

Teaching Textbooks Pre-Algebra

Class Description:

In this Pre-Algebra course, the student will utilize Teaching Textbooks Pre-Algebra to cover the standard topics, including: fractions, decimals, LCD, GCF, money, multiplication, division, percents, geometric concepts, algebraic equations, dealing with x, slope-intercept, and more.

Learning Materials: Main Curriculum:

Teaching Textbook - Pre-Algebra Textbook

Teaching Textbook - Pre-Algebra Answer Key

Teaching Textbook - Pre-Algebra CD-ROM Set:

Learning Goals/Performance Objectives: 8.1.A Solve one-variable linear equations.

8.1.D Determine the slope and y-intercept of a linear function described by a symbolic expression, table, or graph.

8.1.F Solve single- and multi-step word problems involving linear functions and verify the solutions.

8.2.C Demonstrate that the sum of the angle measures in a triangle is 180 degrees, and apply this fact to determine the sum of the angle measures of polygons and to determine unknown angle measures.

8.2.F Demonstrate the Pythagorean Theorem and its converse and apply them to solve problems.

Learning Activities: The student will complete lessons as per the timeline below, using the workbook and CD's. Each lesson consists of video instruction and new material practice. Quizzes are after every 7th lesson. Grades will be automatically calculated via the digital gradebook.

Teaching Textbooks Pre-Algebra

Course Content:

Chapter 1: Arithmetic Basics

Lesson 1—Number Beginnings

Lesson 2—Adding and Subtracting Whole Numbers

Lesson 3—Multiplying Whole Numbers

Lesson 4—Dividing Whole Numbers

Lesson 5—Divisibility

Chapter 2: Rational Numbers

Lesson 6—Fractions

Lesson 7—Equivalent Fractions

Lesson 8—Factoring and Canceling

Lesson 9—Prime Numbers

Lesson 10—Adding and Subtracting Fractions

Lesson 11—Finding the Lowest Common Denominator

Lesson 12—Mixed Numbers

Lesson 13—Multiplying and Dividing Fractions

Lesson 14—Fractions and Whole Numbers

Chapter 3: Decimals

Lesson 15—Ill-Fitting Fractions

Lesson 16—Hundredths, Thousandths

Lesson 17—Adding and Subtracting Decimals

Lesson 18—Filling the Holes

Lesson 19—Money and Decimals

Lesson 20—Multiplying Decimals

Lesson 21—Dividing Decimals

Lesson 22—Decimal Remainders

Lesson 23—Converting Fractions to Decimals

Lesson 24—Never-Ending Decimals

Chapter 4: Percents

Lesson 25—Percents

Lesson 26—Calculating Percents

Lesson 27—Percent of Any Number

Lesson 28—Fractional Percents

Lesson 29—Percents and Banking

Lesson 30—Finding the Percent

Lesson 31—Calculating a Grade

Chapter 5: Measuring Length

Lesson 32—Units of Measurement

Lesson 33—Unit Conversions

Lesson 34—Skipping Around

Lesson 35—Making a Table

Lesson 36—The Metric System

Lesson 37—It's All in a Name

Lesson 38—Converting in Metric

Lesson 39—Converting Between Common and Metric

Chapter 6: Measuring Area and Volume

Lesson 40—Little Squares

Lesson 41—Area Unit Conversions

Lesson 42—Area in the Metric System

Lesson 43—Little Cubes

Lesson 44—Volume Unit Conversions

Lesson 45—Liquid Measures of Volume

Lesson 46—Volume in the Metric System

Chapter 7: Simple Algebraic Equations

Lesson 47—Advanced Arithmetic

Lesson 48—What’s it for Anyway?

Lesson 49—The Golden Rule of Algebra

Lesson 50—Undoing Multiplication and Division

Lesson 51—Changing Places

Lesson 52—New Symbols

Lesson 53—Undoing the Algebra Way

Lesson 54—Solving Percent Problems with Algebra

Lesson 55—Solving Distance Problems with Algebra

Chapter 8: Integers

Lesson 56—Less Than Zero

Lesson 57—The Number Line

Lesson 58—How Negatives are Used

Lesson 59—Addition with Negatives

Lesson 60—Subtraction with Negatives

Lesson 61—Multiplication with Negatives

Lesson 62—Division with Negatives

Lesson 63—Undoing Equations with Negatives—Part 1

Lesson 64—Undoing Equations with Negatives—Part 2

Lesson 65—Negatives and Fractions

Lesson 66—Handling a $-x$

Lesson 67—Dealing with $-x$ in a Fraction

Chapter 9: Longer Algebraic Equations

Lesson 68—Order Matters

Lesson 69—Writing Equations in Order

Lesson 70—Order and the Fraction Bar

Lesson 71—Using the Fraction Bar in Equations

Lesson 72—Undoing in Reverse—Part 1

Lesson 73—Undoing in Reverse—Part 2

Lesson 74—Simplifying First

Lesson 75—More Simplifying First

Chapter 10: Combining Like Terms

Lesson 76—Adding x 's

Lesson 77—Subtracting x 's

Lesson 78— x and $1x$

Lesson 79—Work Problems

Lesson 80—Fancy Distance Problems

Lesson 81— x 's on Both Sides

Lesson 82—Refrigerator Repairs

Chapter 11: Rational Expressions

Lesson 83—Reducing Fractions with x 's

Lesson 84—Canceling x 's

Lesson 85—Fractions and Parentheses—Part 1

Lesson 86—Fractions and Parentheses—Part 2

Lesson 87—Multiplying Fractions with x 's

Lesson 88—Dividing Fractions with x 's

Lesson 89—Adding Fractions with x 's

Lesson 90—Subtracting Fractions with x 's

Chapter 12: Powers, Polynomials, and Radicals

Lesson 91—Raising a Number to a Power

Lesson 92—Scientific Notation

Lesson 93—Order and Powers

Lesson 94—Adding and Subtracting Powers

Lesson 95—Multiplying Powers

Lesson 96—Multiplying Powers: Tougher Cases

Lesson 97—Dividing Powers

Lesson 98—Fractions with Powers

Lesson 99—Taking a Root

Lesson 100—Undoing Powers and Roots

Lesson 101—An Exponent of 1

Lesson 102—An Exponent of 0

Chapter 13: Geometry

Lesson 103—Points, Lines, and Planes

Lesson 104—Angles

Lesson 105—Pairs of Angles

Lesson 106—Line and Angle Relationships

Lesson 107—Triangles

Lesson 108—Pythagorean Theorem 504

Lesson 109—Quadrilaterals 511

Lesson 110—Polygons 518

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Lesson 111—Congruent Figures 526

Lesson 112—Similar Figures 532

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Lesson 114—Area Calculations 547

Lesson 115—Circles 556

Lesson 116—Solids 566

Lesson 117—More on Volume and Surface Area 576

Chapter 15: Relations, Functions, and Graphing 587

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Lesson 122—Graphing Equations 615
Lesson 123—More on Graphing 623
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Lesson 126—Horizontal and Vertical Lines 653
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Lesson 128—Range and Stem-and-Leaf Plots 669
Lesson 129—Histograms and Scatter Plots 675
Lesson 130—Probability 684
Lesson 131—Tree Diagrams 691
Lesson 132—Fundamental Counting Principle 698
Lesson 133—Inequalities 703
Lesson 134—Undoing Inequalities 709
Lesson 135—Undoing Inequalities in Reverse Order 717
Chapter 17: Additional Topics 723
Lesson 136—Equations and the Distributive Property 724
Lesson 137—Absolute Value 730
Lesson 138—Distance Formula 736
Lesson 139—More on Formulas 744

Progress Criteria/Methods of Evaluation: For successful completion of this course, the student will complete at least 70% of the lessons/goals, at a minimum of 70% accuracy.

September Complete Lessons 1 – 14
September Complete Lessons 57 – 70
October Complete Lessons 15 – 28
November Complete Lessons 29 – 42
December Complete Lessons 43 – 56
January Complete Lessons 57 – 70
February Complete Lessons 71 – 84
March Complete Lessons 85 – 98
April Complete Lessons 99 – 112
May Complete Lessons 113 – 126
June Complete Lessons 127 – 139