

Pacing for a Common Core Curriculum with *Prentice Hall Algebra 1*

This leveled Pacing Guide can help you transition to a Common Core-based curriculum with Pearson's *Prentice Hall Algebra 1* ©2011. The first column on the right identifies the lessons that address the standards that make up Achieve's Pathway for Algebra 1. The guide also indicates the Standard(s) for Mathematical Content that each lesson addresses and proposes pacing for each chapter. Included in the guide are the additional Common Core Lessons, numbered CC-1 through CC-20, that Pearson is providing. These lessons offer in-depth coverage of certain standards. With these additional lessons and Pearson's *Prentice Hall Algebra 1* ©2011, you have complete coverage of all of the Common Core State Standards that make up Achieve's Pathway for Algebra 1.

The suggested number of days for each chapter is based on a traditional 45-minute class period and on a 90-minute block period. The total of 160 days of instruction leaves time for assessments, projects, assemblies, preparing for your state test, or other special days that vary from school to school.

KEY

- ✓ = Algebra 1 Common Core Content
- = Reviews content from previous years
- = Content for Enrichment

| | | Common Core State Standards | Average | Advanced | Achieve's Algebra 1 Pathway |
|--|---|-----------------------------|-------------------------------|----------|-----------------------------|
| Chapter 1 Foundations for Algebra | | | Traditional 10 Block 5 | | |
| 1-1 | Variables and Expressions | A.SSE.1, A.SSE.1.a | ✓ | ✓ | ✓ |
| 1-2 | Order of Operations and Evaluating Expressions | A.SSE.1, A.SSE.1.a | ✓ | ✓ | ✓ |
| 1-3 | Real Numbers and the Number Line | Prepares for N.RN.3 | ○ | ○ | |
| 1-4 | Properties of Real Numbers | Prepares for N.RN.3 | ○ | ○ | |
| 1-5 | Adding and Subtracting Real Numbers | Prepares for N.RN.3 | ○ | ○ | |
| Concept Byte: Always, Sometimes, or Never | | Prepares for A.CED.3 | ✓ | ✓ | |
| 1-6 | Multiplying and Dividing Real Numbers | Prepares for N.RN.3 | ○ | ○ | |
| CC-1 | Operations With Rational and Irrational Numbers | N.RN.3 | ✓ | ✓ | ✓ |
| Concept Byte: Closure | | Prepares for A.APR.1 | ✓ | ✓ | |
| 1-7 | The Distributive Property | A.SSE.1, A.SSE.1.a | ✓ | ✓ | ✓ |
| 1-8 | An Introduction to Functions | A.CED.1 | ✓ | ✓ | ✓ |
| Concept Byte: Using Tables to Solve Equations | | Prepares for A.REI.1 | ○ | ○ | |
| Review: Graphing in the Coordinate Plane | | Prepares for A.CED.2 | ○ | ○ | |
| 1-9 | Patterns, Equations, and Graphs | A.CED.2, A.REI.10 | ✓ | ✓ | ✓ |
| Chapter 2 Solving Equations | | | Traditional 12 Block 6 | | |
| Concept Byte: Modeling One-Step Equations | | Prepares for A.REI.1 | ○ | | |
| 2-1 | Solving One-Step Equations | A.CED.1, A.REI.3 | ✓ | ○ | ✓ |
| 2-2 | Solving Two-Step Equations | A.CED.1, A.REI.1, A.REI.3 | ✓ | ✓ | ✓ |
| 2-3 | Solving Multi-Step Equations | A.CED.1, A.REI.1, A.REI.3 | ✓ | ✓ | ✓ |

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| Concept Byte: Modeling Equations With Variables on Both Sides | | Prepares for A.REI.1 | ○ | | |
| 2-4 | Solving Equations With Variables on Both Sides | A.CED.1, A.REI.1, A.REI.3 | ✓ | ✓ | ✓ |
| 2-5 | Literal Equations and Formulas | N.Q.1, A.CED.1, A.CED.4, A.REI.1, A.REI.3 | ✓ | ✓ | ✓ |
| Concept Byte: Finding Perimeter, Area, and Volume | | N.Q.1 | ✓ | | ✓ |
| 2-6 | Ratios, Rates, and Conversions | N.Q.1, N.Q.2 | ✓ | ✓ | ✓ |
| 2-7 | Solving Proportions | N.Q.1, A.CED.1, A.REI.3 | ✓ | ✓ | ✓ |
| 2-8 | Proportions and Similar Figures | A.CED.1, A.REI.3 | ✓ | ✓ | ✓ |
| 2-9 | Percents | Prepares for N.Q.3 | ○ | | |
| 2-10 | Change Expressed as a Percent | N.Q.3 | ✓ | ✓ | ✓ |
| Chapter 3 Solving Inequalities | | | Traditional 8 Block 4 | | |
| 3-1 | Inequalities and Their Graphs | Prepares for A.REI.3 | ○ | | ○ |
| 3-2 | Solving Inequalities Using Addition or Subtraction | A.CED.1, A.REI.3 | ✓ | ✓ | ✓ |
| 3-3 | Solving Inequalities Using Multiplication or Division | N.Q.2, A.CED.1, A.REI.3 | ✓ | ✓ | ✓ |
| Concept Byte: More Algebraic Properties | | Prepares for A.REI.3 | □ | □ | |
| Concept Byte: Modeling Multi-Step Inequalities | | Prepares for A.REI.3 | ✓ | | |
| 3-4 | Solving Multi-Step Inequalities | A.CED.1, A.REI.3 | ✓ | ✓ | ✓ |
| 3-5 | Working With Sets | A.REI.3 | ✓ | ✓ | ✓ |
| 3-6 | Compound Inequalities | A.CED.1, A.REI.3 | ✓ | ✓ | ✓ |
| 3-7 | Absolute Value Equations and Inequalities | A.SSE.1, A.SSE.1.b, A.CED.1 | ✓ | ✓ | ✓ |
| 3-8 | Unions and Intersections of Sets | Extends A.CED.1 | □ | □ | |
| Chapter 4 An Introduction to Functions | | | Traditional 12 Block 6 | | |
| 4-1 | Using Graphs to Relate Two Quantities | Prepares for F.IF.4 | ✓ | ✓ | ✓ |
| 4-2 | Patterns and Linear Functions | A.REI.10, F.IF.4 | ✓ | ✓ | ✓ |
| 4-3 | Patterns and Nonlinear Functions | A.REI.10, F.IF.4 | ✓ | ✓ | ✓ |
| 4-4 | Graphing a Function Rule | N.Q.1, A.REI.10, F.IF.5 | ✓ | ✓ | ✓ |
| Concept Byte: Graphing Functions and Solving Equations | | A.REI.11 | ✓ | ✓ | ✓ |
| 4-5 | Writing a Function Rule | N.Q.2, A.SSE.1, A.SSE.1.a, A.CED.2 | ✓ | ✓ | ✓ |
| 4-6 | Formalizing Relations and Functions | F.IF.1, F.IF.2 | ✓ | ✓ | ✓ |
| 4-7 | Replace Lesson 4-7 with CC-2 | | | | |
| CC-2 | Arithmetic Sequences | A.SSE.1, A.SSE.1.a, A.SSE.1.b, F.IF.3, F.BF.1, F.BF.1.a, F.BF.2, F.LE.2 | ✓ | ✓ | ✓ |

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|---|------------------------------------|--|---------|----------|-----------------------------|
| Chapter 5 Linear Functions | | Traditional 14 Block 7 | | | |
| 5-1 | Rate of Change and Slope | F.IF.6, F.LE.1.b | ✓ | ✓ | ✓ |
| 5-2 | Direct Variation | N.Q.2, A.CED.2 | ✓ | ✓ | ✓ |
| Concept Byte: Investigating $y = mx + b$ | | F.BF.3 | ✓ | ✓ | ✓ |
| 5-3 | Slope-Intercept Form | A.SSE.1, A.SSE.1.a, A.SSE.2, A.CED.2, F.IF.4, F.IF.7, F.IF.7.a, F.LE.5 | ✓ | ✓ | ✓ |
| 5-4 | Point-Slope Form | A.SSE.1, A.SSE.1.a, A.SSE.2, A.CED.2, F.IF.4, F.IF.7, F.IF.7.a, F.BF.1, F.BF.1.a, F.LE.2, F.LE.5 | ✓ | ✓ | ✓ |
| 5-5 | Standard Form | N.Q.2, A.SSE.2, A.CED.2, F.IF.4, F.IF.7, F.IF.7.a, F.BF.1, F.BF.1.a, F.LE.2, F.LE.5 | ✓ | ✓ | ✓ |
| CC-3 | Inverse of a Linear Functions | F.BF.4, F.BF.4.a | ✓ | ✓ | ✓ |
| CC-4 | A Family of Linear Functions | F.IF.9, F.BF.3 | ✓ | ✓ | ✓ |
| 5-6 | Parallel and Perpendicular Lines | G.GPE.5 | ☐ | ☐ | |
| 5-7 | Scatter Plots and Trend Lines | N.Q.1, F.LE.5, S.ID.6, S.ID.6.a, S.ID.6.c, S.ID.7, S.ID.8, S.ID.9 | ✓ | ✓ | ✓ |
| Concept Byte: Collecting Linear Data | | Prepares for S.ID.6.b | ✓ | ✓ | |
| CC-5 | Using Residuals | S.ID.6.b | ✓ | ✓ | ✓ |
| 5-8 | Replace Lesson 5-8 with CC-6 | | | | |
| CC-6 | Graphing Absolute Value Functions | F.IF.7, F.IF.7.b, F.BF.3 | ✓ | ✓ | ✓ |
| Concept Byte: Characteristics of Absolute Value Graphs | | F.IF.7, F.IF.7.b | ✓ | ✓ | ✓ |
| Chapter 6 Systems of Equations and Inequalities | | Traditional 12 Block 6 | | | |
| 6-1 | Solving Systems by Graphing | A.REI.6 | ✓ | ✓ | ✓ |
| Concept Byte: Solving Systems Using Tables and Graphs | | Prepares for A.REI.6 | ✓ | ✓ | |
| Concept Byte: Solving Systems Using Algebra Tiles | | Prepares for A.REI.6 | ✓ | | ○ |
| 6-2 | Solving Systems Using Substitution | A.REI.6 | ✓ | ✓ | ✓ |
| 6-3 | Solving Systems Using Elimination | A.REI.5, A.REI.6 | ✓ | ✓ | ✓ |
| Concept Byte: Matrices and Solving Systems | | Extends A.REI.6 | ☐ | ☐ | |
| 6-4 | Replace Lesson 6-4 with CC-7 | | | | |
| CC-7 | Applications of Linear Systems | N.Q.2, N.Q.3, A.CED.3, A.REI.6 | ✓ | ✓ | ✓ |
| 6-5 | Linear Inequalities | A.CED.3, A.REI.12 | ✓ | ✓ | ✓ |
| 6-6 | Systems of Linear Inequalities | A.CED.3, A.REI.12 | ✓ | ✓ | ✓ |
| Concept Byte: Graphing Linear Inequalities | | A.REI.12 | ✓ | ✓ | ✓ |

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| Chapter 7 Exponents and Exponential Functions | | Traditional 16 Block 8 | | |
| 7-1 Zero and Negative Exponents | Prepares for N.RN.1 and N.RN.2 | ✓ | ✓ | |
| 7-2 Scientific Notation | | ○ | | |
| 7-3 Multiplication Powers With the Same Base | Prepares for N.RN.1 | ○ | ○ | |
| Concept Byte: Powers of Powers and Powers of Products | Prepares for N.RN.1 | ○ | ○ | |
| 7-4 More Multiplication Properties of Exponents | Prepares for N.RN.1 | ○ | ○ | |
| CC-8 Using Rational Exponents | N.RN.1 | ✓ | ✓ | ✓ |
| 7-5 Division Properties of Exponents | Prepares for N.RN.1 | ✓ | ✓ | |
| CC-9 Rational Exponents and Radicals | N.RN.2 | ✓ | ✓ | ✓ |
| 7-6 Exponential Functions | A.CED.2, F.IF.4, F.IF.5, F.IF.7.e, F.LE.2, F.LE.5 | ✓ | ✓ | ✓ |
| CC-10 Geometric Sequences | A.SSE.1, A.SSE.1.a, F.IF.3, F.BF.1, F.BF.1.a, F.BF.2, F.LE.2 | ✓ | ✓ | ✓ |
| 7-7 Exponential Growth and Decay | A.SSE.1, A.SSE.1.b, A.SSE.3, A.SSE.3.c, A.CED.2, F.IF.4, F.IF.8, F.IF.8.b, F.LE.1.c, F.LE.5 | ✓ | ✓ | ✓ |
| CC-11 A Family of Exponential Functions | F.IF.9, F.BF.3 | ✓ | ✓ | ✓ |
| Chapter 8 Polynomials and Factoring | | Traditional 16 Block 8 | | |
| 8-1 Adding and Subtracting Polynomials | A.APR.1 | ✓ | ✓ | ✓ |
| 8-2 Multiplying and Factoring | A.APR.1 | ✓ | ✓ | ✓ |
| Concept Byte: Using Models to Multiply | Prepares for A.APR.1 | ✓ | | |
| 8-3 Multiplying Binomials | A.APR.1 | ✓ | ✓ | ✓ |
| 8-4 Multiplying Special Cases | A.APR.1 | ✓ | ✓ | ✓ |
| Concept Byte: Using Models to Factor | Prepares for A.SSE.2 | ✓ | | |
| 8-5 Factoring $x^2 + bx + c$ | A.SSE.1, A.SSE.1.a | ✓ | ✓ | ✓ |
| 8-6 Factoring $ax^2 + bx + c$ | A.SSE.1, A.SSE.1.a, A.SSE.1.b | ✓ | ✓ | ✓ |
| 8-7 Factoring Special Cases | A.SSE.1, A.SSE.1.a, A.SSE.1.b, A.SSE.2 | ✓ | ✓ | ✓ |
| 8-8 Factoring by Grouping | A.SSE.1, A.SSE.1.a, A.SSE.1.b, A.SSE.2 | ✓ | ✓ | ✓ |
| CC-12 Rewriting Expressions | A.SSE.2 | ✓ | ✓ | ✓ |

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| Chapter 9 Quadratic Functions and Equations | | Traditional 20 Block 10 | | |
| 9-1 Quadratic Graphs and Their Properties | A.CED.2, F.IF.4, F.IF.5, F.IF.7, F.IF.7.a, F.BF.3 | ✓ | ✓ | ✓ |
| CC-13 A Family of Quadratic Functions | F.IF.9, F.BF.3 | ✓ | ✓ | ✓ |
| 9-2 Quadratic Functions | A.CED.2, F.IF.4, F.IF.7, F.IF.7.a | ✓ | ✓ | ✓ |
| CC-14 Rates of Increase | F.IF.6, F.LE.3 | ✓ | ✓ | ✓ |
| Concept Byte: Collecting Quadratic Data | | ☐ | ☐ | |
| 9-3 Solving Quadratic Equations | A.CED.1, A.REI.4, A.REI.4.b | ✓ | ✓ | ✓ |
| Concept Byte: Finding Roots | A.APR.3 | ✓ | ✓ | ✓ |
| 9-4 Factoring to Solve Quadratic Equations | A.CED.1, A.REI.1, A.REI.4, A.REI.4.b | ✓ | ✓ | ✓ |
| 9-5 Completing the Square | N.Q.3, A.SSE.1, A.SSE.1.a, A.SSE.1.b, A.CED.1, A.REI.1, A.REI.4, A.REI.4.a, A.REI.4.b | ✓ | ✓ | ✓ |
| CC-15 Quadratic Expressions and Functions | A.SSE.3, A.SSE.3.a, A.SSE.3.b, F.IF.8, F.IF.8.a | ✓ | ✓ | ✓ |
| 9-6 The Quadratic Formula and the Discriminant | N.Q.3, A.CED.1, A.REI.4, A.REI.4.a, A.REI.4.b | ✓ | ✓ | ✓ |
| CC-16 Graphing Square Root and Cube Root Functions | F.IF.7, F.IF.7.b | ✓ | ✓ | ✓ |
| 9-7 Linear, Quadratic, and Exponential Models | F.IF.4, F.LE.1, F.LE.1.a, F.LE.2, F.LE.3, S.ID.6, S.ID.6.a | ✓ | ✓ | ✓ |
| Concept Byte: Performing Regressions | S.ID.6, S.ID.6.a | ✓ | ✓ | ✓ |
| CC-17 Combining Functions | F.BF.1, F.BF.1.b | ✓ | ✓ | ✓ |
| 9-8 Systems of Linear and Quadratic Equations | A.REI.7, A.REI.11 | ✓ | ✓ | ✓ |
| CC-18 Solving Linear-Quadratic Systems | A.REI.7, A.REI.11 | ✓ | ✓ | ✓ |
| Chapter 10 Radical Expressions and Equations | | Traditional 8 Block 4 | | |
| 10-1 The Pythagorean Theorem | G.SRT.8 | ✓ | ✓ | |
| Concept Byte: Distance and Midpoint Formulas | Reviews 8.G.8 | ○ | ○ | |
| 10-2 Simplifying Radicals | Prepares for A.REI.2 | ✓ | ✓ | |
| 10-3 Operations with Radical Expressions | Prepares for A.REI.2 | ✓ | ✓ | |
| 10-4 Solving Radical Equations | A.REI.2 | ✓ | ✓ | |
| 10-5 Graphing Square Root Functions | A.CED.2, F.IF.7.b | ✓ | ✓ | |
| Concept Byte: Right Triangle Ratios | G.SRT.6 | | ☐ | |
| 10-6 Trigonometric Ratios | G.SRT.6, G.SRT.8 | | ☐ | |

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| Chapter 11 Rational Expressions and Functions | | Traditional 14 Block 7 | | |
| 11-1 Simplifying Rational Expressions | Prepares for A.APR.7 | ✓ | ✓ | |
| 11-2 Multiplying and Dividing Rational Expressions | A.APR.7 | ✓ | ✓ | |
| Concept Byte: Dividing Polynomials Using Algebra Tiles | Prepares for A.APR.7 | ✓ | | |
| 11-3 Dividing Polynomials | A.APR.6 | ✓ | ✓ | |
| 11-4 Adding and Subtracting Rational Expressions | A.APR.7 | ✓ | ✓ | |
| 11-5 Solving Rational Equations | A.CED.1, A.REI.2 | ✓ | ✓ | |
| 11-6 Inverse Variation | A.CED.2, F.IF.5 | ✓ | ✓ | |
| 11-7 Graphing Rational Functions | A.CED.2, F.IF.4 | ✓ | ✓ | |
| Concept Byte: Graphing Rational Functions | A.CED.2 | ✓ | ✓ | |
| Chapter 12 Rational Expressions and Functions | | Traditional 16 Block 8 | | |
| 12-1 Organizing Data Using Matrices | Prepares for N.VM.6 | | | |
| 12-2 Frequency and Histograms | N.Q.1, S.ID.1 | ✓ | ✓ | ✓ |
| 12-3 Measures of Central Tendency and Dispersion | N.Q.2, S.ID.2, S.ID.3 | ✓ | ✓ | ✓ |
| CC-19 Analyzing the Shape of the Data | S.ID.2 | ✓ | ✓ | ✓ |
| Concept Byte: Standard Deviation | S.ID.2 | ✓ | ✓ | ✓ |
| 12-4 Box-and-Whisker Plots | N.Q.1, S.ID.1, S.ID.2 | ✓ | ✓ | ✓ |
| Concept Byte: Designing Your Own Survey | Prepares for S.IC.3 | ✓ | ✓ | |
| 12-5 Samples and Surveys | Prepares for S.IC.3 | ✓ | ✓ | |
| CC-20 Two-Way Frequency Tables | S.ID.5 | ✓ | ✓ | ✓ |
| Concept Byte: Misleading Graphs and Statistics | | ☐ | ☐ | |
| 12-6 Permutations and Combinations | Prepares for S.CP.9 | ✓ | ✓ | |
| 12-7 Theoretical and Experimental Probability | S.CP.1, S.CP.4 | ✓ | ✓ | |
| Concept Byte: Conducting Simulations | S.IC.5 | | ✓ | |
| 12-8 Probability of Compound Events | S.CP.7, S.CP.8 | | ✓ | |
| Concept Byte: Conditional Probability | S.CP.2, S.CP.3, S.CP.5 | | ✓ | |