

Mathematics: Algebra II

The Real Number System N-RN

2 Rewrite expressions that include rational exponents. LC.A2: N-RN.A.2

Seeing Structure in Expressions A-SSE

3 Represent quantities and expressions that use exponents. LC.A2: A-SSE.B.3

4 Use the formula to solve real world problems such as calculating the height of a tree after n years given the initial height of the tree and the rate the tree grows each year. LC.A2: A-SSE.B.4

Arithmetic with Polynomials and Rational Expressions A-APR

2 Understand and apply the Remainder Theorem. LC.A2: A-APR.A.2

3 Find the zeros of a polynomial when the polynomial is factored. LC.A2: A-APR.B.3

4a Prove polynomial identities by showing steps and providing reasons. LC.A2: A-APR.C.4A

4b Illustrate how polynomial identities are used to determine numerical relationships. For example the polynomial identity $(a + b)^2 = a^2 + 2ab + b^2$ can be used to rewrite $(25)^2 = (20 + 5)^2 = 20^2 + 2(20 \cdot 5) + 5^2$. LC.A2: A-APR.C.4B

6 Rewrite rational expressions, $a(x)/b(x)$, in the form $q(x) + r(x)/b(x)$ by using factoring, long division, or synthetic division. LC.A2: A-APR.D.6

Creating Equations A-CED

1 Translate a real-world problem into a one variable linear equation. LC.A2: A-CED.A.1

Reasoning with Equations and Inequalities A-REI

4 Solve quadratic equations in one variable by simple inspection, taking the square root, factoring, and completing the square. LC.A2: A-REI.B.4

6a Solve systems of equations using the elimination method (sometimes called linear combinations). LC.A2: A-REI.C.6A

6b Solve a system of equations by substitution (solving for one variable in the first equation and substitution it into the second equation). LC.A2: A-REI.C.6B

6c Solve systems of equations using graphs. LC.A2: A-REI.C.6C

7 Solve a system containing a linear equation and a quadratic equation in two variables graphically and symbolically. LC.A2: A-REI.C.7

11 Explain why the intersection of $y = f(x)$ and $y = g(x)$ is the solution of the equation $f(x) = g(x)$ for any combination of linear or exponential. Find the solution(s) by: Using technology to graph the equations and determine their point of intersection, Using tables of values, or Using successive approximations that become closer and closer to the actual value. LC.A2: A-REI.D.11

**Interpreting Categorical
and Quantitative
Data** S-ID

4 Use descriptive stats; range, median, mode, mean, outliers/gaps to describe the data set. LC.A2: S-ID.A.4

6a Represent data on a scatter plot to describe and predict. LC.A2: S-ID.B.6A

6b Select an appropriate statement that describes the relationship between variables. LC.A2: S-ID.B.6B

**Interpreting Categorical
and Quantitative
Data** S-IC

1 Determine what inferences can be made from statistics. LC.A2: S-IC.A.1

6a Make or select an appropriate statement(s) about findings. LC.A2: S-IC.B.6A

6b Apply the results of the data to a real world situation. LC.A2: S-IC.B.6B
