

HW 7-2

Int 1

Constant Rate of Change

Unit 7

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

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

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

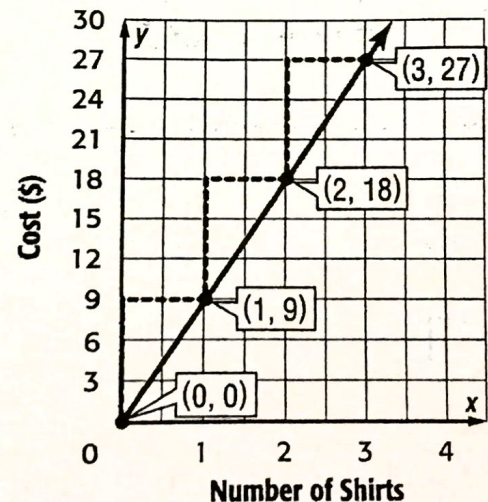
5. The graph shows the cost of purchasing T-shirts. Find the constant rate of change for the graph. Then explain what the points (0,0) and (1,9) mean in context.

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

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

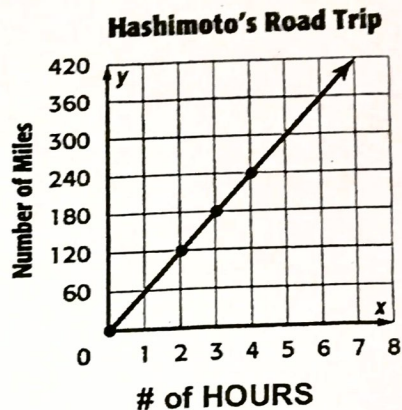
What does the point of (1,9) mean in the story?:

If you buy 1 shirt it will cost \$9.



6. The Guzman and Hashimoto families each took a 4-hour road trip. The distances traveled by each family are shown in the table and the graph below. Which family averaged fewer miles per hour? 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

ANSWERS MAY VARY

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

$x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$ $z = \underline{\hspace{2cm}}$

Time (h)	1	2	3
Earnings (\$)	x	y	z

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

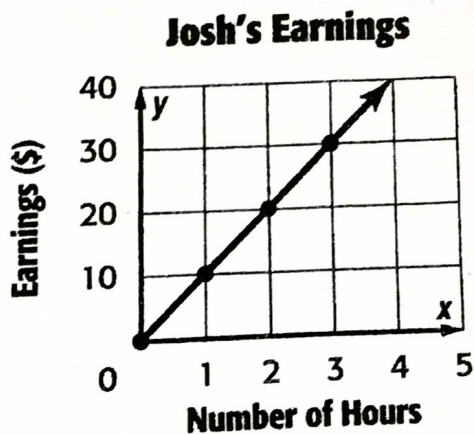
- a) 30
b) 90
c) 105
d) 120

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



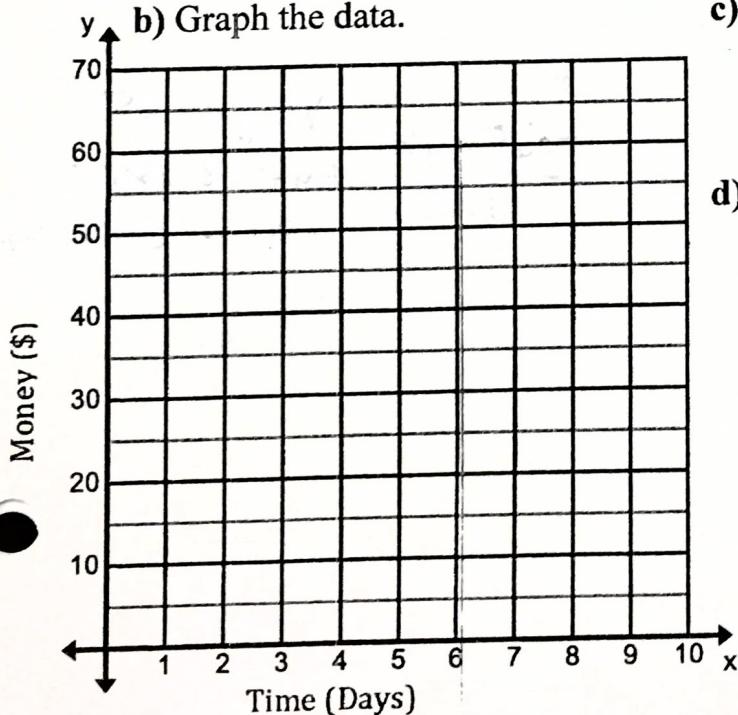
Explanation: Josh. He charged more than Ramona per hour. \$10/1hour vs \$9/1hour

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?

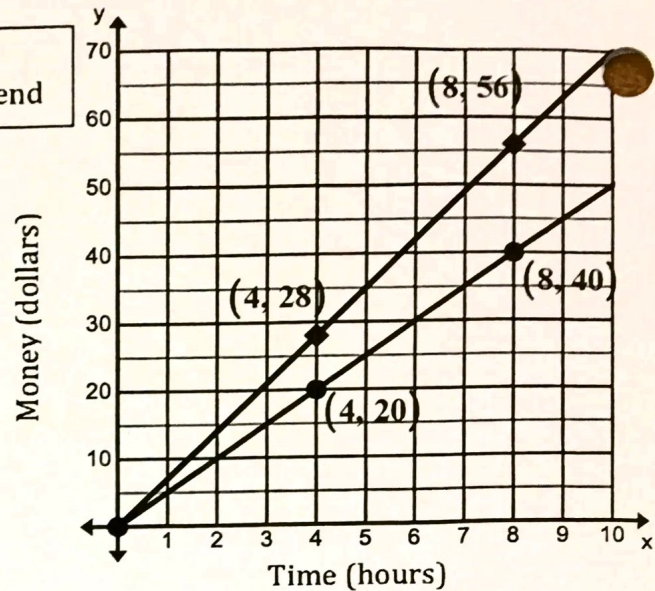
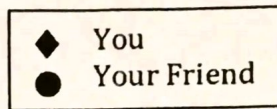
d) What is the constant rate of change?

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?

$$\frac{\$28}{4 \text{ hrs}} = \frac{\$7}{1 \text{ hr}} \quad \text{You earn } \$7 \text{ every hour you work.}$$

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

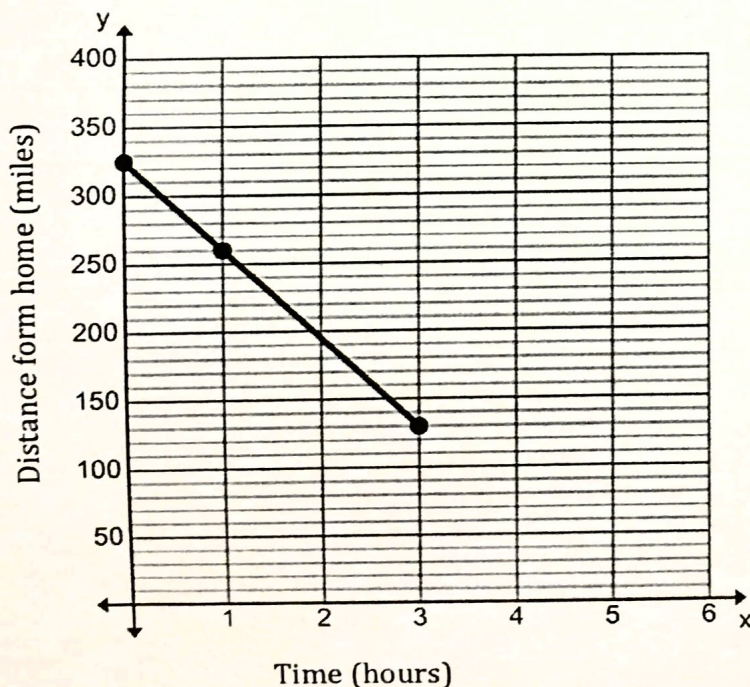


- c) Who makes more money per hour? *You.*

- 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	5
y (miles from home)	325	260	130	0
(x, y)	(0,325)	(1,260)	(3,130)	(5,0)



- a. Complete the ordered pairs in the table.

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

$$\frac{-65 \text{ miles}}{1 \text{ hour}} \quad \text{You get 65 miles closer to home each hour.}$$

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