

What's in Knowre's Curricula?

Pre-Algebra Curriculum

Chapter	Lesson	Topics
1. Number Theory	1-1 Multiples	A. Definition of Multiple B. Definition of LCM
	1-2 Divisibility Tests	A. Divisibility Tests
	1-3 Factors	A. Definition of Factor B. Definition of GCF
	1-4 Prime/Composite Numbers and Exponents	A. Definition of Prime/Composite Numbers B. Introduction to Exponents C. Order of Operations with Exponents
	1-5 Prime Factorization	A. Definition of Prime Factorization B. Finding the Greatest Common Factor C. Finding the Least Common Multiple
2. Integers	2-1 Introduction to Integers	A. Definition of Whole Number B. Definition of Natural Number C. Definition of Integer D. Integers on the Number Line E. Definition of Opposites F. Definition of Absolute Value
	2-2 Adding and Subtracting Integers	A. Adding Positive Integers B. Subtracting Positive Integers C. Adding Negative Integers D. Subtracting Negative Integers E. The Additive Inverse
	2-3 Multiplying and Dividing Integers	A. Multiplying Integers B. Dividing Integers
	2-4 Order of Operations with Integers	A. Powers with a Negative Base B. Order of Operations with Integers
	2-5 The Coordinate Plane	A. Coordinates B. Axes and Quadrants C. Horizontal/Vertical Distance Between Points

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Chapter	Lesson	Topics
3. Basics of Algebra	3-1 Variable Expressions	<ul style="list-style-type: none"> A. Introduction to Variables B. Omitting Multiplication Symbols with Variables C. Writing Variable Expressions D. Evaluating Variable Expressions
	3-2 Adding and Subtracting Variable Expressions	<ul style="list-style-type: none"> A. Definition of Term B. Definition of Coefficient C. Definition of Like Terms
	3-3 Multiplying and Dividing Variable Expressions	<ul style="list-style-type: none"> A. Multiplying Terms B. Dividing Terms
	3-4 Exponents	<ul style="list-style-type: none"> A. Using Exponents with Variables B. Product of Powers Property C. Quotient of Powers Property D. Power of Powers Property
	3-5 The Distributive Property	<ul style="list-style-type: none"> A. Definition of the Distributive Property B. Combining Like Terms Using the Distributive Property C. Simplifying Variable Expressions Using PEMDAS
	3-6 GCF and LCM of Variable Expressions	<ul style="list-style-type: none"> A. GCF of Variable Expressions B. LCM of Variable Expressions
4. Solving Equations and Inequalities	4-1 Equations and Solving One-Step Equations	<ul style="list-style-type: none"> A. Solutions of Equations B. Solving One-Step Equations Using Inverse Operations
	4-2 Solving Multi-Step Equations	<ul style="list-style-type: none"> A. Solving Two-Step Equations B. Solving Multi-Step Equations C. Solving Equations with Variables on Both Sides
	4-3 Inequalities and the Number Line	<ul style="list-style-type: none"> A. Solutions of Inequalities B. Solving Inequalities C. Graphs of Inequalities
	4-4 Solving One-Step Inequalities	<ul style="list-style-type: none"> A. Solving One-Step Inequalities Using Inverse Operations
	4-5 Solving Multi-Step Inequalities	<ul style="list-style-type: none"> A. Solving Two-Step Inequalities B. Solving Multi-Step Inequalities C. Solving Inequalities with Variables on Both Sides

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5. Rational Numbers	5-1 Rational Numbers	<ul style="list-style-type: none"> A. Negative Fractions and Decimals on a Number Line B. Equivalent Forms of Negatives in Fractions C. Writing Integers or Mixed Numbers as Fractions D. Converting Fractions to Decimals and Vice Versa
	5-2 Adding and Subtracting Rational Numbers	<ul style="list-style-type: none"> A. Adding and Subtracting Rational Numbers B. Adding and Subtracting Fractions with Variables
	5-3 Multiplying and Dividing Rational Numbers	<ul style="list-style-type: none"> A. Multiplying Rational Numbers B. Multiplying Fractions with Variables C. Powers with Rational Bases D. Definition of Reciprocal E. Dividing Rational Numbers F. Dividing Fractions with Variables
	5-4 Solving Equations with Decimals and Fractions	<ul style="list-style-type: none"> A. Solving Equations with a Decimal Coefficient B. Solving Equations with a Fractional Coefficient C. Solving Equations with Both Fractions and Decimals
	5-5 Solving Inequalities with Decimals and Fractions	<ul style="list-style-type: none"> A. Solving Inequalities with a Decimal Coefficients B. Solving Inequalities with a Fractional Coefficients C. Solving Inequalities with Both Fractions and Decimals
6. Ratios and Proportions	6-1 Ratios	<ul style="list-style-type: none"> A. Definition of Ratio / Writing Ratios B. Equivalent Ratios
	6-2 Rates	<ul style="list-style-type: none"> A. Equivalent Rates B. Unit Rates C. Converting Rates Using Dimensional Analysis D. Comparing Rates E. Using Rates
	6-3 Proportions	<ul style="list-style-type: none"> A. Definition of Proportion B. Solving Proportions
	6-4 Similarity	<ul style="list-style-type: none"> A. Corresponding Parts of Similar Figures B. Finding and Using a Ratio of Corresponding Side Lengths C. Writing and Solving Proportions Given Similarity D. Definition of Congruence E. Corresponding Parts of Congruent Figures
	6-5 Scale	<ul style="list-style-type: none"> A. Using Scale

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Chapter	Lesson	Topics
7. Percents	7-1 Fractions, Decimals and Percents	<ul style="list-style-type: none"> A. Definition of Percent B. Converting Percents to Decimals and Vice Versa C. Comparing Percents to Rational Numbers
	7-2 The Percent Proportion	<ul style="list-style-type: none"> A. The Percent Proportion
	7-3 The Percent Equation	<ul style="list-style-type: none"> A. The Percent Equation
	7-4 Percent of Change	<ul style="list-style-type: none"> A. Amount of Change B. Percent of Change
	7-5 Discount and Mark-Up	<ul style="list-style-type: none"> A. Discount B. Mark-Up
8. Real Numbers and the Pythagorean Theorem	8-1 Perfect Squares and Square Roots	<ul style="list-style-type: none"> A. Definition of Perfect Square B. Definition of Square Root C. Introduction to the Radical Symbol D. Estimating Square Roots
	8-2 Real Numbers	<ul style="list-style-type: none"> A. Introduction to Real Numbers B. Comparing Real Numbers C. Order of Operations Involving Real Numbers D. Solving Equations Involving x^2
	8-3 The Pythagorean Theorem	<ul style="list-style-type: none"> A. Parts of Right Triangles B. Writing the Pythagorean Theorem C. Using the Pythagorean Theorem to Find Side Lengths of Right Triangles D. Using Pythagorean Theorem to Identify Right Triangles
	8-4 Distance Between Two Points	<ul style="list-style-type: none"> A. Vertical and Horizontal Distance on the Coordinate Plane B. The Distance Formula

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Chapter	Lesson	Topics
9. Linear Functions	9-1 Two Variable Equations	A. Identifying Solutions of Two Variable Equations
	9-2 Relations and Functions	A. Definition of Relation B. Domain and Range from Sets of Pairs C. Domain and Range from Tables D. Definition of Function E. Evaluating Functions
	9-3 Linear Functions	A. Introduction to Linear Functions B. Graphing Linear Functions
	9-4 Rate of Change and Slope	A. Definition of Rate of Change B. Definition of Slope C. Slope Formula
	9-5 Slope-Intercept Form	A. Introduction to Slope-Intercept Form B. Slope-Intercept Form and Graphing