

Chapter (Strand)	Learning Goal(s)	Success Criteria
1 – Systems of Linear Equations (Analytic Geometry - AG)	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>Create and solve a linear system of equations using a variety of methods. (AG1)</li> </ul>	<p>I can:</p> <ul style="list-style-type: none"> <li>Write equations to represent a linear system given a real life situation.</li> <li>Solve a linear system of equations using substitution and check my solution graphically and algebraically.</li> <li>Solve a linear system of equations using elimination and check my solution graphically and algebraically.</li> <li>Interpret my solutions, with respect to analytic geometry and real world scenarios.</li> </ul>
2 – Analytic Geometry: Line Segments and Circles (AG)	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>Solve problems that relate to the properties of lines and line segments by applying my knowledge of analytic geometry. (AG 2)</li> <li>Verify geometric properties of triangles and quadrilaterals by applying my knowledge of analytic geometry. (AG 3)</li> </ul>	<p>I can:</p> <ul style="list-style-type: none"> <li>Explain the midpoint formula, and use it to solve problems; (AG 2)</li> <li>Explain the formula for length of a line segment, and use it to solve problems; (AG 2)</li> <li>Develop the equation of a circle centered at the origin, and use it to find unknown values; (AG 2)</li> <li>Solve problems that combine the slope, midpoint, and length formulas (ex/ finding equations of perpendicular bisectors, medians, and altitudes, the distance from a point to a line, etc.) (AG 2)</li> <li>Use a multi – step strategy to verify a geometric property (ex/ verify that two diagonals bisect at right angles, etc.) (AG 3)</li> </ul>
3 – Graphs of Quadratic Relations (Quadratic Relationships – QR)	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>Explain properties of quadratic relationships, and relate the various forms of quadratic relations. (QR 1)</li> <li>Solve quadratic equations and interpret their solutions. (QR 3)</li> <li>Apply my understanding of quadratic relations to a variety of problem solving situations. (QR 4)</li> </ul>	<p>I can:</p> <ul style="list-style-type: none"> <li>Graph data that represents a quadratic relationship and draw a curve of best fit. (QR 1)</li> <li>Recognize the equation of a quadratic relationship in standard form (<math>y = ax^2 + bx + c</math>), and understand that its graph forms a parabola. (QR 1)</li> <li>Use a table of values and second differences to identify quadratic relationships. (QR 1)</li> <li>Identify the key features of a graph of a parabola (vertex, zeros). (QR 1)</li> <li>Compare the graphs of exponential (<math>y = 2^x</math>) and quadratic (<math>y = x^2</math>) functions. (QR 1)</li> <li>Expand and simplify second-degree polynomial equations (distributive property, FOIL); (QR 3)</li> <li>Determine the zeros and maximum or minimum value for a quadratic relation from its graph or equation. (QR 4)</li> </ul>

4 – Factoring Algebraic Expressions (QR)	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>Solve quadratic equations and interpret their solutions. (QR 3)</li> <li>Apply my understanding of quadratic relations to a variety of problem solving situations. (QR 4)</li> </ul>	<p>I can:</p> <ul style="list-style-type: none"> <li>Factor polynomial expressions involving common factors, trinomials, difference of squares and perfect squares. (QR 3)</li> <li>Sketch the graph of a quadratic relation from its equations using zeros and the vertex. (QR 3)</li> <li>Solve problems related to real world situations that involve quadratic relations by factoring an expression of the form <math>ax^2+bx+c</math>. (QR 4)</li> </ul>
5 – Applying Quadratic Models (QR)	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>Transform the graph of <math>y = x^2</math> when given an equation in standard, factored, or vertex form. (QR 2)</li> <li>Apply my understanding of quadratic relations to a variety of problem solving situations. (QR 4)</li> </ul>	<p>I can:</p> <ul style="list-style-type: none"> <li>Describe the effect of <math>a</math>, <math>h</math>, and <math>k</math> on the graph of <math>y = x^2</math>. (QR 2)</li> <li>Graph <math>y = a(x - h)^2 + k</math> by applying transformations to <math>y = x^2</math>. (QR 2)</li> <li>Determine an equation of a parabola in vertex form given its graph, a list of transformation, or points on the graph. (QR 2)</li> <li>Determine the zeros and the maximum or minimum value of a quadratic equation by using algebraic techniques or its graph. (QR 4)</li> <li>Solve problems arising from real life situations that can be modeled by quadratic relations. (QR 4)</li> </ul>
6 – Quadratic Equations (QR)	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>Solve quadratic equations and interpret their solutions; (QR 3)</li> <li>Apply my understanding of quadratic relations to a variety of problem solving situations. (QR 4)</li> </ul>	<p>I can:</p> <ul style="list-style-type: none"> <li>Solve quadratic equations using a variety of techniques (rearranging from vertex form, factoring, quadratic formula). (QR 3)</li> <li>Write a quadratic relation in standard form in vertex form by completing the square. (QR 3)</li> <li>Interpret real and non – real roots as solutions of quadratic equations. (QR 3)</li> <li>Solve problems arising from real life situations that can be modeled by quadratic equations. (QR 4)</li> </ul>
7 – Similar Triangles and Trigonometry (Trigonometry - T)	<p>I will be able to:</p> <ul style="list-style-type: none"> <li>Use ratios and proportions to identify and describe similar triangles, and solve problems related to similarity. (T 1)</li> <li>Use the Pythagorean theorem and the primary trigonometric ratios to solve problems involving right triangles. (T 2)</li> </ul>	<p>I can:</p> <ul style="list-style-type: none"> <li>Describe and compare the concepts of similarity and congruence. (T 1)</li> <li>Solve problems involving similarity. (T 1)</li> <li>Explain and define the primary trigonometric ratios. (T 2)</li> <li>Determine the measures of unknown sides and angles in a right triangle using the primary trig ratios and the Pythagorean theorem. (T 2)</li> <li>Solve problems involving right triangles. (T 2)</li> </ul>

8 – Acute Triangle Trigonometry	I will be able to: <ul style="list-style-type: none"> <li>Use the sine and cosine laws to solve problems involving acute triangles. (T 3)</li> </ul>	I can: <ul style="list-style-type: none"> <li>Explain when it is appropriate to use the sine and cosine laws. (T 3)</li> <li>Use the sine and cosine laws to solve for unknown sides and angles in acute triangles. (T 3)</li> <li>Solve problems involving acute triangles. (T 3)</li> </ul>
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Your grade will be determined based on your level of mastery of these Learning Goals. Test questions will be categorized by learning goals, so you should always know what you need to be able to do! You will still see a variety of question types (knowledge, communication, application, and thinking), but you will be assessed specifically on your ability to meet the goals of the unit, and the curriculum. The weighting of each learning goal is listed in the table below.

Learning Goal (%)		
Analytic Geometry	Quadratic Relations	Trigonometry
AG1 (12)	QR1 (8)	T1 (4)
AG2 (10)	QR2 (12)	T2 (8)
AG3 (8)	QR3 (15)	T3 (8)
	QR4 (15)	

These Learning Goals reflect the overall expectations in the curriculum document, so if you can do all of that, you are ready for your next math course! You will be provided with opportunities to demonstrate improved learning through reassessment of learning goals.