

# Sanborn Regional School District

## Math Curriculum 9-12

## Sanborn Regional School District Math Curriculum Algebra 1 - Grade 9 Proficiency Standards

| Problem Solving and Reasoning  | Communications and Connections   | Numbers, Numeration, and Number Theory  | Geometry, Measurement, and Trigonometry  |
|--|--|---|--|
| <ul style="list-style-type: none"> <li>• Use technology to solve a problem from science, social science, or mathematics</li> <li>• Justify conjectures, defend generalizations, and write logical arguments</li> </ul> | <ul style="list-style-type: none"> <li>• Describe orally and/or in writing how various technologies can be used to communicate about a specific situation.</li> <li>• Use mathematical symbols and notation to communicate mathematically.</li> <li>• Justify conjectures, defend generalizations and write logical arguments</li> <li>• Explain in oral or written form the relationships between a real-world problem and an appropriate mathematical model.</li> <li>• Explain in oral or written form how mathematics connects to other areas (for example: geometry in art and architecture, data analysis in social studies and exponential growth in finance).</li> </ul> | <ul style="list-style-type: none"> <li>• Compare and order real numbers.</li> <li>• Examine the four basic operations from a functional perspective; that is, as operations on ordered pairs.</li> <li>• Connect the properties of operations on real numbers to common uses (for example, the distributive property is used in each of the following cases:             <ul style="list-style-type: none"> <li>• <math>2x + 3x = 5x</math>; <math>2/7 + 3/7 = 5/7</math>; and <math>2(3x + 4) = 6x + 8</math>.</li> </ul> </li> <li>• Use the field properties to simplify expressions</li> <li>• Use estimation and mental computation to determine the reasonableness of answers obtained from the four basic operations on irrational numbers.</li> <li>• Select and use appropriate mental computation and estimation strategies in problem situations when exact answers are not needed.</li> </ul> | <ul style="list-style-type: none"> <li>• Select an appropriate procedure to determine a measure when a direct measurement cannot be made.</li> </ul> |

## Sanborn Regional School District Math Curriculum Algebra 1 - Grade 9 Proficiency Standards

| Data Analysis, Statistics, and Probability  | Functions, Relations, and Algebra  | Mathematics of Change   | Discrete Mathematics   |
|---|--|---|--|
| <ul style="list-style-type: none"> <li>• Use appropriate measure of central tendency in problem situations.</li> <li>• Given a set of numerical data, determine the ordered pairs and make a scatter plot.</li> <li>• Use sample sets to make appropriate inferences and predictions.</li> <li>• Predict and find the probability of outcomes of a simple probability experiment.</li> <li>• Interpret probabilities in real world situations (for example: lotteries, or medical testing)</li> </ul> | <ul style="list-style-type: none"> <li>• Develop algebraic formulas to express relationships which occur in other disciplines (for example: science, or economics).</li> <li>• Recognize and describe relationships within a set of data</li> <li>• Write an equation or inequality in one variable which represents a real- world problem.</li> <li>• Solve equations and inequalities in one variable.</li> <li>• Graph the solution set of equations and inequalities in one variable.</li> <li>• Use appropriate graphing technology (for example: a graphing calculator, or graphing software) to graph an equation or inequality in two variables.</li> <li>• Use appropriate graphing technology (such as a graphing calculator or graphing software) to solve systems of linear equations in two variables.</li> <li>• Solve and justify, orally or in writing, the algebraic solution to a real-world problem.</li> </ul> | <ul style="list-style-type: none"> <li>• Solve rate problems that involve proportional reasoning. Extend patterns and predict nth terms in number sequences, using words and/or symbols.</li> <li>• Extend patterns and predict nth terms in sequences of geometric figures, using words and/or symbols.</li> <li>• Examine tables of numbers from familiar contexts to determine if patterns exist.</li> <li>• Differentiate among different types of change (for example: arithmetic, geometric, or periodic).</li> <li>• Calculate and describe change in continuous and discrete contexts which are familiar.</li> <li>• Interpret and analyze information about change in familiar situations (for example: percent change, average change, or rates such as distance per unit time).</li> </ul> | <ul style="list-style-type: none"> <li>• Use combinations and permutations to solve a variety of problems</li> </ul> |

## Sanborn Regional School District Math Curriculum Geometry - Grade 9 or 10 Proficiency Standards

| Problem Solving and Reasoning  | Communications and Connections   | Numbers, Numeration, and Number Theory  | Geometry, Measurement, and Trigonometry   |
|--|--|---|---|
| <ul style="list-style-type: none"> <li>• Use technology to solve a problem from science, social science, or mathematics</li> <li>• Justify conjectures, defend generalizations, and write logical arguments</li> </ul> | <ul style="list-style-type: none"> <li>• Describe orally and/or in writing how various technologies can be used to communicate about a specific situation.</li> <li>• Use mathematical symbols and notation to communicate mathematically.</li> <li>• Justify conjectures, defend generalizations and write logical arguments</li> <li>• Explain in oral or written form the relationships between a real-world problem and an appropriate mathematical model.</li> <li>• Explain in oral or written form how mathematics connects to other areas (for example: geometry in art and architecture, data analysis in social studies and exponential growth in finance).</li> </ul> | <ul style="list-style-type: none"> <li>• Compare and order real numbers.</li> <li>• Examine the four basic operations from a functional perspective; that is, as operations on ordered pairs.</li> <li>• Connect the properties of operations on real numbers to common uses (for example, the distributive property is used in each of the following cases:               <ul style="list-style-type: none"> <li>• <math>2x + 3x = 5x</math>; <math>2/7 + 3/7 = 5/7</math>; and <math>2(3x + 4) = 6x + 8</math>.</li> </ul> </li> <li>• Use the field properties to simplify expressions</li> <li>• Use estimation and mental computation to determine the reasonableness of answers obtained from the four basic operations on irrational numbers.</li> <li>• Select and use appropriate mental computation and estimation strategies in problem situations when exact answers are not needed.</li> </ul> | <ul style="list-style-type: none"> <li>• Translate between synthetic and coordinate representations.</li> <li>• Demonstrate that the conditions necessary for congruence or the conditions necessary for similarity are met.</li> <li>• Use technology, manipulatives, and/or coordinate geometry to explain properties of transformations (for example: translations, line reflections, rotations, dilations, and the composition of these transformations).</li> <li>• Demonstrate an understanding of properties among two and three dimensional figures.</li> <li>• Apply the formulas for and choose an appropriate unit of measurement to find the linear and area measures associated with two dimensional figures and the volume and surface area of three dimensional figures.</li> <li>• Apply the Pythagorean theorem to problem solving situations.</li> <li>• Select an appropriate procedure to determine a measure when a direct measurement cannot be made.</li> <li>• Use ratio and proportion to find the measure of all sides of similar figures.</li> <li>• Use technology or manipulatives to apply basic trigonometric ratios to solve practical real-world problem.</li> </ul> |

## Sanborn Regional School District Math Curriculum Geometry - Grade 9 or 10 Proficiency Standards

| Data Analysis, Statistics, and Probability  | Functions, Relations, and Algebra  | Mathematics of Change   | Discrete Mathematics   |
|---|--|---|--|
| <ul style="list-style-type: none"> <li>• Use appropriate measure of central tendency in problem situations.</li> <li>• Given a set of numerical data, determine the ordered pairs and make a scatter plot.</li> <li>• Use sample sets to make appropriate inferences and predictions.</li> <li>• Predict and find the probability of outcomes of a simple probability experiment.</li> <li>• Interpret probabilities in real world situations (for example: lotteries, or medical testing)</li> </ul> | <ul style="list-style-type: none"> <li>• Develop algebraic formulas to express relationships which occur in other disciplines (for example: science, or economics).</li> <li>• Recognize and describe relationships within a set of data</li> <li>• Write an equation or inequality in one variable which represents a real- world problem.</li> <li>• Solve equations and inequalities in one variable.</li> <li>• Graph the solution set of equations and inequalities in one variable.</li> <li>• Use appropriate graphing technology (for example: a graphing calculator, or graphing software) to graph an equation or inequality in two variables.</li> <li>• Use appropriate graphing technology (such as a graphing calculator or graphing software) to solve systems of linear equations in two variables.</li> <li>• Solve and justify, orally or in writing, the algebraic solution to a real-world problem.</li> </ul> | <ul style="list-style-type: none"> <li>• Solve rate problems that involve proportional reasoning. Extend patterns and predict nth terms in number sequences, using words and/or symbols.</li> <li>• Extend patterns and predict nth terms in sequences of geometric figures, using words and/or symbols.</li> <li>• Examine tables of numbers from familiar contexts to determine if patterns exist.</li> <li>• Differentiate among different types of change (for example: arithmetic, geometric, or periodic).</li> <li>• Calculate and describe change in continuous and discrete contexts which are familiar.</li> <li>• Interpret and analyze information about change in familiar situations (for example: percent change, average change, or rates such as distance per unit time).</li> </ul> | <ul style="list-style-type: none"> <li>• Use combinations and permutations to solve a variety of problems</li> </ul> |

## Sanborn Regional School District Math Curriculum Algebra 2 - Grade 10 Proficiency Standards

| Problem Solving and Reasoning  | Communications and Connections   | Numbers, Numeration, and Number Theory  | Geometry, Measurement, and Trigonometry   |
|--|--|---|---|
| <ul style="list-style-type: none"> <li>• Use technology to solve a problem from science, social science, or mathematics</li> <li>• Justify conjectures, defend generalizations, and write logical arguments</li> </ul> | <ul style="list-style-type: none"> <li>• Describe orally and/or in writing how various technologies can be used to communicate about a specific situation.</li> <li>• Use mathematical symbols and notation to communicate mathematically.</li> <li>• Justify conjectures, defend generalizations and write logical arguments</li> <li>• Explain in oral or written form the relationships between a real-world problem and an appropriate mathematical model.</li> <li>• Explain in oral or written form how mathematics connects to other areas (for example: geometry in art and architecture, data analysis in social studies and exponential growth in finance).</li> </ul> | <ul style="list-style-type: none"> <li>• Compare and order real numbers.</li> <li>• Examine the four basic operations from a functional perspective; that is, as operations on ordered pairs.</li> <li>• Connect the properties of operations on real numbers to common uses (for example, the distributive property is used in each of the following cases:             <ul style="list-style-type: none"> <li>• <math>2x + 3x = 5x</math>; <math>2/7 + 3/7 = 5/7</math>; and <math>2(3x + 4) = 6x + 8</math>.</li> </ul> </li> <li>• Use the field properties to simplify expressions</li> <li>• Use estimation and mental computation to determine the reasonableness of answers obtained from the four basic operations on irrational numbers.</li> <li>• Select and use appropriate mental computation and estimation strategies in problem situations when exact answers are not needed.</li> </ul> | <ul style="list-style-type: none"> <li>• Translate between synthetic and coordinate representations.</li> <li>• Demonstrate that the conditions necessary for congruence or the conditions necessary for similarity are met.</li> <li>• Use technology, manipulatives, and/or coordinate geometry to explain properties of transformations (for example: translations, line reflections, rotations, dilations, and the composition of these transformations).</li> <li>• Demonstrate an understanding of properties among two and three dimensional figures.</li> <li>• Apply the formulas for and choose an appropriate unit of measurement to find the linear and area measures associated with two dimensional figures and the volume and surface area of three dimensional figures.</li> <li>• Apply the Pythagorean theorem to problem solving situations.</li> <li>• Select an appropriate procedure to determine a measure when a direct measurement cannot be made.</li> <li>• Use ratio and proportion to find the measure of all sides of similar figures.</li> <li>• Use technology or manipulatives to apply basic trigonometric ratios to solve practical real-world problem.</li> </ul> |

## Sanborn Regional School District Math Curriculum Algebra 2 - Grade 10 Proficiency Standards

| Data Analysis, Statistics, and Probability  | Functions, Relations, and Algebra   | Mathematics of Change   | Discrete Mathematics   |
|---|---|---|--|
| <ul style="list-style-type: none"> <li>• Use appropriate measure of central tendency in problem situations.</li> <li>• Given a set of numerical data, determine the ordered pairs and make a scatter plot.</li> <li>• Use sample sets to make appropriate inferences and predictions.</li> <li>• Predict and find the probability of outcomes of a simple probability experiment.</li> <li>• Interpret probabilities in real world situations (for example: lotteries, or medical testing)</li> </ul> | <ul style="list-style-type: none"> <li>• Develop algebraic formulas to express relationships which occur in other disciplines (for example: science, or economics).</li> <li>• Recognize and describe relationships within a set of data</li> <li>• Perform simple operations on matrices.</li> <li>• Write an equation or inequality in one variable which represents a real-world problem.</li> <li>• Solve equations and inequalities in one variable.</li> <li>• Graph the solution set of equations and inequalities in one variable.</li> <li>• Use appropriate graphing technology (for example: a graphing calculator, or graphing software) to graph an equation or inequality in two variables.</li> <li>• Use appropriate graphing technology (such as a graphing calculator or graphing software) to solve systems of linear equations in two variables.</li> <li>• Solve and justify, orally or in writing, the algebraic solution to a real-world problem.</li> </ul> | <ul style="list-style-type: none"> <li>• Solve rate problems that involve proportional reasoning. Extend patterns and predict nth terms in number sequences, using words and/or symbols.</li> <li>• Extend patterns and predict nth terms in sequences of geometric figures, using words and/or symbols.</li> <li>• Examine tables of numbers from familiar contexts to determine if patterns exist.</li> <li>• Differentiate among different types of change (for example: arithmetic, geometric, or periodic).</li> <li>• Calculate and describe change in continuous and discrete contexts which are familiar.</li> <li>• Interpret and analyze information about change in familiar situations (for example: percent change, average change, or rates such as distance per unit time).</li> </ul> | <ul style="list-style-type: none"> <li>• Use combinations and permutations to solve a variety of problems</li> </ul> |

# Sanborn Regional School District Math Curriculum

Grade 9

Algebra 1

| Academic Expectations  | Instructional Strategies   | Assessments  |
|--|--|--|
| <ol style="list-style-type: none"> <li>1. Develop a proficiency in the communication skills of reading, writing, speaking, viewing, and listening</li> <li>2. Demonstrate a proficiency in problem solving skills and critical thinking skills</li> <li>3. Demonstrate knowledge and application of technology skills</li> </ol> | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstrations</li> <li>• Research</li> <li>• Independent Learner</li> <li>• Writing</li> <li>• Critical Skills Program: Education By Design</li> <li>• Essential Questions</li> <li>• Class Discussions</li> <li>• Cooperative Learning</li> <li>• Investigations</li> <li>• Open-Ended Response Questions</li> <li>• Test-Taking Strategies</li> <li>• Differentiated Instruction</li> </ul> | <ul style="list-style-type: none"> <li>• Class Participation</li> <li>• Portfolios / Notebooks</li> <li>• Quizzes / Tests</li> <li>• Presentations</li> <li>• Projects &amp; Labs</li> <li>• Homework / Classwork</li> <li>• Common Midterm / Final Exam</li> <li>• NWEA Map Goal Area Assessments and End-of-Course Tests</li> <li>• NECAP</li> <li>• Writing Portfolios</li> </ul> |

# Sanborn Regional School District Math Curriculum

## Grade 9

## Algebra 1

| Essential Questions  | Topics   | Key Concepts   |   |
|--|--|--|---|
| <p>What is a real number, and how do you operate on them?</p> <p>What is the difference between an equation and a function?</p> <p>Can you operate on both sides of an equation at the same time?</p> <p>How are slope and rate of change connected?</p> <p>What are the advantages and disadvantages to point-slope, slope-intercept, and standard form of a linear equation?</p> <p>How are linear inequalities similar and different to equations?</p> <p>How do stem-and-leaf and box-and-whisker plots organize data?</p> <p>What are the ways to solve a linear system? How do you decide which way to choose?</p> | <ul style="list-style-type: none"> <li>• Properties of Real Numbers</li> <li>• Solving Linear Equations</li> <li>• Graphing Linear Equations and Functions</li> <li>• Writing Linear Equations</li> <li>• Solving and Graphing Linear Equations</li> <li>• Systems of Linear Equations and Inequalities</li> <li>• Introduction to Probability and Statistics</li> </ul> | <ol style="list-style-type: none"> <li>1. Variable Expression</li> <li>2. Unit Analysis</li> <li>3. Power</li> <li>4. Exponent</li> <li>5. Base of a Power</li> <li>6. Order of Operations</li> <li>7. Equation and Solution of</li> <li>8. Inequality</li> <li>9. Function</li> <li>10. Domain</li> <li>11. Range</li> <li>12. Real Numbers</li> <li>13. Integers</li> <li>14. Absolute Value</li> <li>15. Distributive Property</li> <li>16. Reciprocal</li> <li>17. Equivalent Equations</li> <li>18. Inverse Operations</li> <li>19. Linear Equation in 1 Variable</li> <li>20. Ratio of a to b</li> <li>21. Identity</li> <li>22. Formula</li> <li>23. Rate of a per b</li> <li>24. Coordinate Plane</li> <li>25. Scatter Plot</li> <li>26. Graph of Linear Equation</li> <li>27. x and y - Intercepts</li> </ol> | <ol style="list-style-type: none"> <li>28. Slope</li> <li>29. Rate of Change</li> <li>30. Slope-Intercept Form</li> <li>31. Function Notation</li> <li>32. Best-Fitting Line</li> <li>33. Correlation</li> <li>34. Point-Slope Form</li> <li>35. Standard Form</li> <li>36. Graph of a Linear Inequality</li> <li>37. Compound Inequality</li> <li>38. Solution of Linear Inequality</li> <li>39. Stem-and-Leaf Plot</li> <li>40. Mean, Median, Mode</li> <li>41. Box-and-Whisker Plot</li> <li>42. Linear System, and Solutions</li> <li>43. Linear Combination</li> <li>44. System of Linear Inequalities</li> <li>45. Graphs of Systems</li> </ol> |

# Sanborn Regional School District Math Curriculum

Grade 9 or 10

Geometry

| Academic Expectations  | Instructional Strategies  | Assessments  |
|--|---|--|
| <ol style="list-style-type: none"> <li>1. Develop a proficiency in the communication skills of reading, writing, speaking, viewing, and listening</li> <li>2. Demonstrate a proficiency in problem solving skills and critical thinking skills</li> <li>3. Demonstrate knowledge and application of technology skills</li> </ol> | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstrations</li> <li>• Research</li> <li>• Independent Learner</li> <li>• Writing</li> <li>• Critical Skills Program: Education By Design</li> <li>• Essential Questions</li> <li>• Class Discussions</li> <li>• Cooperative Learning</li> <li>• Investigations</li> </ul> | <ul style="list-style-type: none"> <li>• Class Participation</li> <li>• Portfolios / Notebooks</li> <li>• Quizzes / Tests</li> <li>• Presentations</li> <li>• Projects &amp; Labs</li> <li>• Homework / Classwork</li> <li>• Common Midterm / Final Exam</li> <li>• NWEA Map Goal Area Assessments and End-of-Course Tests</li> <li>• NECAP</li> <li>• Writing Portfolios</li> </ul> |

# Sanborn Regional School District Math Curriculum

## Grade 9 or 10

## Geometry

| Essential Questions   | Topics  | Key Concepts   |  |
|---|---|--|--|
| <p>Why are point, line, and plane considered the foundations of geometry?</p> <p>What is the difference between deductive &amp; inductive reasoning?</p> <p>How do conditional statements relate to proofs?</p> <p>What does congruence mean?</p> <p>How can you prove that two triangles are congruent?</p> <p>How do you classify the different quadrilaterals?</p> <p>What are the similarities and differences between translations, reflections, and rotations?</p> <p>How does ratio and proportion connect to similarity?</p> <p>How do area, surface area, and volume relate?</p> | <ul style="list-style-type: none"> <li>• Reasoning and Proof</li> <li>• Perpendicular and Parallel Lines</li> <li>• Congruent Triangles</li> <li>• Properties of Triangles</li> <li>• Quadrilaterals</li> <li>• Transformations</li> <li>• Similarity</li> <li>• Right Triangles and Trigonometry</li> <li>• Circles</li> <li>• Areas of Polygons and Circles</li> <li>• Surface Area and Volume</li> </ul> | <ol style="list-style-type: none"> <li>1. Conjecture</li> <li>2. Point, Line, Plane</li> <li>3. Segment, Ray</li> <li>4. Postulate</li> <li>5. Congruent Segment &amp; Angle</li> <li>6. Measure of an Angle</li> <li>7. Acute, Right, Obtuse, Vertical, and Straight Angles</li> <li>8. Segment &amp; Angle Bisectors</li> <li>9. Complementary Angles</li> <li>10. Supplementary Angles</li> <li>11. Inductive Reasoning</li> <li>12. If-then Form (Conditionals)</li> <li>13. Converse, Inverse, Contrapositive, and Biconditional Statements</li> <li>14. Theorem</li> <li>15. Two-Column Proof</li> <li>16. Parallel Lines &amp; Planes</li> <li>17. Skew Lines</li> <li>18. Transversal</li> <li>19. Alternate Interior, Alternate Exterior, Consecutive Interior Angles</li> <li>20. Isosceles, Right Triangle</li> <li>21. Leg and Hypotenuse</li> <li>22. Interior / Exterior Angles</li> <li>23. Corollary</li> <li>24. Congruent Figures</li> <li>25. Corresponding Sides, Angles</li> <li>26. Polygon</li> <li>27. Convex / Concave</li> <li>28. Equilateral &amp; Equiangular</li> <li>29. Regular Polygon</li> </ol> | <ol style="list-style-type: none"> <li>30. Diagonals</li> <li>31. Parallelogram, Rhombus, Kite, Square, Trapezoid, Rectangle</li> <li>32. Image and Pre-image</li> <li>33. Transformation</li> <li>34. Reflection, Rotation, Translation</li> <li>35. Vector</li> <li>36. Ratio &amp; Proportion</li> <li>37. Similar Polygons</li> <li>38. Scale Factor</li> <li>39. Dilation, Reduction, Enlarge</li> <li>40. Pythagorean Triple</li> <li>41. Special Right Triangles</li> <li>42. Trigonometric Ratio</li> <li>43. Angle of Elevation</li> <li>44. Solve a Right Triangle</li> <li>45. Circle</li> <li>46. Secant / Tangent</li> <li>47. Central Angle</li> <li>48. Arc &amp; Measure of</li> <li>49. Inscribed Angle</li> <li>50. Circumference</li> <li>51. Arc Length</li> <li>52. Sector of a Circle</li> <li>53. Platonic Solids</li> <li>54. Prism</li> <li>55. Cylinder</li> <li>56. Pyramid</li> <li>57. Circular Cone</li> <li>58. Sphere</li> <li>59. Volume</li> <li>60. Lateral &amp; Surface Area</li> </ol> |

# Sanborn Regional School District Math Curriculum

Grade 10

Algebra 2

| Academic Expectations  | Instructional Strategies  | Assessments  |
|--|---|--|
| <ol style="list-style-type: none"> <li>1. Develop a proficiency in the communication skills of reading, writing, speaking, viewing, and listening</li> <li>2. Demonstrate a proficiency in problem solving skills and critical thinking skills</li> <li>3. Demonstrate knowledge and application of technology skills</li> </ol> | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstrations</li> <li>• Research</li> <li>• Independent Learner</li> <li>• Writing</li> <li>• Critical Skills Program: Education By Design</li> <li>• Essential Questions</li> <li>• Class Discussions</li> <li>• Cooperative Learning</li> <li>• Investigations</li> </ul> | <ul style="list-style-type: none"> <li>• Class Participation</li> <li>• Portfolios / Notebooks</li> <li>• Quizzes / Tests</li> <li>• Presentations</li> <li>• Projects &amp; Labs</li> <li>• Homework / Classwork</li> <li>• Common Midterm / Final Exam</li> <li>• NWEA Map Goal Area Assessments and End-of-Course Tests</li> <li>• NECAP</li> <li>• Writing Portfolios</li> </ul> |

# Sanborn Regional School District Math Curriculum

## Grade 10

## Algebra 2

| Essential Questions  | Topics  | Key Concepts   | (See Also Algebra 1 Terms)  |
|--|---|--|---|
| <p>How do you work with the four representations of functions (verbal, equation, table, and graph)</p> <p>What do the domain and range tell you about a graph?</p> <p>What do the zeros tell you about a function?</p> <p>How do you interpret asymptotes, relative max/min's, and inflection points for a function?</p> <p>How do you model real-world applications in terms of linear, quadratic, cubic, rational, exponential, and logistic models?</p> <p>How do inverse relations connect to exponential and logarithmic functions?</p> <p>What distinguishes a sequence from a series?</p> | <ul style="list-style-type: none"> <li>• Quadratic Equations</li> <li>• Polynomials and Polynomial Functions</li> <li>• Powers, Roots, and Radicals</li> <li>• Exponential and Logarithmic Functions</li> <li>• Rational Equations and Functions</li> <li>• Sequences and Series</li> <li>• Probability and Statistics</li> <li>• Conic Sections (Honors Level Only)</li> </ul> | <ol style="list-style-type: none"> <li>1. Relation &amp; Function</li> <li>2. Ordered Pair</li> <li>3. Direct Variation</li> <li>4. Piecewise Functions</li> <li>5. Quadratic Function</li> <li>6. Parabola</li> <li>7. Factoring</li> <li>8. Zero of a Function</li> <li>9. Square Root</li> <li>10. Complex Number</li> <li>11. Completing the Square</li> <li>12. Quadratic Formula</li> <li>13. Discriminant</li> <li>14. Polynomial Function</li> <li>15. Degree of Polynomial</li> <li>16. End Behavior</li> <li>17. Long &amp; Synthetic Division</li> <li>18. Rational Zero Theorem</li> <li>19. Local Max/Min</li> <li>20. nth Root of a</li> <li>21. Power Function</li> <li>22. Composition</li> <li>23. Inverse Function</li> <li>24. Radical Function</li> <li>25. Measures of Central Tendency</li> <li>26. Histogram</li> </ol> | <ol style="list-style-type: none"> <li>27. Exponential Function</li> <li>28. Asymptote</li> <li>29. Exponential Growth / Decay</li> <li>30. Natural Base e</li> <li>31. Common and Natural Logarithm</li> <li>32. Logistic Growth Function</li> <li>33. Inverse Variation</li> <li>34. Joint Variation</li> <li>35. Rational Function</li> <li>36. Hyperbola</li> <li>37. Simplified Form of a Rational Expression</li> <li>38. Complex Fraction</li> <li>39. Sequence and Terms of</li> <li>40. Finite and Infinite Sequences</li> <li>41. Series</li> <li>42. Summation Notation</li> <li>43. Arithmetic Sequence</li> <li>44. Geometric Series</li> <li>45. Explicit and Recursive Rules</li> <li>46. Permutation / Combination</li> <li>47. Binomial Theorem</li> <li>48. Dependent / Independent Events</li> </ol> |