



MOHAWK

Local School District

Preparing today's students for tomorrow's challenges

Mohawk Local Schools Algebra 1

Quarter-1 Curriculum Guide

Mathematical Practices

1. Make Sense of Problems and Persevere in Solving them
2. Reasoning Abstractly & Quantitatively
3. Construct Viable Arguments and Critique the Reasoning of Others
4. Model with Mathematics
5. Use Appropriate Tools Strategically
6. Attend to Precision
7. Look for and Make use of Structure
8. Look for and Express Regularity in Repeated Reasoning

Critical Areas of Focus Being Addressed:

- o Numbers, quantities, equations and expression

Content Statements Addressed and Whether they are Knowledge, Reasoning, Performance Skill, or Product:

(DOK1) (DOK2) (DOK3) (DOK4)

Underpinning Targets Corresponding with Standards and Whether they are Knowledge, Reasoning, Performance Skill, or Product: "I can.....", "Students Will Be Able To....."

A.REI.1 (DOK 2)

Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.

(DOK 1) I can

- Know that solving an equation means that the equation remains balanced during each step.
- Recall the properties of equality.
- Explain why, when solving equations, it is assumed that the original equation is equal.

(DOK 2) I can ...

- Determine if an equation has a solution.
- Choose an appropriate method for solving the equation.
- Justify solution(s) to equations by explaining each step in solving a simple equation using the properties of equality, beginning with the assumption that the original equation is equal.
- Construct a mathematically viable argument justifying a given, or self-generated, solution method.

<p>A.REI.3 (DOK 2) Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters</p>	<p>(DOK 1) I can ...</p> <ul style="list-style-type: none"> Recall properties of equality Solve multi-step equations in one variable Solve multi-step inequalities in one variable <p>(DOK 2) I can ...</p> <ul style="list-style-type: none"> Determine the effect that rational coefficients have on the inequality symbol and use this to find the solution set. Solve equations and inequalities with coefficients represented by letters.
<p>F.IF.1(DOK 1) Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x. The graph of f is the graph of the equation $y = f(x)$.</p>	<p>(DOK 1) I can ...</p> <ul style="list-style-type: none"> Identify the domain and range of a function. Determine if a relation is a function. Determine the value of the function with proper notation (i.e. $f(x)=y$, the y value is the value of the function at a particular value of x) Evaluate functions for given values of x
<p>F.IF.2 (DOK 2) Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.</p>	<p>(DOK 1) I can...</p> <ul style="list-style-type: none"> Identify mathematical relationships and express them using function notation. Define a reasonable domain, which depends on the context and/or mathematical situation, for a function focusing on linear and exponential functions. Evaluate functions at a given input in the domain, focusing on linear and exponential functions. <p>(DOK 2) I can...</p> <ul style="list-style-type: none"> Interpret statements that use functions in terms of real world situations, focusing on linear and exponential functions.
<p>F.IF.4 (DOK 2) For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.</p>	<p>(DOK 1) I can...</p> <ul style="list-style-type: none"> Define and recognize the key features in tables and graphs of linear and exponential functions: intercepts; intervals where the function is increasing, decreasing, positive, or negative, and end behavior. Identify whether the function is linear or exponential, given its table or graph. <p>(DOK 2) I can...</p> <ul style="list-style-type: none"> Interpret key features of graphs and tables of functions in the terms of the contextual quantities the function represents. Sketch graphs showing key features of a function that models a relationship between two quantities from a given verbal description of the relationship.

N.Q.1 (DOK 2)

Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

(DOK 1) I can...

- Calculate unit conversions.

(DOK 2)

- Use given units and the context of a problem as a way to determine if the solution to a multi-step problem is reasonable (e.g. length problems dictate different units than problems dealing with a measure such as slope)
- Choose appropriate units to represent a problem when using formulas or graphing.
- Interpret units or scales used in formulas or represented in graphs. Use units as a way to understand problems and to guide the solution of multi-step problems.