomials, binomials, and trinomials (20)
  - Determine the degree of polynomials (20)
- Adding, Subtracting, and Evaluating Polynomials
  - Add or subtract monomials (20)
  - Add or subtract polynomials (20)
10.2 Use Multiplication Properties of Exponents

- Simplifying Expressions with the Multiplication Properties of Exponents
  - Evaluate numerical expressions with exponents (20)
  - Simplify expressions using the Product Property of Exponents (20)
  - Simplify expressions using the Power Property of Exponents (20)
  - Simplify expressions using the Product to a Power Property (20)
  - Simplify expressions by applying several of the multiplication properties of exponents

- Multiplying Polynomials by Monomials
  - Multiply two monomials (20)
  - Multiply a monomial by a polynomial

10.3 Multiply Polynomials

- Multiplying Binomials and Polynomials
  - Multiply a binomial by a binomial using the distributive property (20)
  - Multiply a binomial by a binomial using the FOIL method (20)
  - Multiply a trinomial by a binomial using the distributive property (20)

- Multiplying Polynomials with the Vertical Method
  - Multiply polynomials using the vertical method (20)

10.4 Divide Monomials

- Simplifying Expressions with the Division Properties of Exponents and Dividing Monomials
  - Simplify expressions using the Quotient Property of Exponents and the Zero Property of Exponents (20)
  - Simplify an expression using the Quotient to a Power Property (20)
  - Simplify expressions by applying several properties of exponents
  - Divide two monomials (20)

10.5 Integer Exponents and Scientific Notation

- Integer Exponents
  - Use the definition of negative exponents (20)
  - Simplify an expression with integer exponents (20)

- Scientific Notation and Operations with Scientific Notation
  - Convert decimal notation to scientific notation (20)
  - Convert scientific notation to decimal form (20)
  - Multiply or divide using scientific notation (20, 20)

10.6 Introduction to Factoring Polynomials

- Greatest Common Factors of Monomials and Polynomials
  - Find the greatest common factor of the given expressions (20)
  - Factor the greatest common factor out of a polynomial (20)
  - Factor a greatest common factor with a negative coefficient from a polynomial (20)
Chapter 11: Graphs

11.1 Use the Rectangular Coordinate System
- Plotting Points on a Rectangular Coordinate System
  - Plot points in a rectangular coordinate system
  - Identify the quadrants of points and plot points with a coordinate of zero
  - Identify points on a graph
- Solutions of Linear Equations
  - Verify solutions to an equation in two variables (20)
  - Complete a table of solutions to a linear equation
  - Find solutions to linear equations in two variables (20)

11.2 Graphing Linear Equations
- Graph Linear Equations and Vertical and Horizontal Lines by Plotting Points
  - Recognize the relation between the solutions of an equation and its graph
  - Graph a line by plotting points (20)
  - Graph a linear equation with x and y on the same side by plotting points (20)
  - Graph vertical or horizontal lines (20)

11.3 Graphing with Intercepts
- Graph Linear Equations with Intercepts
  - Identify the intercepts on a graph
  - Find the intercepts from an equation of a line (20)
  - Graph a line using the intercepts (20)
  - Choose the most convenient method to graph a line

11.4 Understand Slope of a Line
- Understanding Slope
  - Use geoboards to model slope
  - Find the slope of a line from its graph
  - Find the slope of horizontal or vertical lines (20)
- Graphing Lines with Slope and Applications of Slope
  - Find the slope of a line between two points by using the slope formula (20)
  - Graph lines given a point and the slope (20)
  - Solve slope applications (20)