Trigonometry

T-1	**Angles in Standard Position**	4.1 (Weighting – 1)

Students will demonstrate an understanding of angles in standard position, expressed in degrees and radians.

T-2, T-3	**Unit Circle, Trigonometric Ratios**	4.2, 4.3 (Weighting – 3)

Students will develop and apply the equation of the unit circle and solve problems using the six trigonometric ratios for angles expressed in radians and degrees

T-4	**Graphing Trigonometric Functions**	5.1, 5.2, 5.3, 5.4 (Weighting – 4)

Students will graph and analyze the trigonometric functions sine, cosine, and tangent to solve problems

T-5	**Trigonometric Equations**	4.4, 5.4 (Weighting – 4)

Students will solve algebraically first and second degree trigonometric equations with the domain expressed in degrees and radians

T-6	**Trigonometric Identities**	6.1, 6.2, 6.3, 6.4 (Weighting – 4)
	Students will prove trig identities, using • Reciprocal identities • Quotient identities • Pythagorean Identities • Sum/difference, double-angle identities	

Relations and Functions

R-1	**Operations and Compositions of Functions**	10.1, 10.2, 10.3 (Weighting – 3)
	Students will demonstrate an understanding of operations on, and compositions of, functions.	

R-2, R-3, R-4, R-5	**Translations, Compressions and Stretches, Applications, Reflections**	1.1, 1.2, 1.3 (Weighting – 5)

Students will

- demonstrate an understanding of horizontal and vertical translations on the graphs of functions and their related equations.
- demonstrate an understanding of horizontal and vertical compressions on the graphs of functions and their related equations.
- sketch the graph of the function $y - k = af(b(x - h))$
- write the equation of a function, given its graph which is a translation, compression or stretch of the function $y = f(x)$
- demonstrate an understanding of reflections through the x-axis, y-axis and the line $y = x$

R-6	**Inverses**	1.4 (Weighting – 1)

Students will demonstrate an understanding of inverses of relations.

R-7/8	**Understanding Logarithms/ Laws of Logarithms**	8.1, 8.3 (Weighting – 3)

Students will

- explain the relationship between logarithms and exponents
- express a logarithmic expression as an exponential expression and vice versa
- determine the both the exact and estimated value of a logarithm
- demonstrate an understanding of the product, quotient, and power laws of logarithms

R-9	**Graphing Logarithmic and Exponential Functions**	7.2, 8.2 (Weighting – 2)

Students will graph and analyze logarithmic and exponential functions

R-10	**Exponential and Logarithmic Equations and Problems**	7.3, 8.4 (Weighting – 5)

Students will solve exponential equations in which bases are powers of one another
Students will solve exponential equations in which bases are not powers of one another
Students will determine the solution of a logarithmic equation
Students will solve problems involving logarithms and exponentials

R-11	**Factoring Polynomials**	3.2, 3.3 (Weighting – 2)
Students will factor polynomials of degree greater than 2		

R-12	**Graphing Polynomial Functions**	3.1, 3.4 (Weighting – 3)
Students will graph and analyze polynomial functions		

R-13	**Graphing Radical Functions**	2.1, 2.2, 2.3 (Weighting – 4)
Students will graph and analyze radical functions		

R-14	**Graphing Rational Functions**	9.1, 9.2, 9.3 (Weighting – 4)
Students will graph and analyze rational function		

Permutations, Combinations and Binomial Theorem

P-1/2/3	Fundamental Counting Principle, Permutations and Combinations	11.1, 11.2 (Weighting – 3)
Students will apply the fundamental counting principle to solve problems Students will determine the number of permutations of n elements taken r and a time to solve problems. Students will determine the number of combinations of n different elements taken r and a time to solve problems.		

P-4	Binomial Theorem	11.3 (Weighting – 2)
Students will expand powers of binomial in a variety of ways		
