

## District 2853

Month	Content	Performance Standards Addressed Grades 9-11 Grades 11-12	Skills for Student Achievement	Assessment	
September	Functions	Mathematical Reasoning - Benchmarks #1, #2, #3, Computation & Operation - Benchmarks #1, #5, #6 Patterns and Functions - Benchmarks #4, #5 Algebra - Benchmarks #1, #5, #7, #9, #10	Algebra - Benchmark #16	<ul style="list-style-type: none"><li>Evaluate expressions &amp; formulas</li><li>Use four operations to write expressions</li><li>Determine whether a relation is a function</li><li>Determine domain and range of a function</li><li>Use functions to solve real-world problems</li><li>Solve and check linear functions</li><li>Use linear functions to solve real-world problems</li><li>Rewrite formulas</li><li>Evaluate sequences</li><li>Write recursive and explicit formulas for sequences</li></ul>	Test/Quiz Daily Formative          <b>Identify domain and range of functions</b>
October	Variations and Graphs	Computation & Operation - Benchmark #6 Patterns and Functions - Benchmark #1, #3, #4, #5 Geometry - Benchmark #5	Algebra - Benchmark #11	<ul style="list-style-type: none"><li>Translate direct variation and inverse variation language into formulas</li><li>Solve direct and inverse variation problems</li><li>Use the fundamental theorem of variation</li><li>Find slope</li><li>Graph variation equations</li><li>Identify variation equations from graphs</li><li>Fit an appropriate model to data</li></ul>	Test/Quiz Daily Formative          <b>Use linear models to interpret data</b>
November to Mid-December	Linear Functions	Geometry - Benchmark #5 Computation & Operation - Benchmark #6 Patterns and Functions - Benchmarks #4, #5 Algebra - Benchmarks #3, #12		<ul style="list-style-type: none"><li>Determine the slope and y-intercept of a line</li><li>Determine the equation of a line</li><li>Graph and interpret graphs of linear functions</li><li>Recognize properties of linear functions</li><li>Evaluate and find recursive and explicit formulas for arithmetic sequences</li></ul>	Test/Quiz Daily Formative          <b>Use equations and graphs of linear functions to solve problems</b>
December	Matrix	Geometry - Benchmark #6		<ul style="list-style-type: none"><li>Use matrix to store data</li><li>Graph figures using matrix</li><li>Perform operations with matrix</li><li>Use matrix to achieve</li></ul>	Test/Quiz Daily Formative

				transformation of geometric figures · Determine equations of lines perpendicular to given lines	Use Matrices to solve problems
January	Systems	Algebra - Benchmarks #7, #11	Algebra - Benchmark #1	· Solve and graph linear inequalities · Solve systems of equations · Find the determine and the inverse of a square matrix · Use matrix to solve systems of equations · Graph linear inequalities · Solve systems of inequalities	Test/Quiz Daily Formative  Semester Final  Use inequalities to solve problems
February	Quadratic Functions	Patterns and Functions - Benchmark #1 Algebra - Benchmarks #2, #8		· Solve quadratic equations by graphing, completing the square and using the quadratic formula · Graph quadratic functions · Use quadratic equations to solve problems · Graph absolute value functions · Graph and interpret parabolas · Transform quadratic equations from vertex form to standard form · Fit a quadratic model to data · Perform operations with complex numbers · Determine the nature of the solutions of an equation · Determine the number of x-intercepts of a graph	Test/Quiz Daily Formative       Use quadratic equations to solve problems. Connect quadratic equations and graphs to real world problems
March	Quadratic Functions and Powers	Patterns and Functions - Benchmarks #1, #3, #4 Algebra - Benchmarks #6, #8	Algebra - Benchmarks #5, #6, #7, #13	· Graph power functions · Simplify expressions using properties of exponents · Simplify expressions with negative exponents · Solve real-world problems which can be modeled by expressions with nth powers · Describe geometric sequences explicitly and recursively · Solve equations with negative exponents	Test/Quiz Daily Formative    Use power and root functions to solve Problems

				· Solve equations with rational exponents	
April	· Inverses and Radicals	Computation & Operation - Benchmark #4	Algebra - Benchmarks #4, #9, #15	· Find values and rules for composites of functions · Apply properties of inverse relations and functions · Make and interpret graphs of inverses of relations · Evaluate radicals · Simplify expressions with radicals · Solve equations with radicals	Test/Quiz Daily Formative  <b>Interpret inverse functions and their graphs</b>
May	· Polynomials	Algebra - Benchmark #1	Algebra - Benchmarks #3, #10	· Graph polynomial functions · Multiply polynomials · Factor polynomials · Find factors and zeros of polynomials	Test/Quiz Daily Formative Semester Final