

SUBJECT	Algebra I	Geometry	Math of Models	Algebra II	Pre-Calculus
Ideas students are learning	Students will learn about linear inequalities and systems.	Students will learn about the properties of similar triangles and will find areas of polygons, circles and composite figures.	Students will learn about polynomial operations and quadratics.	Students will review radical functions, use square root functions to solve equations/inequalities and classify and solve systems.	Students will solve real world problems using right triangle trig., solve situations and problems that involve linear and angular speed/velocity, and use the context of the problem to set up and solve equations involving trig. ratios.
Skills	Students will investigate methods for solving linear inequalities using concrete models, graphs, technology and properties of equality and solve systems of equations graphically.	Students will use properties of similar triangles to find indirect measurements and will identify and use the correct formulas to solve problems involving area.	Students will use the box method to multiply two binomials and determine the factors of Quadratic Trinomials.	Students use multiple representations of square root functions, transform radical functions, classify and solve systems of linear equations and inequalities.	Students will explore patterns and make conjectures about the ratios between similar right triangles, convert between radian and degree measures, and apply concepts of trigonometry to solve real world problems
Work and assignments to look for	Look for work that shows various representations of inequalities and solve systems of equations using multiple methods.	Look for work where students are finding segment lengths, using scale drawings and finding areas of composite and irregular shapes.	Look for work that asks students to apply their knowledge of the box method and to represent a quadratic in three different ways: standard, factored and vertex form.	Look for work that asks students to apply their knowledge such as the I was going how fast activity or The Country Feed Store activity.	Look for work that asks students to compare the characteristics of all the trigonometric functions.
Questions Parents Can Ask	Ask your student how inequalities represent real-world situations. Also ask what does the solution of a system represent.	Ask your student to explain how they know when triangles are similar. Also, ask how they can find the area of an irregular shape.	Ask students how they can use a graphing calculator to find a trinomial that is equivalent to a given product of binomials.	Ask your student what are some of the techniques involved in solving square root functions? Also ask how does the graph of a system of inequalities help us understand real situation.	Ask your student how are sine, cosine and tangent relationships defined for right triangles. Also, what is the relationship between the Pythagorean Theorem and the unit circle.
Special Notes	Systems of equations are problems that can be solved using two separate equations containing common variables. Inequalities include the vocabulary/symbols for greater than and less than: $<$ , $>$ , $<=$ , $>=$	Triangles are similar if they have the same angle measurements and/or proportional measurements.	Polynomials can be classified by degree. Polynomials with an exponent of two are quadratic.	The answer to square root problems can be positive and/or negative depending on the context of the problem.	Sine, cosine and tangent are defined as ratios of sides of right triangles.