

## What is it we expect students to learn? Identifying Essential Standards

Grade Level: 9-12 Subject: Algebra 2

Team Members: Martha Ogness, Lisa Kunst

1. Standard*/Description	2. Example/Rigor	3. Prior Skills Needed	4. Common Assessment	5. When Taught?
<b>1.0</b> Student will be able to solve any equation, including quadratic equations.	Solve: $6x^2 - 2x + 2 = 4x^2 + x$	Simplifying expressions Factoring Simplifying radicals	Unit Test Formative Assessment	Term 1 Sept Term 2 Feb
<b>8.0, 9.0, 10.0</b> Students will be able to solve and graph quadratic equations and inequalities.	Graph: $y \leq -x^2 + 4x + 2$	Evaluating expressions	Unit Test Formative Assessment	Term 1 Oct Term 2 March
<b>5.0, 6.0</b> Students will be able to perform operations with complex numbers.	Simplify: $\frac{9 + 2i}{1 - 4i}$	Operations with integers	Unit Test Formative Assessment	Term 1 Oct Term 2 March
<b>11.0, 13.0, 14.0</b> Students will have an understanding of logarithms and be able to solve logarithmic equations.	Solve: $2(3)^{2x} = 5$	Apply properties of exponents	Unit Test Formative Assessment	Term 1 Nov Term 2 April
<b>12.0, 10.0</b> Students will be able to solve and graph exponential equations.	Graph: $y = 2(3)^{x-1} + 5$	Apply properties of exponents	Unit Test Formative Assessment	Term 1 Nov Term 2 April
<b>7.0</b> Students will be able to perform operations and graph with rational functions.	Simplify: $\frac{x-1}{x-2} - \frac{x-4}{x+1}$	Perform operations with numeric fractions	Unit Test Formative Assessment	Term 1 Nov Term 2 April
<b>16.0</b> Students will be able to graph conic sections.	Graph: $\frac{(y-2)^2}{9} - \frac{(x+1)^2}{4} = 1$	Shift graphs using $(h,k)$ formulas Complete the square	Unit Test Formative Assessment	Term 1 Dec Term 2 May
<b>18.0, 19.0</b> Students will be able use the fundamental counting principle, combinations, and permutations to find probabilities.	Find the probability of drawing a face card (K, Q, J), then a 2 from a standard deck of 52 cards, without replacement.	Evaluate factorials	Unit Test Formative Assessment	Term 1 Dec Term 2 May
<b>20.0</b> Students will be able to use the binomial theorem to expand powers of binomial expressions.	Find the coefficient of $y^4$ in the expansion of $(y^2 - 5)^3$ .	Evaluate combinations	Unit Test Formative Assessment	Term 1 Dec Term 2 May

\*Aligned to CA State Standards