

Trigonometry

State Standard Number	State Standard Area/Description	Unit Name	Course Topic Description
T.1	The student, given a point other than the origin on the terminal side of an angle, will use the definitions of the six trigonometric functions to find the sine, cosine, tangent, cotangent, secant, and cosecant of the angle in standard position. Trigonometric functions defined on the unit circle will be related to trigonometric functions defined in right triangles.	Trigonometric Ratios	Trigonometric Ratios and Inverse Trigonometric Relations
T.2	The student, given the value of one trigonometric function, will find the values of the other trigonometric functions, using the definitions and properties of the trigonometric functions.	Trigonometric Ratios	Trigonometric Ratios and Inverse Trigonometric Relations
T.3	The student will find, without the aid of a calculator, the values of the trigonometric functions of the special angles and their related angles as found in the unit circle. This will include converting angle measures from radians to degrees and vice versa.	Trigonometric Ratios	The Unit Circle
T.4	The student will find, with the aid of a calculator, the value of any trigonometric function and inverse trigonometric function.	Trigonometric Ratios	Trigonometric Ratios and Inverse Trigonometric Relations
T.5	The student will verify basic trigonometric identities and make substitutions, using the basic identities.	Trigonometric Laws and Identities	Trigonometric Laws and Identities
T.6	The student, given one of the six trigonometric functions in standard form, will		
T.6.a	state the domain and the range of the function;	Graphing Trigonometric Functions	Graphing Trigonometric Functions
T.6.b	determine the amplitude, period, phase shift, vertical shift, and asymptotes;	Graphing Trigonometric Functions	Transformations of Trigonometric Functions

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T.6.c	sketch the graph of the function by using transformations for at least a two-period interval; and	Graphing Trigonometric Functions	Transformations of Trigonometric Functions
T.6.d	investigate the effect of changing the parameters in a trigonometric function on the graph of the function.	Graphing Trigonometric Functions	Transformations of Trigonometric Functions
T.7	The student will identify the domain and range of the inverse trigonometric functions and recognize the graphs of these functions. Restrictions on the domains of the inverse trigonometric functions will be included.	Graphing Trigonometric Functions	Graphing Trigonometric Functions
T.8	The student will solve trigonometric equations that include both infinite solutions and restricted domain solutions and solve basic trigonometric inequalities.	Trigonometric Laws and Identities	Trigonometric Identities and Equations
T.9	The student will identify, create, and solve real-world problems involving triangles. Techniques will include using the trigonometric functions, the Pythagorean Theorem, the Law of Sines, and the Law of Cosines.	Trigonometric Laws and Identities	Covered throughout unit