Bell Ringer - Find the intercepts of the linear equation.

$$-3y = x - 5$$

Bell Ringer - Find the intercepts of the linear equation.

$$-3y = x - 5$$

x	y
5	0
0	$5/3$

$$-3(0) = x - 5$$
$$0 = x - 5$$
$$+5 \qquad +5$$
$$5 = x$$

$$-3y = 0 - 5$$
$$-3y = -5$$
$$\frac{-3y}{-3} = \frac{-5}{-3}$$
$$y = \frac{5}{3} \text{ or } 1\frac{2}{3}$$

Constant Rate of Change

Rate of Change: a rate that describes how one quantity changes in relation to another quantity.

In a linear function/equation, the rate of change between any two quantities is the same, or constant.

To find the rate of change, use the following procedure: $\dfrac{\text{change in quantity \#2 (y)}}{\text{change in quantity \#1 (x)}}$

- use subtraction to find the change
- make sure to simplify the fraction and/or divide to get per one unit
- in a table or graph, time (years, weeks, days, hours, minutes, etc) is normally quantity #1
- in a table, quantity #2 is normally listed first (I know confusing right?)
- in a graph, quantity #2 is the y, and quantity #1 is the x

Find the constant rate of change in each table.

1.

Items	5	10	15	20
Cost ($)	12	24	36	48

Find the constant rate of change in each table.

1.

Items ✗	5	10	15	20
Cost ($) ✗	12	24	36	48

$$\frac{\text{change in } y}{\text{change in } x}$$

$$\frac{\$12}{5} = 2\frac{2}{5}$$

$\$2.40$ per item

$\$2.40/$ item

Find the constant rate of change in each table.

2.

Time (min)	4	6	8	10
Altitude (ft)	160	120	80	40

Find the constant rate of change in each table.

2.

Time (min) X	4	6	8	10
Altitude (ft) Y	160	120	80	40

$$\frac{change\ in\ y}{change\ in\ x}$$

$$\frac{-40}{2} = \frac{-20}{1}$$

-20 ft per minute

Find the rate of change and interpret the meaning.

3.

Growth of Plant

Height of Plant (in.)

7
6
5
4
3
2
1

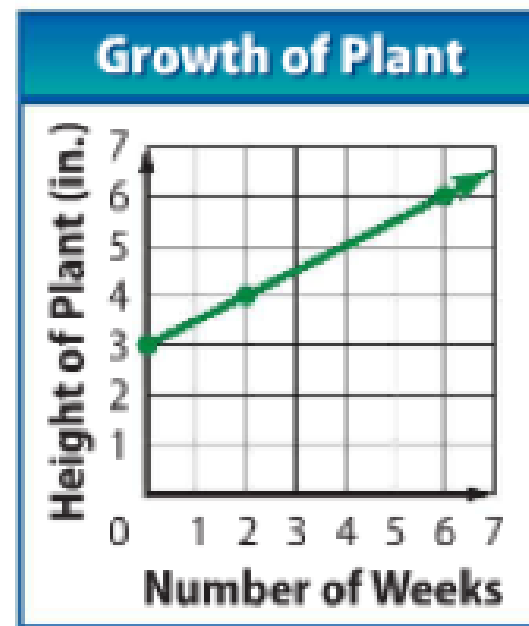0   1 2 3 4 5 6 7

Number of Weeks

Find the rate of change and interpret the meaning.

3.

Growth of Plant
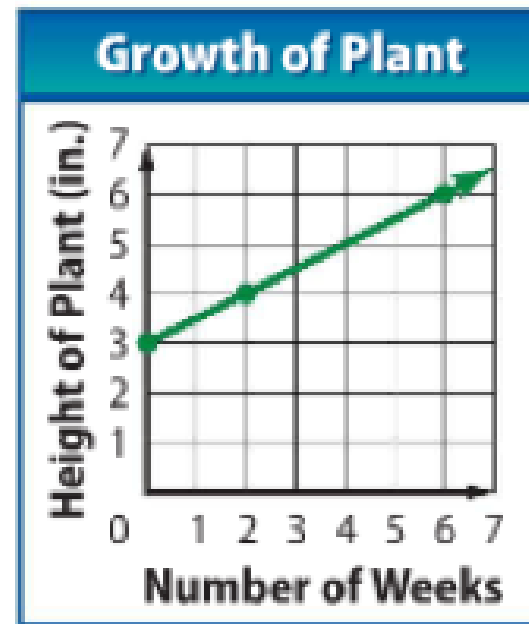
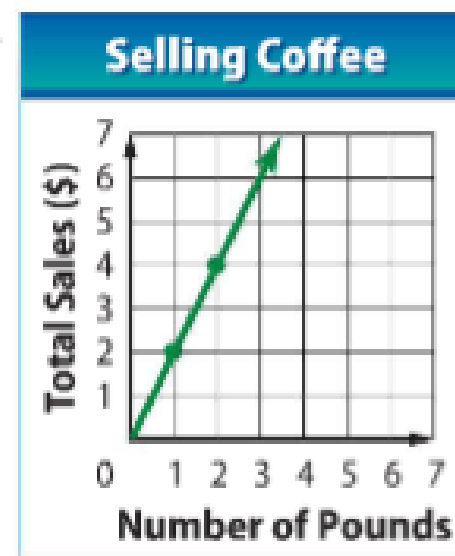

$$\frac{\text{change in } y}{\text{change in } x}$$

$$\frac{1}{2}$$

For every week, the plant grows ½ inch.

Find the rate of change and interpret the meaning.

4.

Selling Coffee

Total Sales ($) vs. Number of Pounds

Find the rate of change and interpret the meaning.

$$\frac{4-2}{2-1} = \frac{2}{1}$$

$2 per pound

Selling Coffee

Total Sales ($) vs Number of Pounds