

Spotlight On: Vertical, Non-Permanent Surfaces

In *Inspiring Connections*, students have opportunities to show their understanding of the mathematics in a variety of ways. Sometimes students work in teams to solve problems on vertical, non-permanent surfaces (VNPSs), which provide space to try different solving methods. When students know their work is not permanent, they are more likely to try out new ways of solving and to be willing to articulate incomplete ideas. Working at VNPSs also enables students to get out of their seats and move, which helps them stay engaged.

The Big Picture

Growing From

Using ratios to solve problems;
Describing shape, center, and spread

Working On

Identifying proportional relationships;
Sampling

Growing To

Graphing proportional relationships;
Making inferences about populations

Need Help?

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

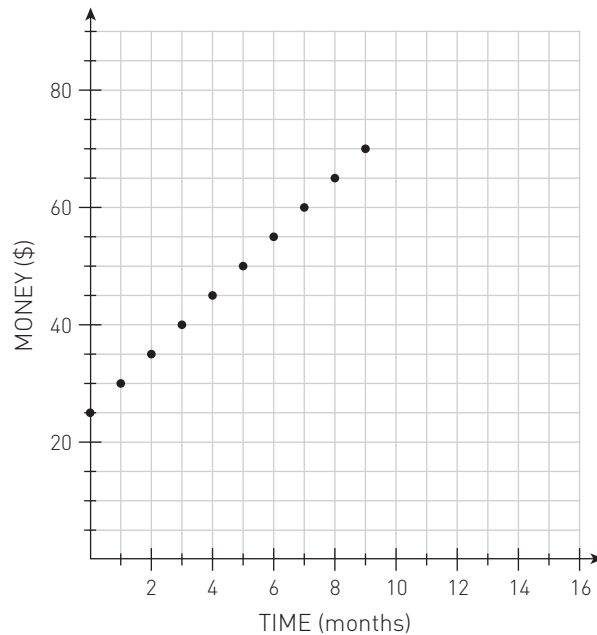
- 3.1.5: Scaling Axes
- 3.2.4: Random Samples and Representative Samples

Current Topics

In this chapter, students will identify proportional relationships represented in words, equations, tables, and graphs. They will also use probability simulations to make predictions about a population and identify when a sample does and does not represent a population.

Proportional Relationships (Section 3.1)

Proportional relationships contain the xy -pair $(0, 0)$ and have a constant rate of change. The graph shown does not represent a proportional relationship because, although the values change at a constant rate, it does not pass through the point $(0, 0)$. The table, however, does represent a proportional relationship since it contains $(0, 0)$ and the values increase at a constant rate.



Time (months)	0	1	2	3	4
Money (\$)	0	6.75	13.50	20.25	27

Data and Statistics: Using Samples to Make Predictions (Section 3.2)

If you were to poll your neighbors about whether they want a community garden paid for by the city, do you think their answers would be representative of the opinions of the entire town? Sometimes it is more feasible to ask a question to a small group of a population instead of asking every person in the population. Whether the results of a poll accurately represent the opinions of a population can depend on who was asked and the methods used to ask them.

Try This at Home!

Create a poll with your student that you can ask friends, neighbors, or family members. Work together to interpret the results.

