



### Math Prealgebra Semester 2 Final Assessment Blueprint

Year: 2024-2025  
Subject: Math

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

#### Resources

Prealgebra Curriculum Map

#### Standards At-A Glance

Standard	Number of Items	Standard Description
MA.8.EE.A.1	4	Understand and apply the properties of integer exponents to generate equivalent numerical expressions.
MA.8.EE.A.4	2	Perform operations with numbers expressed in scientific notation including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities.
MA.8.EE.B.5	3	Graph proportional relationships interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.
MA.8.EE.B.6	1	Use similar triangles to explain why the slope $m$ is the same between any two distinct points on a non-vertical line in the coordinate plane. Derive the equation $y = m x$ for a line through the origin and the equation $y = m x + b$ for a line intercepting the vertical axis at $(0, b)$ .
MA.8.EE.C.8	2	Analyze and solve pairs of simultaneous linear equations.
MA.8.EE.C.8.b	2	Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations including cases of no solution and infinite number of solutions. Solve simple cases by inspection.
MA.8.F.A.1	3	Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. (Function notation is not required in Grade 8.)
MA.8.F.A.2	2	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).
MA.8.F.A.3	1	Interpret the equation $y = m x + b$ as defining a linear function whose graph is a straight line; give examples of functions that are not linear.
MA.8.F.B.4	5	Given a description of a situation, generate a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two $(x, y)$ values, including reading these from a table or a graph. Track how the values of the two quantities change together. Interpret the rate of change and initial value of a linear function in terms of the situation it models, its graph, or its table of values.
MA.8.F.B.5	1	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.
MA.8.SP.A.1	1	Construct and interpret scatter plots for bivariate measurement data to investigate and describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
MA.8.SP.A.2	1	Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
MA.8.SP.A.3	1	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.
MA.8.SP.B.5	3	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

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

#### Depth of Knowledge

DOK	Number of Items
Level 1: Recall	7
Level 2: Skill/Concept	16
Level 3: Strategic Thinking	7

#### Item Types Included

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