

# Learning Targets

## Lesson 1 Understanding Proportional Relationships

- I can graph a proportional relationship from a story.
- I can use the constant of proportionality to compare the pace of different animals.

## Lesson 2 Representing Proportional Relationships

- I can scale and label coordinate axes in order to graph a proportional relationship.
- I can tell when two graphs are of the same proportional relationship even if the scales are different.

## Lesson 3 Comparing Proportional Relationships

- I can compare proportional relationships represented in different ways.

## Lesson 4 Introduction to Linear Relationships

- I can find the rate of change of a linear relationship by figuring out the slope of the line representing the relationship.

## Lesson 5 More Linear Relationships

- I can interpret the vertical intercept of a graph of a real-world situation.
- I can match graphs to the real-world situations they represent by identifying the slope and the vertical intercept.

## Lesson 6 Representations of Linear Relationships

- I can use patterns to write a linear equation to represent a situation.
- I can write an equation for the relationship between the total volume in a graduated cylinder and the number of objects added to the graduated cylinder.

## Lesson 7 Translating to $y = mx + b$

- I can explain where to find the slope and vertical intercept in both an equation and its graph.
- I can write equations of lines using  $y = mx + b$ .

## Lesson 8 Slopes Don't Have to Be Positive

- I can create a graph of a situation that has a negative slope.
- I can determine if a situation or a graph has a slope that is positive, negative, or zero and explain how I know.

## Lesson 9 Calculating Slope



- I can calculate positive and negative slopes given two points on the line.

### **Lesson 10 Equations of All Kinds of Lines**

- I can write equations of lines that have a positive or a negative slope.
- I can write equations of vertical and horizontal lines.

### **Lesson 11 Solutions to Linear Equations**

- I know that the graph of an equation is a visual representation of all the solutions to the equation.
- I understand what the solution to an equation in two variables is.

### **Lesson 12 More Solutions to Linear Equations**

- I can find solutions  $(x, y)$  to linear equations given either the  $x$ - or  $y$ -value to start from.

### **Lesson 13 On Both of the Lines**

- I can use graphs to find an ordered pair that two real-world situations have in common.

### **Lesson 14 Systems of Equations**

- I can explain the solution to a system of equations in a real-world context.
- I can explain what a system of equations is.
- I can make graphs to find an ordered pair that two real-world situations have in common.

### **Lesson 15 Solving Systems of Equations**

- I can graph a system of equations.
- I can solve systems of equations using algebra.

### **Lesson 16 Solving More Systems**

- I can use the structure of equations to help me figure out how many solutions a system of equations has.

### **Lesson 17 Writing Systems of Equations**

- I can write a system of equations from a real-world situation.

### **Lesson 18 Organizing Data**

- I can organize data to see patterns more clearly.

### **Lesson 19 What a Point in a Scatter Plot Means**

- I can describe the meaning of a point in a scatter plot in context.

### **Lesson 20 Fitting a Line to Data**



- I can pick out outliers on a scatter plot.
- I can use a model to predict values for data.

### **Lesson 21 Describing Trends in Scatter Plots**

- I can draw a line to fit data in a scatter plot.
- I can say whether data in a scatter plot has a positive or negative association (or neither).

### **Lesson 22 The Slope of a Fitted Line**

- I can use the slope of a line fit to data in a scatter plot to say how the variables are connected in real-world situations.

### **Lesson 23 Observing More Patterns in Scatter Plots**

- I can pick out clusters in data from a scatter plot.
- I can use a scatter plot to decide if two variables have a linear association.

### **Lesson 24 Looking for Associations**

- I can identify the same data represented in a bar graph, a segmented bar graph, and a two-way table.
- I can use a two-way frequency table or relative frequency table to find associations among variables.

### **Lesson 25 Using Data Displays to Find Associations**

- I can create relative frequency tables, bar graphs, and segmented bar graphs from frequency tables to find associations among variables.

### **Lesson 26 Using Linear Relations to Solve Problems**

- I can write linear equations to reason about real-world situations.

### **Lesson 27 Solving Problems with Systems of Equations**

- I can use a system of equations to represent a real-world situation and answer questions about the situation.

### **Lesson 28 Gone in 30 Seconds**

- I can collect data and analyze it for associations using scatter plots, two-way tables, and segmented bar graphs.

