

Unit	Lesson	Lesson Objectives
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**Functions and Bivariate Data****Tables, Graphs, and Equations**

- Generate different representations of the same two-variable data.
- Recognize that tabular and graphical representations may be partial representations.
- Translate tables and graphs into equations.

**Introduction to Functions**

- Determine if a real-world situation describes a functional relationship.
- Identify functions from tables, graphs, and equations.

**Linear vs. Nonlinear Functions**

- Differentiate functions as either linear or nonlinear.
- Interpret the rate of change from a graph or table.

**Exploring Slope**

- Determine the value of the slope of a line from a table or a graph.
- Recognize the difference between positive slope, negative slope, no slope, and zero slope.

**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**

- Compare and contrast using point-slope form and the slope-intercept form to get an equation to slope-intercept form.
- Write a linear equation in slope-intercept form given the slope and a point other than the  $y$ -intercept.

**Constructing Scatterplots**

- Analyze a scatterplot.
- Classify dependent and independent variables.
- Create a scatterplot using a table of values.

**Drawing Trend Lines**

- Draw a line of best fit in scatterplots and identify its purpose.
- Use a graphing calculator to graph scatterplots and draw the trend line.

**Using Equations to Represent Trend Lines**

- Create the linear equation of the trend line.
- Find and interpret the slope of a trend line.

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**Linear Equations and Systems of Linear Equations****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.

**Solving 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.

**Solving Multistep Equations with Variables on Both Sides**

- 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.

**Analyzing Solutions**

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

**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 Solve Systems**

- Determine the solution of a linear system from the graph.
- Graph linear systems on the coordinate plane.
- Rewrite a system of linear equations in slope-intercept 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.

**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.