

Knowre Math: **Grade 6** Curriculum

Chapter 1 Whole Numbers

| Lesson | Topic |
|---|--------------------------------------|
| 1-1 Dividing Using the Standard Algorithm | A) Long Division |
| | B) Equivalent Divisions |
| | C) Horizontal Division |
| 1-2 Divisibility Tests | A) Divisibility Tests |
| 1-3 Multiples and Factors | A) Multiples |
| | B) Least Common Multiples |
| | C) Factors |
| | D) Greatest Common Factors |
| 1-4 Exponents and the Order of Operations | A) Multiplication Symbols |
| | B) Defining Powers |
| | C) Writing Expressions as Powers |
| | D) Evaluating Powers |
| | E) Missing Values in Power Equations |
| | F) Order of Operations |
| 1-5 Prime Factorization | A) Prime and Composite Numbers |
| | B) Prime Factorization |
| | C) Greatest Common Factors |
| | D) Least Common Multiples |

Chapter 2 Fractions and Decimals

| Lesson | Topic |
|--------------------------------------|---|
| 2-1 Fractions | A) Fractions on Number Lines |
| | B) Whole Numbers as Fractions |
| | C) Equivalent Fractions |
| | D) Comparing Fractions |
| | E) Simplifying Fractions |
| | F) Mixed Numbers as Improper Fractions |
| 2-2 Adding and Subtracting Fractions | A) Adding and Subtracting Fractions with Common Denominators |
| | B) Adding and Subtracting Fractions with Different Denominators |

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Chapter 2 Fractions and Decimals (cont.)

| Lesson | Topic |
|---|--|
| 2-3 Multiplying and Dividing Fractions | A) Multiplying Fractions |
| | B) Powers of Nonnegative Fractions |
| | C) Reciprocals |
| | D) Dividing Fractions |
| 2-4 Adding and Subtracting Decimals | A) Decimals on Number Lines |
| | B) Representing Repeating Decimals |
| | C) Ordering Decimals |
| | D) Adding Decimals |
| | E) Subtracting Decimals |
| 2-5 Multiplying and Dividing Decimals | A) Multiplying Decimals |
| | B) Powers of Nonnegative Decimals |
| | C) Dividing Decimals |
| 2-6 Order of Operations with Rational Numbers | A) Terminating Decimals as Fractions |
| | B) Order of Operations with Nonnegative Rational Numbers |

Chapter 3 Basics of Algebra

| Lesson | Topic |
|---|--|
| 3-1 Variables and Expressions | A) Parts of Variable Expressions |
| | B) Writing Variable Expressions |
| 3-2 Operations and Variable Expressions | A) Omitting Multiplication Symbols with Variables |
| | B) Understanding Coefficients |
| | C) Evaluating Variable Expressions |
| 3-3 Properties of Operations | A) Commutative Property |
| | B) Associative Property |
| | C) Using the Properties to Multiply Terms |
| | D) Identity Property |
| 3-4 Distributive Property | A) Distributive Property |
| | B) Rewrite Sums and Differences with the Distributive Property |

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Chapter 4 Equations and Inequalities

| Lesson | Topic |
|---------------------------------------|---|
| 4-1 Equations | A) Identifying Expressions and Equations |
| | B) Writing Equations |
| | C) Solutions of Equations |
| 4-2 Solving One-Step Equations I | A) Subtraction Property of Equaility |
| | B) Addition Property of Equaility |
| 4-3 Solving One-Step Equations II | A) Division Property of Equaility |
| | B) Multiplication Property of Equaility |
| 4-4 Writing and Graphing Inequalities | A) Writing Inequalities from Verbal Expressions |
| | B) Solutions of Inequalities |
| | C) Writing Inequalities from Number Lines |
| | D) Graphing Inequalities |
| 4-5 Solving One-Step Inequalities | A) Subtraction Property of Inequality |
| | B) Addition Property of Inequality |
| | C) Multiplication Property of Inequality |
| | D) Division Property of Inequality |

Chapter 5 Ratios and Rates

| Lesson | Topic |
|---------------------------|--|
| 5-1 Ratios | A) Writing Ratios |
| | B) Simplifying Ratios |
| | C) Equivalent Ratios |
| 5-2 Rates and Conversions | A) Unit Rates |
| | B) Conversion Factors |
| | C) Unit Conversions within a System |
| | D) Unit Rates and Dimensional Analysis |
| 5-3 Percents | A) Writing Percents as Fractions |
| | B) Writing Fractions as Percents |
| | C) Writing Percents as Decimals |
| | D) Writing Decimals as Percents |
| | E) Percent Equations |

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Chapter 6 Integers

| Lesson | Topic |
|--|---|
| 6-1 Introduction to Integers | A) Classifying Numbers |
| | B) Representing Situations as Integers |
| | C) Integers on Number Lines |
| | D) Comparing Integers |
| | E) Distance on a Number Line |
| 6-2 Opposites and Absolute Value | A) Opposites |
| | B) Absolute Values |
| 6-3 Adding and Subtracting Integers on a Number Line | A) Adding Integers on Number Lines |
| | B) Subtracting Integers on Number Lines |

Chapter 7 Coordinate Plane and Two Variable Equations

| Lesson | Topic |
|--|---|
| 7-1 Coordinate Plane | A) Identifying Quadrants and Axes of Coordinate Planes |
| | B) Graphing Points |
| | C) Writing the Coordinates of Points |
| | D) Identifying Quadrants and Axes from Coordinates |
| 7-2 Distance and Reflections on a Coordinate Plane | A) Counting to Find the Distance Between Points |
| | B) Using Absolute Value to Find the Distance Between Points |
| | C) Reflections Over the x-axis |
| | D) Reflections Over the y-axis |
| 7-3 Relations | A) Representing Relations in Different Forms |
| | B) Input and Output |
| | C) Independent and Dependent Variables |
| 7-4 Two-Variable Equations | A) Evaluating Functions |
| | B) Graphing Linear Functions |
| | C) Writing Linear Functions |

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Chapter 8 Two- and Three-Dimensional Geometry

| Lesson | Topic |
|--|---|
| 8-1 Area of Rectangles and Squares | A) Areas of Rectangles |
| | B) Areas of Squares |
| 8-2 Area of Triangles | A) Bases and Heights of Triangles |
| | B) Areas of Triangles |
| 8-3 Area of Parallelograms and Trapezoids | A) Areas of Parallelograms |
| | B) Areas of Trapezoids |
| 8-4 Surface Area of Prisms and Pyramids Using Nets | A) Nets of Solids |
| | B) Surface Areas of Prisms and Pyramids from Nets |
| | C) Surface Areas of Prisms |
| 8-5 Volume of Rectangular Prisms | A) Volume from Cubic Units |
| | B) Volumes of Right Prisms |

Chapter 9 Displays of Data

| Lesson | Topic |
|--------------------------------|---|
| 9-1 Introduction to Statistics | A) Statistical Questions |
| | B) Characteristics of Data Sets |
| | C) Frequency Tables |
| | D) Characteristics of Tables |
| 9-2 Dot Plots | A) Characteristics of Dot Plots |
| | B) Dot Plots, Data Sets, and Frequency Tables |
| | C) Finding the Number of Observations within a Range of Numbers |
| | D) Finding the Minimum and Maximum Values |
| | E) Finding the Mode |
| 9-3 Histograms | A) Characteristics of Histograms |
| | B) Bins |
| | C) Histograms, Data Sets, and Frequency Tables |
| | D) Finding the Number of Observations within a Range of Numbers |
| | E) Values in a Histogram |

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Chapter 10 Distributions of Data

| Lesson | Topic |
|------------------------------|--|
| 10-1 Measures of Center | A) Mean |
| | B) Median |
| | C) Mean and Median of Same Data Set |
| 10-2 Measures of Variation | A) Range |
| | B) MAD |
| | C) Quartiles |
| | D) IQR |
| 10-3 Box Plots | A) Five-Number Summary |
| | B) Measures of Variation |
| | C) Box Plots, Five-Number Summaries, and Data Sets |
| | D) Distribution of Data in a Dot Plot |
| 10-4 Shapes of Distributions | A) Shapes of Histograms |
| | B) Shapes of Dot Plots |
| | C) Shape and Measure of Center |
| | D) Measure of Center and Measure of Variation |
| | E) Outliers and Measures of Center |