

Mary Queen of Peace Curriculum--Math Algebra I

High Priority Standards: (State, National, CCSS)

Functions

Learning Goal

Students will be able to:
graph and analyze functions including transformations

Learning Targets

- Understand and use function notation
- Understand that each domain has exactly one range.
- Interpret functions that arise in terms of a context.
- Analyze functions using different representations.
- Interpret expressions for functions in the terms of the situation they model
- Build new functions from existing functions.

Learning Goal

Students will be able to: solve, write and graph equations and inequalities.

Learning Targets

- Solve and represent equations and inequalities graphically.
 - Interpret parts of the expressions- terms, factors, coefficients.
- Construct and compare linear, exponential, and quadratic models.
- Create equations and inequalities with one variable to solve problems.
- Create equations with two or more variables to represent relationships.

Learning Goal

Students will be able to: solve systems of equations and inequalities

Learning Targets

- Prove replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions (given two equations with two variables).
- Solve linear systems graphically.
- Graph the solutions of linear inequalities with two variables as the intersection of half-planes

<p style="text-align: center;">Learning Goal</p> <p style="text-align: center;">Students will be able to: simplify exponential and polynomial expressions.</p>	<p style="text-align: center;">Learning Targets</p> <ul style="list-style-type: none"> ● Extend the properties of exponents to rational exponents. ● Perform arithmetic operations to polynomials.
<p style="text-align: center;">Learning Goal</p> <p style="text-align: center;">Students will be able to: model, analyze and solve quadratic relationships.</p>	<p style="text-align: center;">Learning Targets</p> <ul style="list-style-type: none"> ● Use the process of factoring and completing the square to show zeros, extreme values, symmetry and interpret these in terms of context. ● Write a function defined by an expression in different, but equivalent forms. ● Solve quadratic equations by taking square roots, completing the square, factoring, and using the quadratic formula.
<p style="text-align: center;">Learning Goal</p> <p style="text-align: center;">Students will be able to: summarize, represent, and interpret data.</p>	<p style="text-align: center;">Learning Targets</p> <ul style="list-style-type: none"> ● Represent data with plots on the Real number line. ● Use statistics appropriate to the shape of data distribution to compare median/mean and interquartile range. ● Interpret differences in shape, spread and center of data sets to account for outliers. ● Represent data with two quantitative variables on scatterplots to describe relationships. ● Fit linear functions to scatter plots that suggest linear correlation. ● Interpret slope and intercepts of linear

	functions in the context provided.
<p>Learning Goal</p> <p>Students will be able to: manipulate equations</p>	<p>Learning Targets</p> <ul style="list-style-type: none">• Rearrange formulas to highlight a quantity of interest.• Create and graph equations in two or more variables to represent relationships between quantities.• Produce equivalent forms of an expression to show and explain properties• Write a function defined by an expression in different, equivalent forms.