

# Algebra II

## Number and Quantity

### **B Use complex numbers.** A2.NQ.B

- 7 Know and apply the Fundamental Theorem of Algebra. A2.NQ.B.7
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## Seeing Structure in Expressions

### **A Define and use logarithms.** A2.SSE.A

- 4 Understand why logarithmic scales are used, and use them to solve problems. A2.SSE.A.4
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## Reasoning with Equations and Inequalities

### **A Solve equations and inequalities.** A2.REI.A

- 1 Create and solve equations and inequalities, including those that involve absolute value. A2.REI.A.1
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### **B Solve general systems of equations and inequalities.** A2.REI.B

- 3 Create and solve systems of equations that may include non-linear equations and inequalities. A2.REI.B.3
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## Arithmetic with Polynomials and Rationals

### **A Perform operations on polynomials and rational expressions.** A2.APR.A

- 2 Understand the Remainder Theorem and use it to solve problems. A2.APR.A.2
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## Interpreting Functions

### **A Use and interpret functions.** A2.IF.A

- 1 Identify and interpret key characteristics of functions represented graphically, with tables and with algebraic symbolism to solve problems. A2.IF.A.1
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## Building Functions

### **A Create new functions from existing functions.** A2.BF.A

- 1 Create new functions by applying the four arithmetic operations and composition of functions (modifying the domain and range as necessary). A2.BF.A.1
  - 3 Describe the effects of transformations algebraically and graphically, creating vertical and horizontal translations, vertical and horizontal reflections and dilations (expansions/compressions) for linear, quadratic, cubic, square and cube root, absolute value, exponential and logarithmic functions. A2.BF.A.3
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## Function Modeling

### **A Use functions to model real-world problems.** A2.FM.A

- 1 Create functions and use them to solve applications of quadratic and exponential function model problems. A2.FM.A.1
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## Data and Statistics

### **A Make inferences and justify conclusions.** A2.DS.A

- 2 Determine whether a specified model is consistent with a given data set. A2.DS.A.2
  - 4 Use data from a sample to estimate characteristics of the population and recognize the meaning of the margin of error in these estimates. A2.DS.A.4
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### **B Fit a data set to a normal distribution.** A2.DS.B

- 8 Know and use the characteristics of normally distributed data sets; predict what percentage of the data will be above or below a given value that is a multiple of standard deviations above or below the mean. A2.DS.B.8