NAME: Period: SCORE:____/_____=_____%=_____

# HW 7-2

**Int 1** **Constant Rate of Change** **Unit 7**

C R O C

**Determine whether the following tables represent a constant rate of change or not. If they do, state the constant rate of change. Remember that your constant rate of change must contain words. .**

**1.**

| Minutes | 0 | 5 | 10 | 15 |
|---|---|---|---|---|
| Water Left in Pool (liters) | 250 | 225 | 200 | 175 |

$CROC = \frac{-5 \text{ liters}}{1 \text{ min}}$

**2.**

| Time (h) | 0 | 1 | 2 | 3 |
|---|---|---|---|---|
| Wages ($) | 0 | 9 | 18 | 27 |

**3.**

| Time (s) | Distance (m) |
|---|---|
| 1 | 24 |
| 2 | 37 |
| 3 | 52 |
| 4 | 61 |

NO CROC

**4.**

| Weeks | Weight (lbs) |
|---|---|
| 2 | 150 |
| 4 | 142 |
| 6 | 135 |
| 8 | 127 |

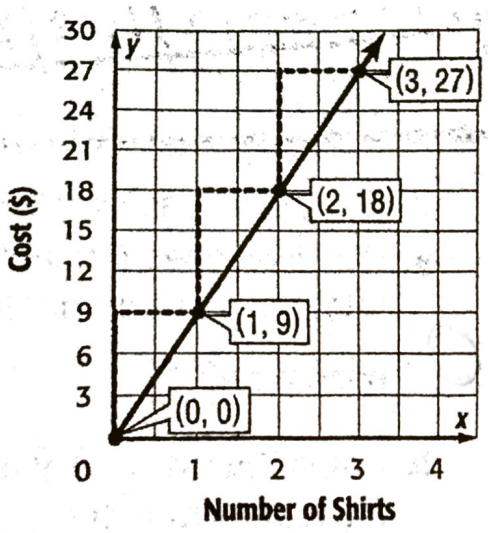
**5.** The graph shows the cost of purchasing T-shirts. Find the constant rate of change for the graph. Then explain what the points (0,0) and (1,9) mean in context.

**Constant Rate of Change:** $\frac{\$9}{1 \text{ shirt}}$

**What does the point of (0,0) mean in the story?:**

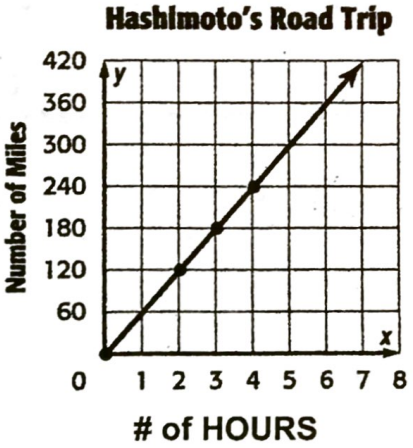
**What does the point of (1,9) mean in the story?:**

1 shirt costs $9.



**6.** The Guzman and Hashimoto families each took a 4-hour road trip. The distances traveled by each family are show in the table and the graph below. Which family averaged fewer miles per hours? EXPLAIN how you know.

| Guzman's Road Trip | |
|---|---|
| Time (hours) | Distance (miles) |
| 2 | 90 |
| 3 | 135 |
| 4 | 180 |




**7.** Make a table where the constant rate of change is 6 inches every second.

| Seconds ($x$) | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| Inches ($y$) | 0 | 6 | 12 | 18 | 24 | 30 |

**8.** The constant rate of change for the relationship shown in the table is \$8 per hour. Find the missing values.

$y$ =_____ $z$ =_____

| Time (h) | 0 | 1 | 2 |
|---|---|---|---|
| Earnings (\$) | 5 | $y$ | $z$ |

**9.** The information in the table represents a constant rate of change. Find the missing value.

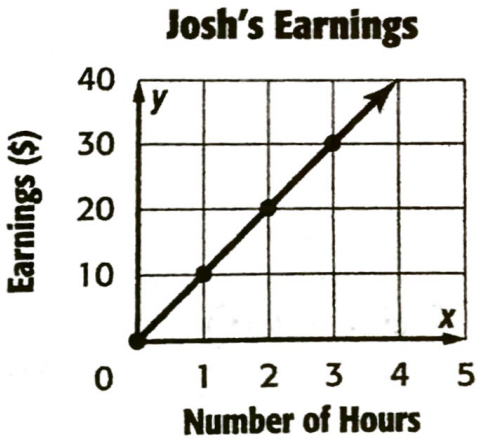
**a)** 30
**b)** 90
**c)** 105
**d)** 120

| Number of Packages | 2 | 4 | 7 |
|---|---|---|---|
| Number of Raisins | 30 | 60 | $x$ |

**10.** The cost of 1 movie ticket is $7.50. The cost of 2 movie tickets is $15. Based on this constant rate of change, what is cost of 4 movie tickets? (Show your work).

**11.** Ramona and Josh earn money by babysitting. The amounts earned for one evening are shown in the table and graph below. Who charged more per hour? EXPLAIN how you know.

| Ramona's Earnings | |
|---|---|
| Time (hours) | Earnings ($) |
| 2 | 18 |
| 3 | 27 |
| 4 | 36 |




*show your work!*

Explanation: Josh charged more.

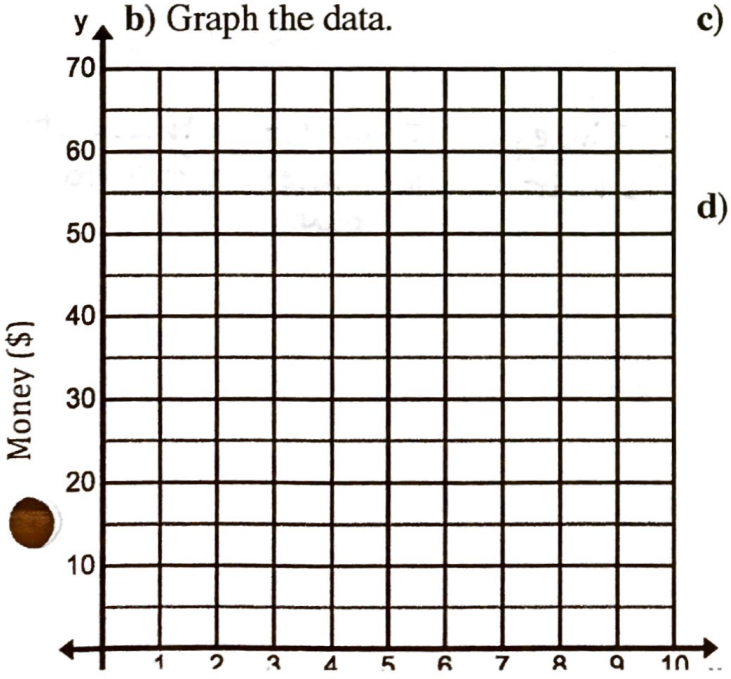
Josh charged $10/hour and Ramona charged $9/hour

**12.** The table below shows your bank account balance throughout the week.

**a)** Complete the table.

| $x$ (Days) | 0 | 2 | 4 | 6 | 8 | 10 |
|---|---|---|---|---|---|---|
| $y$ (Money) | 50 | 46 | | | | |
| $(x, y)$ | (0, 50) | (2,46) | | | | |

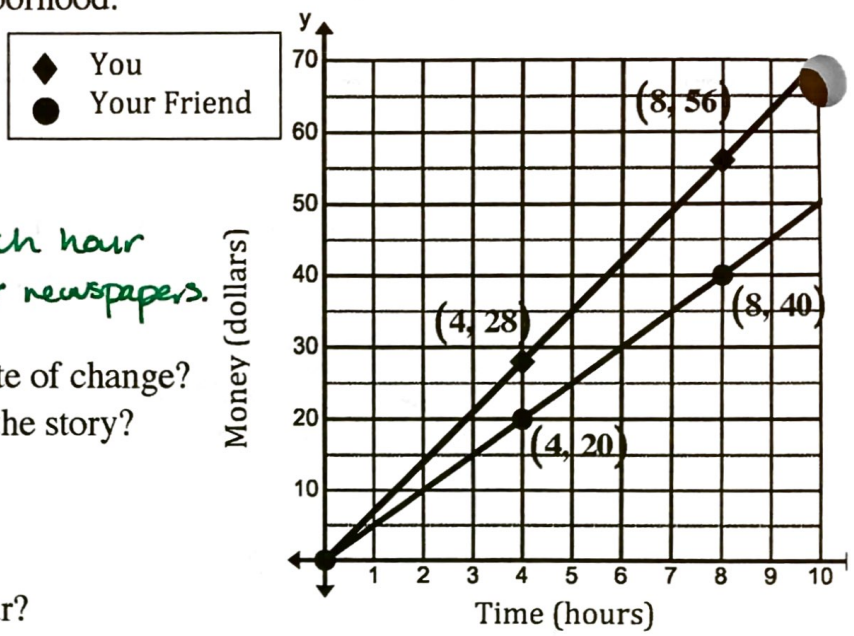
**b)** Graph the data.




**c)** How much money are you spending every day?

**d)** What is the constant rate of change?

**13.** The following graph shows the money you and your friend make for delivering newspapers to houses in your neighborhood.




a) What is your constant rate of change? What does it mean in context of the story?

$\frac{\$7}{1 \text{ hour}}$ I make $7 each hour that I deliver newspapers.

b) What is your friend's constant rate of change? What does it mean in context of the story?

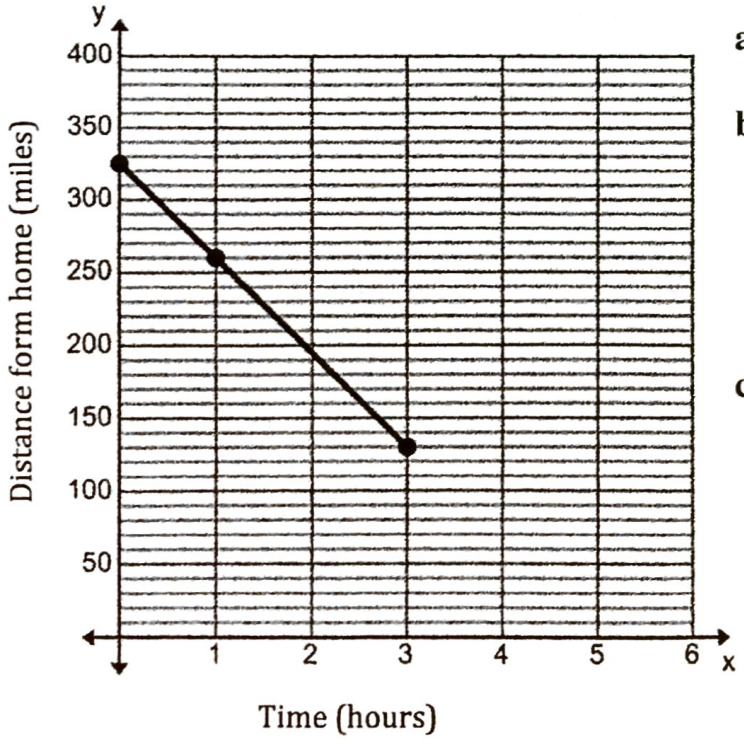
c) Who makes more money per hour?

I do. (You)

d) How many hours would you have to work to earn $91?

**14.** The table and graph below describes you returning home from a vacation.

| $x$ (hours) | 0 | 1 | 2 | 3 |
|---|---|---|---|---|
| $y$ (miles from home) | 325 | 260 | | 130 |
| $(x, y)$ | (0,325) | (1,260) | | (3,130) |




**a.** Complete the ordered pairs in the table.

**b.** What is the rate of change? What does it mean in the story?

$\frac{-65 \text{ miles}}{1 \text{ hour}}$ Each hour you get 65 miles closer to home.

**c.** How many miles will it take you to get home from your vacation? How do you know?