

Curriculum Map

Unit 1 – The Foundations of Algebra

- 1-1 The Real Number System**
- 1-2 Operations on Integers**
- 1-3 Simplifying Numerical Expressions (Order of Operations)**
- 1-4 Rational Numbers**
- 1-5 Approximating Square Roots**
- 1-6 Constants, Variables and Expressions**
- 1-7 Evaluating Algebraic Expressions**
- 1-8 The Distributive Property**
- 1-9 The Cumulative and Associative Properties**
- 1-10 Operations on Polynomials (Addition and Subtraction)**
- 1-11 Operation on Polynomials (Multiplication and Division)**

Unit 2 – Special Products and Factoring

- 2-1 Multiplying Binomials**
- 2-2 Solving Two-Step Equations**
- 2-3 Solving Multi-Step Equations**
- 2-4 Solving Equations with Variables on Both Sides**
- 2-5 Literal Equations and Formulas**



2-6 Ratios, Rates, and Conversions

2-7 Solving Proportions

2-8 Proportions and Similar Figures

2-9 Percentages

2-10 Change Expressed as a Percent

Unit 3 – Solving Equations and Inequalities

3-1 Inequalities and Their Graphs

3-2 Solving Inequalities Using Addition and Subtraction

3-3 Solving Inequalities Using Multiplication or Division

3-4 Solving Multi-Step Inequalities

3-5 Working with Sets

3-6 Compound Inequalities

3-7 Absolute Value Equations and Inequalities

3-8 Union and Intersection of Sets

Unit 4 – An Introduction to Functions

4-1 Using Graphs to Relate Two Quantities

4-2 Patterns and Linear Functions

4-3 Patterns and Nonlinear Functions



4-4 Graphing a Function Rule

4-5 Writing a Function Rule

4-6 Formalizing Relations and Functions

4-7 Arithmetic Sequences

Unit 5 - Linear Functions

5-1 Rate of Change and Slope

5-2 Direct Variation

5-3 Slope-Intercept Form

5-4 Point-Slope Form

5-5 Standard Form

5-6 Parallel and Perpendicular Lines

5-7 Scatter Plots and Trend Lines

5-8 Graphing Absolute Value Functions

Unit 6 – Systems of Equations and Inequalities

6-1 Solving Systems by Graphing

6-2 Solving Linear Systems by Substitution

6-3 Solving Linear Systems Using Elimination

6-4 Applications of Linear Systems



6-5 Linear Inequalities

6-6 Systems of Linear Inequalities

Unit 7 – Exponents and Exponential Functions

7-1 Zero and Negative Exponents

7-2 Multiplying Powers with the Same Base

7-3 More Multiplication Properties of Exponents

7-4 Division Properties of Exponents

7-5 Rational Exponents and Radicals

7-6 Exponential Functions

7-7 Exponential Growth and Decay

7-8 Geometric Sequences

Unit 8 – Polynomials and Factoring

8-1 Adding and Subtracting Polynomials

8-2 Multiplying and Factoring

8-3 Multiplying Binomials

8-4 Multiplying Special Cases

8-5 Factoring $x^2 + bx + c$

8-6 Factoring $ax^2 + bx + c$



8-7 Factoring Special Case

8-8 Factoring by Grouping

Unit 9 - Exponents and Exponential Functions

9-1 Quadratic Graphs and Their Properties

9-2 Quadratic Functions

9-3 Solving Quadratic Equations

9-4 Factoring to Solve Quadratic Equations

9-5 Completing the Square

9-6 The Quadratic Formula and the Discriminant

9-7 Linear, Quadratic and Exponential Models

9-8 Systems of Linear and Quadratic Equations

Unit 10 – Radical Expressions and Equations

10-1 Pythagorean Theorem

10-2 Simplifying Radical

10-3 Operations with Radical Expressions

10-4 Solving Radical Equations

10-5 Graphing Square Root Functions

10-6 Trigonometric Ratios



Unit 11 – Rational Expressions and Functions

11-1 Simplifying Rational Expressions

11-2 Multiplying and Dividing Rational Expressions

11-3 Dividing Polynomials

11-4 Adding and Subtracting Rational Expressions

11-5 Solving Rational Expressions

11-6 Inverse Variation

11-7 Graphing Rational Functions

Unit 12 – Data Analysis and Probability

12-1 Organizing Data Using Matrices

12-2 Frequency and Histogram

12-3 Measures of Central Tendency and Dispersion

12-4 Box and Whiskers Plots

12-5 Samples and Surveys

12-6 Permutation and Combination

12-7 Theoretical and Experimental Probability

12-8 Probability of Compound Events