Chapter 1: Whole Numbers

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

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
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)
  - Translate to an equation and solve (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
  - 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 (20)
- 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

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)
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

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 (20, 20)

• 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
  - 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 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 commutative and associative properties
  ● Evaluate expressions using the commutative and associative properties
  ● Simplify expressions using the commutative and associative properties

7.3 Distributive Property

● Simplifying Expressions with the Distributive Property
  ● Simplify expressions using the distributive property
  ● 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
- Solve equations that need to be simplified using the Division and Multiplication Properties of Equality

8.3 Solve Equations with Variables and Constants on Both Sides
- A General Strategy for Solving Equations
- Solve equations with constants on both sides
- Solve an equation with variables on each side
- Solve an equation with variables and constants on both sides
- General Strategies for Solving Linear Equations
- Solve an equation using the distributive property with variables on one side
- Solve an equation using the distributive property with variables on both sides
- Classify equations as conditional, identity, or a contradiction

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

8.5 Solve Linear Inequalities
- Inequalities, the Number Line, and Interval Notation
  - Graph an inequality on the number line
  - Express an inequality using interval notation
- Solving One-Step Linear Inequalities
  - Solve an inequality using the subtraction and addition properties of inequality
  - Solve an inequality using the division and multiplication properties of inequality
- Solving Linear Inequalities
  - Solve an inequality that requires simplification
  - Classify an inequality as conditional, identity, or contradiction
Translate an English sentence into an inequality and solve (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 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 with 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)

9.8 Solve Applications with Linear Inequalities
- Problem Solving with Linear Inequalities
  - Solve one-step applications with linear inequalities
  - Solve applications with linear inequalities

Chapter 10: Graphs
10.1 Use the Rectangular Coordinate System
- Plotting Points on a Rectangular Coordinate System
  - Plot points on a rectangular coordinate system (*22)
  - Identify the quadrants of points and plot points with a coordinate of zero (*25)
  - 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)

10.2 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)

10.3 Graphing with Intercepts
- Graph Linear Equations with Intercepts
  - Identify the intercepts on a graph
  - Find the intercepts from an equation of a line
  - Graph a line using the intercepts (*24)
  - Choose the most convenient method to graph a line

10.4 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
- 10.5 Use the Slope-Intercept Form of an Equation of a Line
  - Slope-Intercept Form
    - Identify the slope and y-intercept from an equation of a line and relate a graph to the equation
    - Graph a line given its equation using its slope and y-intercept
    - Graph lines using a variety of methods
    - Graph and interpret applications of slope-intercept
  - Parallel and Perpendicular Lines
    - Use slopes to identify parallel lines (20)
    - Use slopes to identify perpendicular lines (20)
- 10.6 Find the Equation of a Line
  - Equations of Lines
    - Find an equation of the line given the slope and y-intercept (20)
    - Find an equation of the line given the slope and a point (20)
    - Find an equation of the line given two points (20)
  - Equations of Parallel and Perpendicular Lines
    - Find an equation of a line parallel to a given line (20)
    - Find an equation of a line perpendicular to a given line (20)
- 10.7 Graphs of Linear Inequalities
  - Graphing Linear Inequalities
    - Verify solutions to an inequality in two variables (20)
    - Recognize the relationship between the solutions of an inequality and its graph
    - Graph a linear inequality

Chapter 11: Systems of Linear Equations
11.1 Solve Systems of Equations by Graphing
  - Solving Systems of Linear Equations by Graphing
    - Determine whether an ordered pair is a solution of a system of linear equations (20)
    - Solve a system of linear equations by graphing
    - Determine the number of solutions of a linear system (20)
    - Solve applications of systems of linear equations by graphing
11.2 Solve Systems of Equations by Substitution
  - Solving Systems of Linear Equations by Substitution
    - Solve a system of linear equations by substitution
    - Solve applications of systems of linear equations by substitution (20)
11.3 Solve Systems of Equations by Elimination
  - Solving Systems of Linear Equations by Elimination
    - Solve a system of linear equations by elimination
11.4 Solve Applications with Systems of Equations
- Systems of Linear Equations and Problem Solving
  - Translate a word problem to a system of equations
  - Solve a word problem using a system of equations
  - Solve an application in geometry using a system of equations
  - Solve uniform motion applications using a system of equations

11.5 Solve Mixture Applications with Systems of Equations
- Mixture Problems and Systems of Equations
  - Solve mixture applications involving tickets or money with a system of equations
  - Solve mixture applications involving concentrations using a system of equations
  - Solve interest applications using a system of equations

11.6 Graphing Systems of Linear Inequalities
- Solving Systems of Linear Inequalities
  - Determine whether an ordered pair is a solution of a system of linear inequalities

Chapter 12: Polynomials
12.1 Add and Subtract Polynomials
- Names and Degrees of Polynomials
  - Identify polynomials, monomials, binomials, and trinomials
  - Determine the degree of polynomials
- Adding, Subtracting, and Evaluating Polynomials
  - Add or subtract monomials
  - Add or subtract polynomials
  - Evaluate a polynomial for a given value

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

12.3 Multiply Polynomials
- Multiplying Polynomials by Monomials
  - Multiply two monomials
  - Multiply a monomial by a polynomial
- Multiplying Binomials and Polynomials
  - Multiply a binomial by a binomial using the distributive property
- 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)

12.4 Special Products
- Special Products of Binomials
  - Square a binomial using the binomial squares pattern (20)
  - Multiply conjugates using the product of conjugates pattern (20)
  - Recognize and use the appropriate special product pattern

12.5 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)

12.6 Divide Polynomials
- Dividing Polynomials
  - Divide a polynomial by a monomial (20)
  - Divide a polynomial by a binomial using polynomial long division (20)

12.7 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)

Chapter 13: Factoring
13.1 Introduction to Factoring Polynomials
- Greatest Common Factors of Monomials and Polynomials
  - Find the GCF of two or more expressions (20)
  - Factor the greatest common factor from a polynomial (20)
  - Factor a greatest common factor with a negative coefficient from a polynomial (20)
- Factoring by Grouping
  - Factor a polynomial by grouping (20)
13.2 Factor Quadratic Trinomials with Leading Coefficient 1
- Factoring Trinomials with a Leading Coefficient of 1
  - Factor a trinomial of the form \(x^2+bx+c\) where \(c\) is positive (20)
  - Factor a trinomial of the form \(x^2+bx+c\) where \(c\) is negative (20)
  - Factor a trinomial of the form \(x^2+bx+cy^2\) (20)
13.3 Factor Quadratic Trinomials with Leading Coefficient Other than 1
    ● Factoring Trinomials with a Leading Coefficient Other than 1
      ● Factor a trinomial of the form $ax^2+bx+c$ with a GCF (20)
      ● Factor a trinomial using trial and error
      ● Factor a trinomial using the 'ac' method (20)

13.4 Factor Special Products
    ● Factoring Special Products
      ● Factor a perfect square trinomial (20)
      ● Factor a difference of squares (20)
      ● Factor sums and differences of cubes (20, 20)

13.5 General Strategy for Factoring Polynomials
    ● Choosing a Factoring Strategy
      ● Recognize and use the appropriate method to factor a polynomial completely

13.6 Quadratic Equations
    ● Solving Quadratic Equations by Factoring
      ● Solve a factored quadratic equation using the zero product property
      ● Solve a quadratic equation by factoring (20)
      ● Solve applications modeled by quadratic equations

Chapter 14: Rational Expressions and Equations

14.1 Simplify Rational Expressions
    ● Domain of Rational Expressions and Simplifying Rational Expressions
      ● Determine the values for which a rational expression is undefined
      ● Evaluate a rational expression
      ● Simplify a rational expression
      ● Simplify a rational expression with opposite factors

14.2 Multiply and Divide Rational Expressions
    ● Multiplying and Dividing Rational Expressions
      ● Multiply rational expressions (20)
      ● Divide rational expressions (20)
      ● Multiply or divide more than two rational expressions (20)

14.3 Add and Subtract Rational Expressions with a Common Denominator
    ● Adding and Subtracting Rational Expressions with a Common Denominator
      ● Add rational expressions with a common denominator (20)
      ● Subtract rational expressions with a common denominator (20)
      ● Add and subtract rational expressions whose denominators are opposites (20)

14.4 Add and Subtract Rational Expressions with Unlike Denominators
    ● Adding and Subtracting Rational Expressions with Unlike Denominators
      ● Find the least common denominator of rational expressions (20)
      ● Find equivalent rational expressions (20)
      ● Add rational expressions with different denominators (20)
      ● Subtract rational expressions with different denominators (20)

14.5 Simplify Complex Rational Expressions
    ● Simplifying Complex Fractions
14.6 Solve Rational Equations
- Solving Rational Equations
  - Solve a rational equation that results in a linear equation
  - Solve a rational equation that results in a quadratic equation
  - Solve a rational equation for a specific variable

14.7 Solve Proportion and Similar Figure Applications
- Proportions and Problem Solving with Rational Equations
  - Solve proportions (20)
  - Solve applications with proportions
  - Solve similar figure applications

14.8 Solve Uniform Motion and Work Applications
- Uniform Motion, Work, and Problem Solving
  - Solve uniform motion applications involving rational equations
  - Solve problems involving rates of work using rational equations

14.9 Use Direct and Inverse Variation
- Variation and Problem Solving
  - Solve direct variation problems
  - Solve inverse variation problems

Chapter 15: Roots and Radicals
15.1 Simplify and Use Square Roots
- Understanding Square Roots
  - Simplify expressions with square roots (20)
  - Estimate square roots and approximate square roots (20, 20)
  - Simplify variable expressions with square roots (20)

15.2 Simplify Square Roots
- Simplifying Square Root Expressions
  - Use the product property to simplify square roots
  - Use the quotient property to simplify a perfect square fraction (20)
  - Use the quotient property to simplify square roots

15.3 Add and Subtract Square Roots
- Adding and Subtracting Square Root Expressions
  - Add and subtract like square roots (20)
  - Add and subtract square roots that need simplification (20)

15.4 Multiply Square Roots
- Multiplying Square Root Expressions
  - Multiply square roots
  - Use polynomial multiplication to multiply square roots
  - Use special product formulas to multiply square roots

15.5 Divide Square Roots
- Dividing Square Root Expressions and Rationalizing Denominators
15.6 Solve Equations with Square Roots
- Solving Radical Equations
  - Solve a square root equation with a single radical (20)
  - Solve a square root equation with two radicals (20)
- Use square roots in applications

15.7 Higher Roots
- Understanding Higher Roots
  - Simplify numerical expressions with higher roots
  - Simplify expressions with higher roots (20)
- Simplifying Higher Roots and Operations on Higher Roots
  - Use the product property to simplify expressions with higher roots
  - Use the quotient property to simplify expressions with higher roots
  - Add and subtract higher roots (20)

15.8 Rational Exponents
- Simplifying Expressions with Rational Exponents
  - Simplify expressions with rational exponents and a numerator of 1 (20)
  - Simplify expressions with rational exponents and a numerator greater than 1 (20)
  - Use the laws of exponents to simplify expressions with rational exponents

Chapter 16: Quadratic Equations
16.1 Solve Quadratic Equations Using the Square Root Property
- Solving Quadratic Equations Using the Square Root Property
  - Solve a quadratic equation using the square root property (20)
  - Solve a quadratic equation with a binomial as the quadratic term using the square root property
  - Solve a quadratic equation where factoring results in a perfect square binomial

16.2 Solve Quadratic Equations by Completing the Square
- Solving Quadratic Equations by Completing the Square
  - Complete the square of a binomial expression (20)
  - Solve a quadratic equation with a leading coefficient of 1 by completing the square (20)
  - Solve a quadratic equation with a leading coefficient greater than 1 by completing the square (20)

16.3 Solve Quadratic Equations Using the Quadratic Formula
- Solving Quadratic Equations with the Quadratic Formula
  - Solve a quadratic equation using the quadratic formula with 2 real solutions (20)
  - Solve a quadratic equation using the quadratic formula with 1 or 0 real solutions (20)
  - Use the discriminant to predict the number of solutions of a quadratic equation (20)

16.4 Solve Applications Modeled by Quadratic Equations
- Problem Solving with Quadratic Equations
  - Solve applications modeled by quadratic equations that may require the quadratic formula
● Solve geometric applications that may require the quadratic formula

16.5 Graphing Quadratic Equations

● Parabolas and Their Properties
  ● Graph a quadratic equation by plotting points and recognize the direction a parabola opens
  ● Find the axis of symmetry and vertex of a parabola (20)
  ● Find the intercepts of a parabola (20)

● Graphing Quadratic Equations
  ● Graph a quadratic equation in two variables by using key points
  ● Find the maximum or minimum of a quadratic equation and use it in applications (20)