

Spotlight On: Talking About Mathematics

Students who talk to others about mathematics learn more, retain more of what they learn, and take more responsibility for their learning. To facilitate mathematical talk, lessons include strategies such as Reciprocal Teaching, Go Chat, and Think-Ink-Pair-Share. For example, during a Go Chat, when teams are working on a problem, students form pairs and move to a different location to discuss their current ideas, then go back to their teams to share what they learned.

The Big Picture

Growing From

Comparing data sets;
Proportionality;
Unit rate

Working On

Create and interpret scatter plots;
Rigid transformations;
Interpret unit rate on a graph;
Graph linear relationships

Growing To

Identify features of a scatter plot;
Dilations and similar figures;
Identify slope and y -intercept in multiple representations

Need Help?

Methods & Meanings boxes are included in the Mathematician's Notebook as reference.

- 1.1.1: Axes, Quadrants, and Graphing on the Coordinate Plane
- 1.1.2: Converting Proportions
- 1.1.3: Solving Equations
- 1.1.4: Scatter Plots
- 1.2.1: Measures of Center and Spread
- 1.2.2: Diamond Problems
- 1.2.3: Dakabibi
- 1.3.1: Proportional Relationships
- 1.3.2: Patterns in Nature

Current Topics

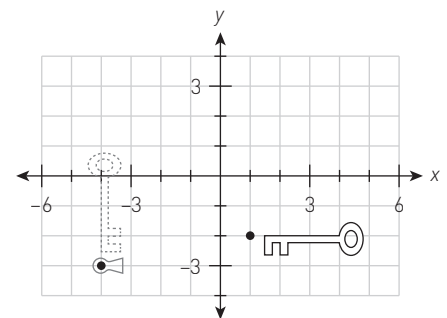
Much of the mathematics students will learn this year requires them to model linear relationships. In this chapter, students will represent bivariate data using scatter plots and explore the idea of trend lines. They will also translate figures in the coordinate plane and graph proportional and non-proportional linear relationships.

Data and Graphs (Section 1.1)

Section 1.1 begins with students moving from representing univariate data on histograms and dot plots to representing bivariate data on scatter plots. Students will also identify linear trends and graph trend lines to make predictions.

Introduction to Transformations (Section 1.2)

In Section 1.2, students will apply their knowledge of scale figures to describe rigid transformations in the plane. Students will initially describe these transformations informally as “flip,” “slide,” and “turn.” In Lesson 1.2.2, they will formally name them “reflection,” “translation,” and “rotation.” Students will also write the coordinates of the vertices of the preimage and image of a transformation.



Linear Relationships (Section 1.3)

In this section, students will graph proportional and non-proportional linear relationships from written descriptions, tile patterns, tables, or equations. Throughout the course, students will continue to work with multiple representations of linear relationships. Many real-world contexts can be represented with linear relations, and it is useful to use different representations to make sense of a context.

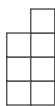


FIGURE 1

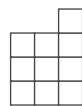


FIGURE 2

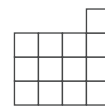
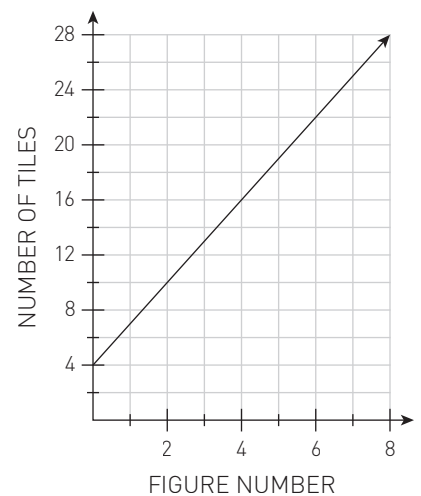


FIGURE 3



Try This at Home!

Students will see many data displays this year, discussing what they do and do not reveal. Share a statistical graph (such as a scatter plot) in a news article or other source, and talk with your student about how that picture tells a story.

