

Options FRMS Math 8A 2020	Scope and Sequence
Unit Lesson	Objectives
Input-Output Relationships	
Graphing on the Coordinate Plane	
	Identify and graph points in the coordinate plane, describing their relationship to axes and quadrants.
	Create graphs from a table or situation and use them to solve problems.
Interpreting Graphs	
	Analyze qualitative graphs.
	Interpret information given in a graph.
	Create a graph to model a situation.
Tables, Graphs, and Equations	
	Translate tables and graphs into equations.
	Generate different representations of the same two-variable data.
	Recognize that tabular and graphical representations may be partial representations.
Introduction to Functions	
	Identify functions from tables, graphs, and equations.
	Determine if a real-world situation describes a functional relationship.
Linear vs. Nonlinear Functions	
	Interpret the rate of change from a graph or table.
	Differentiate functions as either linear or nonlinear.
Unit Test	
Linear Functions	
Constructing Linear Functions	
	Analyze linear functions to find the rate of change and initial value.

Unit Lesson**Objectives**

Interpret the rate of change and initial value of a linear function in terms of the situation it models.

Rate of Change and Introduction to Slope

Determine the positive slope of a line from a table and a graph.

Compare positive slopes in a real-world situation.

Exploring Slope

Recognize the difference between positive slope, negative slope, no slope, and zero slope.

Determine the value of the slope of a line from a table or a graph.

Proportional Relationships

Determine whether a linear function is a direct variation.

Solve problems involving direct variation.

Compare proportional and nonproportional linear functions in the form of a table, graph, and equation.

Slope-Intercept Form

Analyze a graph to determine slope and y-intercept.

Graph a linear function using the slope and y-intercept.

Write a linear equation in slope-intercept form given the slope and y-intercept.

Graphing in a Variety of Contexts

Construct and analyze graphs given two components of a linear function.

Estimate y-intercepts on a graph.

Writing Linear Functions

Write a linear equation in slope-intercept form given the slope and a point other than the y-intercept.

Compare and contrast using point-slope form and the slope-intercept form to get an equation to slope-intercept form.

Writing Linear Equations Given Two Points

Unit Lesson**Objectives**

Write a linear equation in slope-intercept form given two points.

Applying Linear Functions

Determine what the slope and y-intercept are and what they represent in real-world functional relationships.

Use real-world scenarios of linear functions to write an equation in slope-intercept form.

Evaluate inputs and outputs for linear equations in slope-intercept form.

Comparing Slopes and Intercepts

Determine slope and y-intercept of linear functions represented differently.

Compare the slope and intercepts of linear functions, including when they are expressed as equations written in different forms.

Unit Test

Linear Equations

Combining Like Terms to Solve Equations

Identify and combine like terms to solve one-variable linear equations.

Determine and apply properties of equality when solving an equation.

Solving with the Distributive Property

Solve one-variable linear equations using the distributive property.

Justify the steps taken to solve one-variable linear equations involving the distributive property.

Solving Equations with Rational Numbers

Identify the least common denominator of fractions to combine like terms and solve equations.

Solve one-variable linear equations with rational numbers using properties of equality.

Modeling with Variables on Both Sides

Use algebra tiles to model one-variable equations with variables on both sides.

Unit Lesson**Objectives**

Solving with Variables on Both Sides

Use algebra tiles to solve one-variable equations with variables on both sides.

Solving Multistep Equations with Variables on Both Sides

Determine and apply the steps needed to isolate a variable in a linear equation with variables on both sides.

Solve equations with variables on both sides and verify the solutions.

Analyzing Solutions

Build a process for solving multistep linear equations with variables on both sides.

Solve multistep linear equations with variables on both sides and verify the solutions.

Solve equations that have one solution, infinitely many solutions, and no solution.

Identify equations that have one solution, infinitely many solutions, and no solution.

Write equations that have infinitely many solutions and no solution.

Unit Test

Linear Systems of Equations

Exploring Systems of Linear Equations

Determine if a given coordinate point is a solution to a system of linear equations.

Identify the unique solution of a system of two linear equations from a graph.

Using Graphs to Determine the Number of Solutions

Determine the number of solutions of a system of linear equations from a graph or by inspection.

Create a system of linear equations that has no solution, one solution, or infinitely many solutions.

Using Graphs to Solve Systems

Rewrite a system of linear equations in slope-intercept form.

Unit Lesson**Objectives**

Graph linear systems on the coordinate plane.

Determine the solution of a linear system from the graph.

Estimating Solutions of Systems

Estimate solutions of linear systems graphically.

Use intercepts to graph a system of equations given in standard form.

Writing and Solving Systems

Create systems of equations from mathematical problems.

Solve systems of two linear equations.

Using Substitution to Solve Systems

Use substitution to solve a linear system.

Rewriting Equations to Use Substitution

Isolate one variable in a system of linear equations.

Use substitution to solve a system of linear equations.

Write and solve a system of linear equations from a real-world scenario.

Using Addition to Solve Systems

Use the linear combination method to solve linear systems.

Multiplying One Equation to Solve Systems

Solve a system using the linear combination method after multiplying one equation.

Write equations of a linear system in standard form from a real-world scenario.

Problem Solving with Systems

Write a system of linear equations to represent a real-world scenario.

Solve a system of linear equations.

Unit Lesson**Objectives**

Unit Test

Patterns in Bivariate Data

Constructing Scatterplots

Create a scatterplot using a table of values.

Analyze a scatterplot.

Classify dependent and independent variables.

Interpreting Clusters and Outliers

Identify clusters and outliers in a scatterplot and table of values.

Analyze the influence outliers and clusters have on the data set.

Explain the meaning of clusters and outliers in context.

Exploring Association

Analyze the correlation and association in scatterplots.

Unit Test

Cumulative Exam

Cumulative Exam Review

Cumulative Exam