

## **Algebra 2 CP**

Grade Level: 9, 10, 11, 12

Credit: 0.5 or 1.0

Prerequisite: Algebra I and Geometry

Algebra 2 CP includes the study of absolute value inequalities, factoring of polynomials, radicals, lines, linear inequalities, complex numbers, solving quadratic equations and inequalities, functions, inverse functions and compositions, variation, exponential and logarithmic functions, systems of linear equations, matrix operations, inversion, determinants, and conic section basics. Study includes both math theory and real-life application of concepts. Appropriate technology, including calculators and application software, is used regularly for instruction and assessment.

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## **Algebra 2 CP Lessons**

### **Teacher Message**

### **Lesson 1: Pre-Test**

### **Lesson 2: Absolute-Value Inequalities**

### **Lesson 3: Factoring Polynomials**

### **Lesson 4: Polynomials**

### **Lesson 5: Radicals and Roots**

### **Lesson 6: Solving Radical Equations**

### **Lesson 7: Review**

### **Lesson 8: Lines**

### **Lesson 9: Linear Inequalities**

### **Lesson 10: Complex Numbers**

### **Lesson 11: Quadratic Equations with Complex Solutions**

### **Lesson 12: More with Quadratic Equations**

### **Lesson 13: Application Problems with Quadratic Equations**

### **Lesson 14: Solving Quadratic Inequalities**

### **Lesson 15: Review**

### **Lesson 16: Functions**

### **Lesson 17: Composition of Functions**



**Lesson 18: Inverse Functions**

**Lesson 19: Direct, Inverse, and Joint Variation**

**Lesson 20: Review**

**Lesson 21: Exponential Functions vs. Quadratic Functions**

**Lesson 22: Graphing Exponential Functions**

**Lesson 23: Exponential and Logarithm Functions**

**Lesson 24: Law of Logarithms**

**Lesson 25: Graphing Logarithmic Functions**

**Lesson 26: Solving Exponential Problems**

**Lesson 27: Solving Logarithmic Equations**

**Lesson 28: Review of Exponential and Log Functions**

**Lesson 29: Systems of Linear and Quadratic Equations (Graphing)**

**Lesson 30: Systems of Linear and Quadratic Equations II**

**Lesson 31: Introduction to Matrices**

**Lesson 32: Matrix Multiplication**

**Lesson 33: Review of Systems of Linear Equations and Matrices**

**Lesson 34: Determinants: Cramer's Rule**

**Lesson 35: Introduction to Conic Sections**

**Lesson 36: Review of Determinants and Conic Sections**

**Lesson 37: Skills Assessment**

