### 1st Nine Weeks
**Number and Operations**
- Order a set of real numbers
- Calculate and compare simple and compound interest.
- Describe relationship between sets of real numbers
- Convert between standard and scientific notation
- Approximate the value of an irrational number and locate on number line
- Solve interest rate and loan length problems
- Explain investments and how they grow over time

**Solving Algebraic Equations**
- Model equations with algebra tiles.
- Solve equations and inequalities with variables on both sides
- Write one-variable equations or inequalities with variables on both sides
- Write a corresponding real-world problem when given an equation or inequality

**Proportional relationships and slope**
- Represent linear proportional situations with tables, graphs and equations
- Solve problems involving direct variation
- Use similar right triangles to develop an understanding of slope
- Slope formula
- Use data from a table or graph to determine slope/rate of change
- Graph proportional relationships using unit rate as slope

### 2nd Nine Weeks
**Non-Proportional relationships**
- Identify functions using ordered pairs, tables, mappings and graphs
- Write an equation to model a linear relationship using verbal description, table and graph
- Use data from a table or graph to determine slope/rate of change and y intercept
- Distinguish between proportional and non-proportional situations
- Represent linear non-proportional situations with tables, graphs and equations.
- Identify and verify solutions to systems of equations graphically.

**Pythagorean Theorem and Angle Relationships**
- Use the Pythagorean theorem to solve problems
- Determine distance on coordinate plane
- Angles created when 2 parallel lines are cut by transversal
- Ratio of corresponding sides of similar shapes are proportional
- Model the effect on linear and area measurements

### 3rd Nine Weeks
**Similarity and Transformations**
- Scale factors applied to figures, use an algebraic expression
- Translations, reflections and rotations
- Attributes of a shape and its dilation
- Properties of orientation and congruence of rotation, reflection, translation and dilation
- Differentiate between which transformations preserve congruence and which do not.

**Measurement**
- Volume of cylinder
- Volume of prism
- Volume of cone
- Volume of sphere
- Surface Area of prisms and cylinders

**Data Analysis**
- Compare data that do form a linear relationship with those that do not
- Construct a scatterplot and classify data as linear, non-linear and no association
- Determine mean absolute deviation
- Use a trend line to approximate relationship in a scatterplot
- Estimate the cost of a two year and four year college education

### 4th Nine Weeks
**STAAR Review**
- Review targeted TEKS from assessed curriculum.
- Utilize data from benchmark to identify weaknesses
- Close gaps

**STAAR EXAM is April 7**

**Bridge to Algebra 1**
- Targeted teaching to prepare students for Algebra 1
- Review Solving Equations and Inequalities by hand with variables on both sides
- Continue practicing distributive property when solving equations
- Review graphing lines by hand from form y=mx and y= mx+b
- Graph inequalities by hand from form y>mx and y> mx+b
<table>
<thead>
<tr>
<th>1st Nine Weeks</th>
<th>2nd Nine Weeks</th>
<th>3rd Nine Weeks</th>
<th>4th Nine Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Write and Solve Equations and Inequalities</strong></td>
<td><strong>Write Linear Functions</strong></td>
<td><strong>Exponentials</strong></td>
<td><strong>Graphing and Writing quadratics continued</strong></td>
</tr>
<tr>
<td>- Solve linear equations with variables on both sides and distributive property</td>
<td>- Write linear equations in two variables given table, graph or verbal description</td>
<td>- Simplify numerical radical expressions involving square roots</td>
<td>- Determine the effects of transformations on the parent graph of the quadratic function</td>
</tr>
<tr>
<td>- Solve linear inequalities with variables on both sides and distributive property</td>
<td>- Write equations in various forms including slope-intercept, standard form, and point-slope form.</td>
<td>- Determine domain and range of exponential graphs</td>
<td>- Write equations of quadratic functions given the vertex and another point and write equation in vertex form</td>
</tr>
<tr>
<td><strong>Relations to functions</strong></td>
<td>- Write linear inequalities in two variables given table, graph or verbal description</td>
<td>- Perform exponential regression using technology</td>
<td>- Convert vertex form to standard form</td>
</tr>
<tr>
<td>- Determine domain and range for linear functions</td>
<td>- Write and solve equations involving direct variation</td>
<td>- Graph exponential functions that model growth and decay</td>
<td>- Write quadratic functions given real solutions and graphs of their related equations</td>
</tr>
<tr>
<td>- Determine whether a function is continuous or discrete</td>
<td>- Write an equation of a line with a slope of zero and undefined</td>
<td>- Write exponential functions and interpret the meaning of the values a and b in an exponential situation</td>
<td>- Perform quadratic regression using technology</td>
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<tr>
<td>- Solve literal equations</td>
<td>- Write the equation of a line that contains a given point and is parallel or perpendicular to a given line</td>
<td>- Identify terms of geometric sequences</td>
<td><strong>Scatterplots and regression</strong></td>
</tr>
<tr>
<td>- Decide whether relations represent a function verbally, tabularly, graphically and symbolically</td>
<td><strong>Graphing Systems</strong></td>
<td>- Write a formula for the nth term in a geometric sequence</td>
<td>- Calculate the correlation coefficient</td>
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<tr>
<td><strong>Graphing Linear functions</strong></td>
<td>- Graph systems of two linear equations on a coordinate plane and determine solution.</td>
<td><strong>Factoring and solving quadratics</strong></td>
<td>- Compare and contrast causation and association</td>
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<tr>
<td>- Calculate the rate of change</td>
<td>- Estimate graphically the solutions of systems.</td>
<td>- Decide if a binomial can be written as difference of two squares</td>
<td>- Write linear functions to fit data with and without technology.</td>
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<td>- Graph linear functions on a coordinate plane and identify key features: x intercept, y intercept, zeros and slope</td>
<td>- Graph systems of two linear inequalities on a coordinate plane and determine solution set.</td>
<td>- Factor trinomials</td>
<td>- Identify terms of arithmetic sequences</td>
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<td>- Graph solution set of linear inequalities</td>
<td>- Write systems of two equations given a table, graph and/or verbal description</td>
<td>- Describe the relationship between linear factors of quadratic expressions and their zeros</td>
<td><strong>Sequences and simplifying radicals</strong></td>
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<td>- Determine slope using a table, graph, two points, and an equation</td>
<td><strong>Properties of exponents and polynomials</strong></td>
<td>- Solve quadratic equations by factoring, taking square roots, completing the square and applying the quadratic formula</td>
<td>- Write a formula for the nth term of an arithmetic sequence</td>
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<td>- Determine the effects on the graph of the linear parent function</td>
<td>- Add, subtract, multiply and divide polynomials</td>
<td><strong>Graphing and writing quadratics</strong></td>
<td>- Simplify numerical radical expressions involving square roots</td>
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<td><strong>Graphing and Writing quadratics</strong></td>
<td>- Simplify numeric and algebraic expressions using laws of exponents</td>
<td>- Determine domain and range of quadratic functions</td>
<td>- Identify terms of arithmetic and geometric sequences when the sequences are given in function form</td>
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<td><strong>Properties of exponents and polynomials</strong></td>
<td>- Use distributive property to rewrite polynomial expressions</td>
<td>- Graph quadratics on coordinate plane and identify key attributes: x &amp; y-intercepts, zeros, maximum value.</td>
<td><strong>STAAR Review</strong></td>
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<td>- Determine domain and range of quadratic functions</td>
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<td>- Close gaps</td>
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**STAAR EXAM is May 5**