

DETERMINING OUR ESSENTIALS - Algebra 1

Standard

Number and Quantity - N		
The Real Number System (N-RN)		
A1.N-RN.B Use properties of rational and irrational numbers.	A1.N-RN.B.3	Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.
Quantities (N-Q)		
A1.N-Q.A Reason quantitatively and use units to solve problems.	A1.N-Q.A.1	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, include utilizing real-world context.
	A1.N-Q.A.2	Define appropriate quantities for the purpose of descriptive modeling. Include problem-solving opportunities utilizing real-world context.
	A1.N-Q.A.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities utilizing real-world context.
Algebra - A		
Seeing Structure in Expressions (A-SSE)		
A1.A-SSE.A Interpret the structure of expressions.	A1.A-SSE.A.1	Interpret expressions that represent a quantity in terms of its context. a. Interpret parts of an expression, such as terms, factors, and coefficients. b. Interpret expressions by viewing one or more of their parts as a single entity.
	A1.A-SSE.A.2	Use structure to identify ways to rewrite numerical

A1.A-SSE.B	A1.A-SSE.B.3	Choose and produce an equivalent form of an
Arithmetic with Polynomials and Rational Expressions (A-APR)		
A1.A-APR.A	A1.A-APR.A.1	Understand that polynomials form a system
A1.A-APR.B	A1.A-APR.B.3	Identify zeros of polynomials when suitable
Creating Equations (A-CED)		
A1.A-CED.A Create equations that describe numbers or relationships.	A1.A-CED.A.1	Create equations and inequalities in one variable and
	A1.A-CED.A.2	Create equations in two or more variables to
	A1.A-CED.A.3	Represent constraints by equations or inequalities,
	A1.A-CED.A.4	Rearrange formulas to highlight a quantity of interest,
Reasoning with Equations and Inequalities (A-REI)		
A1.A-REI.A	A1.A-REI.A.1	Explain each step in solving linear and quadratic
A1.REI.B Solve equations and inequalities in	A1.A-REI.B.3	Solve linear equations and inequalities in one
	A1.A-REI.B.4	Solve quadratic equations in one variable.
A1.A-REI.C Solve systems of equations.	A1.A-REI.C.5	Prove that, given a system of two equations in two
	A1.A-REI.C.6	Solve systems of linear equations exactly and
A1.A-REI.D Represent and solve equations and inequalities graphically.	A1.A-REI.D.10	Understand that the graph of an equation in two
	A1.A-REI.D.11	Explain why the x-coordinates of the points where
	A1.A-REI.D.12	Graph the solutions to a linear inequality in two
Functions - F		
Interpreting Functions (F-IF)		
A1.F-IF.A Understand the concept of a function and use function notation.	A1.F-IF.A.1	Understand that a function from one set (called the
	A1.F-IF.A.2	Evaluate a function for inputs in the domain, and
	A1.F-IF.A.3	Recognize that sequences are functions, sometimes
A1.F-IF.B Interpret functions that arise in applications in terms of the context	A1.F-IF.B.4	For a function that models a relationship between
	A1.F-IF.B.5	Relate the domain of a function to its graph and,
	A1.F-IF.B.6	Calculate and interpret the average rate of change of
A1.F-IF.C Analyze functions using different representations.	A1.F-IF.C.7	Graph functions expressed symbolically and show key
	A1.F-IF.C.8	Write a function defined by an expression in different
	A1.F-IF.C.9	Compare properties of two functions each
Building Functions (F-BF)		
A1.F-BF.A	A1.F-BF.A.1	Write a function that describes a relationship

A1.F-BF.B	A1.F-BF.B.3	Identify the effect on the graph of replacing $f(x)$ by f
Linear, Quadratic, and Exponential Models (F-LE)		
A1.F-LE.A Construct and compare linear, quadratic, and exponential models and solve problems.	A1.F-LE.A.1	Distinguish between situations that can be modeled
	A1.F-LE.A.2	Construct linear and exponential functions, including
	A1.F-LE.A.3	Observe, using graphs and tables, that a quantity
A1.F-LE.B	A1.F-LE.B.5	Interpret the parameters in a linear or exponential
Statistics and Probability - S		
Interpreting Categorical and Quantitative Data (S-ID)		
A1.S-ID.A Summarize, represent, and interpret data on a single count or measurement variable.	A1.S-ID.A.1	Represent real-value data with plots for the purpose
	A1.S-ID.A.2	Use statistics appropriate to the shape of the data
	A1.S-ID.A.3	Interpret differences in shape, center, and spread in
A1.S-ID.B Summarize, represent, and	A1.S-ID.B.5	Summarize categorical data for two categories in
	A1.S-ID.B.6	Represent data on two quantitative variables on a
A1.S-ID.C Interpret linear models.	A1.S-ID.C.7	Interpret the slope as a rate of change and the
	A1.S-ID.C.8	Compute and interpret the correlation coefficient of
	A1.S-ID.C.9	Distinguish between correlation and causation.
Conditional Probability and the rules of Probability (S-CP)		
A1.S-CP.A Understand independence and	A1.S-CP.A.1	Describe events as subsets of a sample space using
	A1.S-CP.A.2	Use the Multiplication Rule for independent events to