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).

$= \dfrac{16}{2}$ $\dfrac{\text{length}}{\text{number}}$
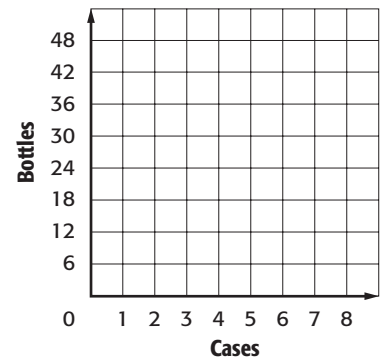
$= \dfrac{8}{1}$ Simplify.
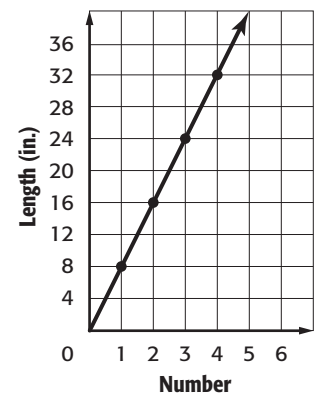
So, for every 8 inches, there is 1 patio block.
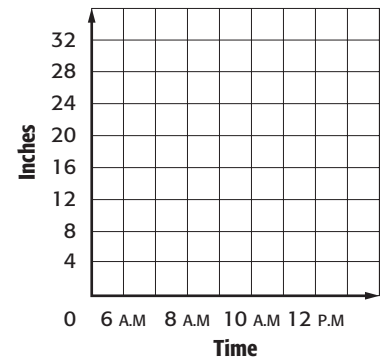
Exercises

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

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.
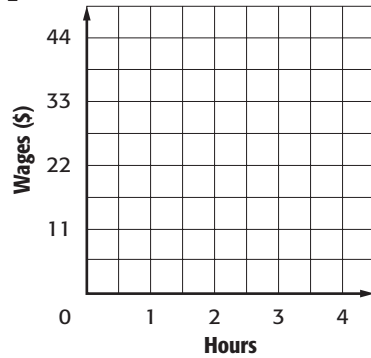
Lesson 8 Skills Practice

Slope

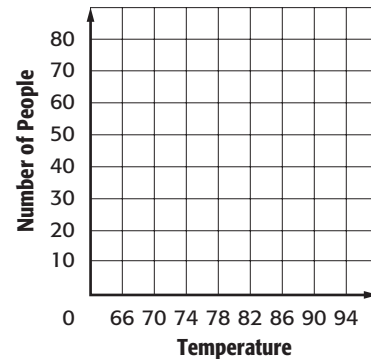**Graph the data. Then find the slope. Explain what the slope represents.**

1.

Hours	1	2	3	4
Wages ($)	11	22	33	44

2.

Temperature (°F)	70	78	86	94
Number of People on Beach	24	40	56	72

3. SWIMMING Latonya swims 50 meters in $\frac{1}{2}$ minute.
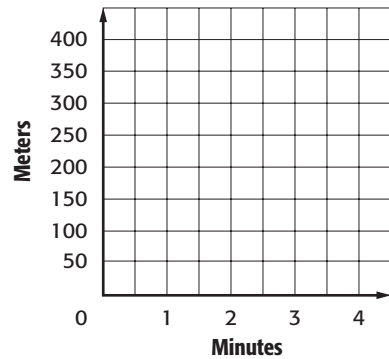
4. SONGS Find the slope of the line on the graph showing the cost to download songs.