Lesson 8 Reteach

Slope

Slope is the rate of change between any two points on a line.

$$\text{slope} = \frac{\text{change in } y}{\text{change in } x} = \frac{\text{vertical change}}{\text{horizontal change}} \text{ or } \frac{\text{rise}}{\text{run}}$$

Example

The table shows the length of a patio as blocks are added.

Number of Patio Blocks	0	1	2	3	4
Length (in.)	0	8	16	24	32

Graph the data. Then find the slope of the line.

Explain what the slope represents.

$\text{slope} = \dfrac{\text{change in } y}{\text{change in } x}$ Definition of slope

$= \dfrac{24 - 8}{3 - 1}$ Use (1, 8) and (3, 24).

$= \dfrac{16}{2}$ $\dfrac{\text{length}}{\text{number}}$

$= \dfrac{8}{1}$ Simplify.
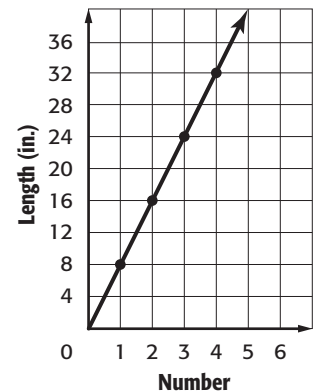
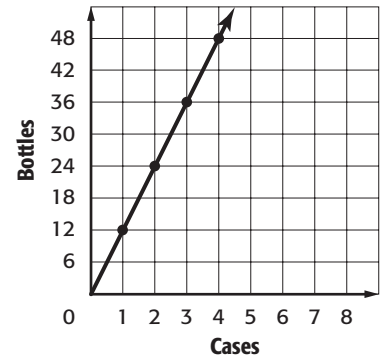So, for every 8 inches, there is 1 patio block.

Exercises

Graph the data. Then find the slope of the line. Explain what the slope represents.

1. The table shows the number of juice bottles per case.

Cases	1	2	3	4
Juice Bottles	12	24	36	48

12; 12 juice bottles per case

2. At 6 A.M., the retention pond had 28 inches of water in it. The water receded so that at 10 A.M. there were 16 inches of water left.

−3; the water went down 3 inches per hour