



### Math Algebra I Semester 2 Final Assessment Blueprint

Year: 2024-2025  
Subject: Math

Method of Delivery: Online  
Administration Window: May 12-22

#### Resources

Algebra I Curriculum Map

#### Standards At-A Glance

Standard	Number of Items	Standard Description
MA.9-12.A1.A-APR.A.1	2	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.
MA.9-12.A1.A-APR.B.3	2	Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. Focus on quadratic and cubic polynomials in which linear and quadratic factors are available.
MA.9-12.A1.A-REI.A.1	1	Explain each step in solving linear and quadratic equations 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.
MA.9-12.A1.A-REI.B.4	3	Solve quadratic equations in one variable.
MA.9-12.A1.A-SSE.A.1	1	Interpret expressions that represent a quantity in terms of its context.
MA.9-12.A1.A-SSE.A.2	4	Use structure to identify ways to rewrite numerical and polynomial expressions. Focus on polynomial multiplication and factoring patterns.
MA.9-12.A1.A-SSE.B	1	Write expressions in equivalent forms to solve problems.
MA.9-12.A1.F-BF.B.3	3	Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$ , $k f(x)$ , and $f(x - k)$ for specific values of $k$ (both positive and negative); find the value of $k$ given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).
MA.9-12.A1.F-IF.B.4	3	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. Include problem-solving opportunities utilizing real-world context. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).
MA.9-12.A1.F-IF.B.5	2	Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes.
MA.9-12.A1.F-IF.C.7	2	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).
MA.9-12.A1.F-LE.A.1.c	1	Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.
MA.9-12.A1.F-LE.A.2	2	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or input/output pairs.
MA.9-12.A1.F-LE.A.3	1	Observe, using graphs and tables, that a quantity increasing exponentially eventually exceeds a quantity increasing linearly or quadratically.
MA.9-12.A1.F-LE.B.5	1	Interpret the parameters in a linear or exponential function with integer exponents utilizing real world context.
MA.9-12.A1.N-RN.B.3	1	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.

\* Some items are tagged to more than one standard.

#### Depth of Knowledge

DOK	Number of Items
Level 1: Recall	1
Level 2: Skill/Concept	29
Level 3: Strategic Thinking	0

#### Item Types Included

Type	Number of Items	Description
MC	30	Multiple Choice - Select one answer