

## Grade 10 Applied Course Overview

### Mathematical Processes

Unit 1 Similar Triangles	Unit 2 Trigonometry	Unit 3 Equations of Lines	Unit 4 Linear Systems	Unit 5 Graphical Representation of Quadratic Relations	Unit 6 Algebraic Representations of Quadratic Relations	Unit 7 Measurement
<ul style="list-style-type: none"> <li>• Ratios and Proportions Review</li> <li>• Metric Conversions</li> <li>• Similar Triangles</li> <li>• Solving Problems Involving Similar Triangles</li> </ul>	<ul style="list-style-type: none"> <li>• Primary Trigonometric Ratios for Right Triangles</li> <li>• Solving Problems Involving Trigonometric Ratios and Pythagorean Theorem</li> </ul>	<ul style="list-style-type: none"> <li>• Linear Relations Review</li> <li>• Slope Y-Intercept Form</li> <li>• Properties of Lines Connected to Slope</li> <li>• Graphing Lines using Slope and Y-Intercept</li> <li>• Solving One-Variable Equations</li> <li>• Determining the Equation of a Linear Relationship</li> <li>• X-and Y-Intercepts</li> <li>• Rearranging Equations</li> </ul>	<ul style="list-style-type: none"> <li>• Point of Intersection</li> <li>• Substitution Method</li> <li>• Elimination Method</li> <li>• Solve Problems Involving Linear Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Curve of Best Fit and Second Differences</li> <li>• Key Features of Parabolic Graphs</li> <li>• Solving Problems Interpreting Curves of Best Fit</li> </ul>	<ul style="list-style-type: none"> <li>• Expanding and Simplifying Second Degree Polynomial Expressions</li> <li>• Factoring Trinomials</li> <li>• Factoring Quadratics with a Common Variable</li> <li>• Factoring Difference of Two Squares</li> <li>• Graphing Parabolas in Standard and Factored Form</li> <li>• Solving Problems Involving Quadratic Equations</li> </ul>	<ul style="list-style-type: none"> <li>• Using Imperial and Metric Systems to Solve Measurement Problems</li> <li>• Surface Area of 3D Figures</li> <li>• Solving Problems Involving the Volume of 3D Figures</li> <li>• Solving for a Variable in Measurement Problems</li> </ul>

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Unit #	Unit Name	Overall Expectations Students will:	Approximate Number of Days
1	Similar Triangles	<ul style="list-style-type: none"> <li>• Use their knowledge of ratio and proportion to investigate similar triangles and solve problems related to similarity (MTV.01)</li> <li>• Manipulate and solve algebraic equations, as needed to solve problems (LRV.01)</li> </ul>	10
2	Trigonometry	<ul style="list-style-type: none"> <li>• Solve problems involving right triangles, using the primary trigonometric ratios and the Pythagorean theorem (MTV.02)</li> <li>• Manipulate and solve algebraic equations, as needed to solve problems (LRV.01)</li> </ul>	10
3	Equations of Lines	<ul style="list-style-type: none"> <li>• Graph a line and write the equation of a line from given information (LRV.02)</li> <li>• Manipulate and solve algebraic equations, as needed to solve problems (LRV.01)</li> </ul>	13
4	Linear Systems	<ul style="list-style-type: none"> <li>• Solve systems of two linear equations, and solve related problems that arise from realistic situations (LRV.03)</li> </ul>	11
5	Graphical Representations of Quadratic Relations	<ul style="list-style-type: none"> <li>• Identify characteristics of quadratic relations (QRV.02)</li> <li>• Solve problems by interpreting graphs of quadratic relations (QRV.03)</li> <li>• Solve systems of two linear equations, and solve related problems that arise from realistic situations (LRV.03)</li> </ul>	7
6	Algebraic Representations of Quadratic Relations	<ul style="list-style-type: none"> <li>• Manipulate algebraic expressions, as needed to understand quadratic relations (QRV.01)</li> <li>• Identify characteristics of quadratic relations (QRV.02)</li> <li>• Solve problems by interpreting graphs of quadratic relations (QRV.03)</li> </ul>	13
7	Measurement	<ul style="list-style-type: none"> <li>• Solve problems involving the surface areas and volumes of three-dimensional figures, and use the imperial and metric systems of measurement (MTV.03)</li> <li>• Manipulate and solve algebraic equations, as needed to solve problems (LRV.01)</li> </ul>	18