



College Math Semester 1 Final Assessment Blueprint			
Year: 2024-2025		Method of Delivery: Online	
Subject: Math		Administration Window: December 9-19	

Resources
College Math Curriculum Map

Standards At-A Glance		
Standard	Number of Items	Standard Description
MA.9-12.A1.A-CED.A.2	1	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
MA.9-12.A1.A-CED.A.4	1	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.
MA.9-12.A1.A-REI.B.3	2	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
MA.9-12.A1.A-REI.B.4	2	Solve quadratic equations in one variable.
MA.9-12.A1.A-REI.C.5	2	Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.
MA.9-12.A1.A-REI.D.12	1	Graph the solutions to a linear inequality in two variables as a half-plane, excluding the boundary in the case of a strict inequality, and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.
MA.9-12.A1.F-BF.A.1	1	Write a function that describes a relationship between two quantities. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root and piecewise-defined functions. Include problem-solving opportunities utilizing real-world context.
MA.9-12.A1.F-IF.A.1	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 $y = f(x)$.
MA.9-12.A1.F-IF.A.2	2	Evaluate a function for inputs in the domain, and interpret statements that use function notation in terms of a context.
MA.9-12.A1.F-IF.B.6	1	Calculate and interpret the average rate of change of a continuous function (presented symbolically or as a table) on a closed interval. Estimate the rate of change from a graph. Include problem-solving opportunities utilizing real-world context. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step).
MA.9-12.A1.F-IF.C.7	1	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.A2.A-CED.A.1	2	Create equations and inequalities in one variable and use them to solve problems. Include problem-solving opportunities utilizing real-world context. Focus on equations and inequalities arising from linear, quadratic, rational, and exponential functions.
MA.9-12.A2.A-REI.A.2	1	Solve rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.
MA.9-12.A2.A-SSE.A.2	3	Use structure to identify ways to rewrite polynomial and rational expressions. Focus on polynomial operations and factoring patterns.
MA.9-12.A2.A-SSE.B.3	1	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Include problem-solving opportunities utilizing real-world context and focus on expressions with rational exponents.
MA.9-12.A2.A-SSE.B.3.c		Use the properties of exponents to transform expressions for exponential functions.
MA.9-12.A2.F-BF.A.1	1	Write a function that describes a relationship between two quantities. Functions include linear, quadratic, exponential, polynomial, logarithmic, rational, sine, cosine, tangent, square root, cube root and piecewise-defined functions. Include problem-solving opportunities utilizing real-world context.
MA.9-12.A2.N-CN.C.7		Solve quadratic equations with real coefficients that have complex solutions.
MA.9-12.A2.N-RN.A.2	2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.
MAT142.1.0	1	Distinguish between a subset and a proper subset. (I)
MAT142.16.0	2	Apply unit analysis skills to solve applied problems. (V)
MAT142.17.0	4	Use dimensional analysis to convert units of measurement between different systems. (V)
MAT142.18.0	1	Use written and verbal communication to describe process and results. (I-VI)
MAT142.19.0		Model and solve real-world problems. (I-VI)
MAT142.2.0	4	Use Venn diagrams to solve applied problems involving the union, intersection, and complement of sets. (I)
MAT142.7.0	1	Organize, analyze, and display data using multiple representations. (III)

*Some items may be tagged to more than one standard.

Depth of Knowledge	
DOK	Number of Items
Level 1: Recall	2
Level 2: Skill/Concept	28
Level 3: Strategic Thinking	8

Item Types Included		
Type	Number of Items	Description
MC	38	Multiple Choice - Select one answer