

## CURRICULUM MAP FOR ALGEBRA I GRADES 9-10 (High School)

(Suggested timeline for introducing content and process standards - some overlap all four quarters)

GLEs/GSEs NCTM Standards	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
<b>1. Numbers Sense and Operations (content)</b>	<ul style="list-style-type: none"> <li>• Rational numbers 1.1.1</li> <li>• Expression Evaluation 1.2.1</li> <li>• Real world problems 1.2.2</li> <li>• Number lines and inequalities 1.1.2</li> <li>• Properties</li> <li>• Ratios, proportion 1.2.1</li> <li>• Mental computation 1.3.1</li> <li>• Estimation 1.4.1</li> </ul> <p style="color: red;">Required problem</p> <ul style="list-style-type: none"> <li>• p. 68 #29 1.1.4</li> </ul>	<ul style="list-style-type: none"> <li>• Rational numbers 1.1.1</li> <li>• Expression Evaluation 1.2.1</li> <li>• Real world problems 1.2.2</li> </ul> <ul style="list-style-type: none"> <li>• Ratios, proportion 1.2.1</li> <li>• Mental computation 1.3.1</li> <li>• Estimation 1.4.1</li> <li>• Properties of numbers 1.5.1</li> </ul> <p style="color: red;">Required problem</p> <ul style="list-style-type: none"> <li>• Ski Trip #2 1.2.4</li> </ul>	<ul style="list-style-type: none"> <li>• Rational numbers 1.1.1</li> <li>• Expression Evaluation 1.2.1</li> <li>• Real world problems 1.2.2</li> </ul> <ul style="list-style-type: none"> <li>• Ratios, proportion 1.2.1</li> <li>• Mental computation 1.3.1</li> <li>• Estimation 1.4.1</li> <li>• Properties of numbers 1.5.1</li> </ul> <p style="color: red;">Required problems</p> <ul style="list-style-type: none"> <li>• <b>Merrill Algebra I Applications and connections (Glencoe) Riverdale page 64 # 49 (1.3.2)</b></li> <li>• Princess Deli 1.1.2</li> </ul>	<ul style="list-style-type: none"> <li>• Rational numbers 1.1.1</li> <li>• Expression Evaluation 1.2.1</li> <li>• Real world problems 1.2.2</li> <li>• Utilize technology 1.1.3</li> </ul> <ul style="list-style-type: none"> <li>• Mental computation 1.3.1</li> <li>• Properties of numbers 1.5.1</li> </ul> <p style="color: red;">Required problem</p>
<b>2. Geometry and Measurement</b>	<ul style="list-style-type: none"> <li>• Formulas for regular shapes 2.2.2</li> <li>• Units of measure 2.5.1</li> </ul> <p style="color: red;">Required problem</p> <ul style="list-style-type: none"> <li>• Clover Leaf # 3</li> </ul>	<ul style="list-style-type: none"> <li>• Units of measure 2.5.1</li> </ul> <p style="color: red;">Required problem</p> <ul style="list-style-type: none"> <li>• World Records #7 2.5.3</li> </ul>	<ul style="list-style-type: none"> <li>• Perimeter, area, circumference 2.4.1</li> <li>• Units of measure 2.5.1</li> </ul> <p style="color: red;">Required problems</p> <ul style="list-style-type: none"> <li>• Marketing #5 2.4.3</li> <li>• Shaded Region # 6 2.4.3</li> </ul>	<ul style="list-style-type: none"> <li>• Pythagorean Theorem 2.2.1</li> <li>• Units of measure 2.5.1</li> <li>• Midpoint and distance 2.6.1</li> </ul> <p style="color: red;">Required problems</p> <ul style="list-style-type: none"> <li>• Sailing #4 2.2.3</li> <li>• Two Cities # 8 2.6.3</li> </ul>

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<b>3. Functions and Algebra</b>		<ul style="list-style-type: none"> <li>• Patterns 3.1.1</li> <li>• Solving equalities 3.4.1</li> <li>• Algebraic expressions 3.3.1</li> </ul> <p style="color: red; margin-top: 5px;">Required problem</p> <ul style="list-style-type: none"> <li>• Geology #9 3.1.3</li> </ul>	<ul style="list-style-type: none"> <li>• Linear and non linear relations 3.2.1</li> <li>• Solving equalities 3.4.1</li> <li>• Factoring 3.3.1</li> </ul> <p style="color: red; margin-top: 5px;">Required problems</p> <ul style="list-style-type: none"> <li>• Pool Party #12 3.3.3</li> <li>• Perimeter, Area and Circumference 2.4.1</li> </ul>	<ul style="list-style-type: none"> <li>• Linear and non linear relations 3.2.1</li> </ul> <p style="color: red; margin-top: 5px;">Required problems</p> <ul style="list-style-type: none"> <li>• Throwing Ball # 11 3.2.5</li> <li>• Thunderstorm #10 3.2.5</li> </ul>
<b>4. Data, Statistics, and Probability (content)</b>	<ul style="list-style-type: none"> <li>• Analyzing data 4.2.1</li> <li>• Sets of Data 4.3.1</li> <li>• Generating hypothesis 4.6.1</li> </ul> <p style="color: red; margin-top: 5px;">Required problem</p> <ul style="list-style-type: none"> <li>• Coach's Dilemma #18 4.2.3</li> </ul>	<ul style="list-style-type: none"> <li>• Technology 4.4.2</li> </ul> <p style="color: red; margin-top: 5px;">Required problem</p> <ul style="list-style-type: none"> <li>• TV Shows # 19 4.4.2</li> </ul>	<ul style="list-style-type: none"> <li>• Scatter Plot 4.1.1</li> </ul> <p style="color: red; margin-top: 5px;">Required problem</p> <ul style="list-style-type: none"> <li>• Dice Game #20 4.4.2</li> </ul>	<ul style="list-style-type: none"> <li>• Charts, graphs histograms 4.1.1</li> </ul> <p style="color: red; margin-top: 5px;">Required problems</p> <ul style="list-style-type: none"> <li>• Alisha's Allowance # 15,</li> <li>• Librarian's Conclusion #16</li> </ul>

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<b>5. Problem Solving, Reasoning and Proof</b> (process)	<ul style="list-style-type: none"> <li>• Problem-solving strategies 5.1.1</li> <li>• Logical conclusions and generalizations 5.2.1</li> <li>• Mathematical conjectures and arguments 5.2.2</li> <li>• Validity of a mathematical solution 5.2.3</li> <li>• Mathematical reasoning in other disciplines. 5.2.4</li> </ul>	<ul style="list-style-type: none"> <li>• Problem-solving strategies 5.1.1</li> <li>• Logical conclusions and generalizations 5.2.1</li> <li>• Mathematical conjectures and arguments 5.2.2</li> <li>• Validity of a mathematical solution 5.2.3</li> <li>• Mathematical reasoning in other disciplines. 5.2.4</li> </ul>	<ul style="list-style-type: none"> <li>• Problem-solving strategies 5.1.1</li> <li>• Logical conclusions and generalizations 5.2.1</li> <li>• Mathematical conjectures and arguments 5.2.2</li> <li>• Validity of a mathematical solution 5.2.3</li> <li>• Mathematical reasoning in other disciplines. 5.2.4</li> </ul>	<ul style="list-style-type: none"> <li>• Problem-solving strategies 5.1.1</li> <li>• Logical conclusions and generalizations 5.2.1</li> <li>• Mathematical conjectures and arguments 5.2.2</li> <li>• Validity of a mathematical solution 5.2.3</li> <li>• Mathematical reasoning in other disciplines. 5.2.4</li> </ul>
<b>6. Communication, Representation, and connections</b> (process)	<ul style="list-style-type: none"> <li>• Ideas clearly and logically in both written and oral form. 6.1.1</li> <li>• Mathematical terminology, labels, symbols, and notation 6.1.3</li> <li>• Questions, conjectures, definitions, and generalizations about data, information, and problem situations 6.1.4</li> <li>• Models and technology 6.2.1</li> <li>• Representations 6.2.2</li> <li>• Oral and written form 6.3.3</li> </ul>	<ul style="list-style-type: none"> <li>• Ideas clearly and logically in both written and oral form. 6.1.1</li> <li>• Mathematical terminology, labels, symbols, and notation 6.1.3</li> <li>• Questions, conjectures, definitions, and generalizations about data, information, and problem situations 6.1.4</li> <li>• Models and technology 6.2.1</li> <li>• Representations 6.2.2</li> <li>• Oral and written form 6.3.3</li> </ul>	<ul style="list-style-type: none"> <li>• Ideas clearly and logically in both written and oral form. 6.1.1</li> <li>• Mathematical terminology, labels, symbols, and notation 6.1.3</li> <li>• Questions, conjectures, definitions, and generalizations about data, information, and problem situations 6.1.4</li> <li>• Models and technology 6.2.1</li> <li>• Representations 6.2.2</li> <li>• Oral and written form 6.3.3</li> </ul>	<ul style="list-style-type: none"> <li>• Ideas clearly and logically in both written and oral form. 6.1.1</li> <li>• Mathematical terminology, labels, symbols, and notation 6.1.3</li> <li>• Questions, conjectures, definitions, and generalizations about data, information, and problem situations 6.1.4</li> <li>• Models and technology 6.2.1</li> <li>• Representations 6.2.2</li> <li>• Oral and written form 6.3.3</li> </ul>