

Spanish Fork High School

2014/2015 Math 1010 "I can" Statements

Unit 1: Linear Functions

- I can find the slope of a line
- I can graph a line
- I can find the equation of a line
- I can solve linear equations and inequalities
- I can solve absolute value equations and inequalities and graph using transformations
- I can write a linear equation
- I can find a linear regression using the formula or technology
- I can build linear models

Unit 2: Systems of Linear Equations and Inequalities

- I can solve systems graphically and algebraically using substitution and elimination
- I can solve systems of two equations in two variables
- I can solve 3x3 linear systems
- I can solve problems using linear programming
- I can solve mixture and distance, rate, time problems

Unit 3: Quadratic Functions

- I can graph quadratics using transformations from vertex form
- I can find the domain and range of a quadratic function and its inverse, find end behavior and identify its symmetry.
- I can convert between standard, intercept, and vertex form
- I can solve a quadratic using factoring and the quadratic formula
- I can find the maximum or minimum of a quadratic by finding the vertex
- I can maximize area using a quadratic function

Unit 4: Polynomial Functions

- I can find domain, range, end behavior and zeros of a polynomial function
- I can find zeros and multiplicities and graph polynomial functions
- I can perform Polynomial Long Division and Synthetic Division
- I can find roots of polynomial functions
- I can maximize volume using polynomials

Unit 5: Rational Functions

- I can find domain, range, end behavior, intercepts, and asymptotes of a rational function

- I can graph rational functions by hand
- I can solve rational equations
- I can solve polynomial and rational inequalities

Unit 6: Radicals & Rational Exponents

- I can simplifying expressions containing radicals and exponents
- I can simplify expressions containing rational exponents
- I can add, subtract, multiply, and divide with radicals
- I can evaluate radical functions
- I can find the domain, range, and graph square root and cube root functions
- I can solve equations with radicals
- I can simplify expressions containing imaginary numbers

Unit 7: Exponential & Logarithmic Functions

- I can graph exponential functions and identify domain, range, and asymptotes
- I can model real situations using exponential functions
- I can graph exponential functions with base “e”
- I can find exponential growth and decay rates
- I can convert between exponential and logarithmic form
- I can find the inverse of an exponential function and graph a logarithmic function
- I can use properties of logarithms to simplify a logarithmic expression
- I can solve exponential equations
- I can solve logarithmic equations
- I can solve problems involving finance, radioactive decay, and Newton’s Law of Cooling

Unit 8: Trigonometry

- I can solve right triangles using right triangle trigonometry
- I can find missing sides and angles in special right triangles
- I can solve triangles using the Law of Sines and Cosines
- I can find the area of triangles using trigonometry and Heron’s Formula
- I can convert between radians and degrees
- I can use the circular definition of the trigonometric functions to solve problems
- I can find the trigonometric functions of any angle using reference triangles or the unit circle
- I can graph sine, cosine, tangent and their reciprocals and transformations of them

Unit 9: Conic Sections

- I can find find the vertex, focus, directrix and equation of a parabola and sketch its graph
- I can find the center, radius, and equation of a circle and sketch its graph
- I can find the center, vertices, foci, and equation of an ellipse and sketch its graph

- I can find the center, vertices, foci, asymptotes, and equation of a hyperbola and sketch its graph
- I can convert an equation between general and standard form and identify the type of conic

Unit 10: Sequences & Series

- I can determine if a sequence is arithmetic, geometric, or neither
- I can find the n th term and the n th partial sums of arithmetic and geometric sequences
- I can find the sum of an infinite geometric series, if possible
- I can use sigma notation to find a sum