Unit 2 Day 4 – Find the Rate of Change Assignment

Name: _____

All things are difficult before they are easy.

1.

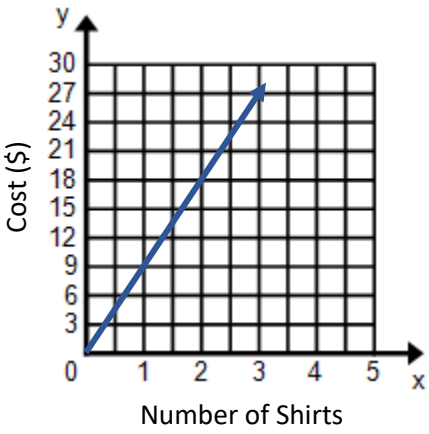
Time (s)	1	2	3	4
Distance (m)	6	12	18	24

a. Does this table represent a proportional relationship?

b. What is the constant rate of change?

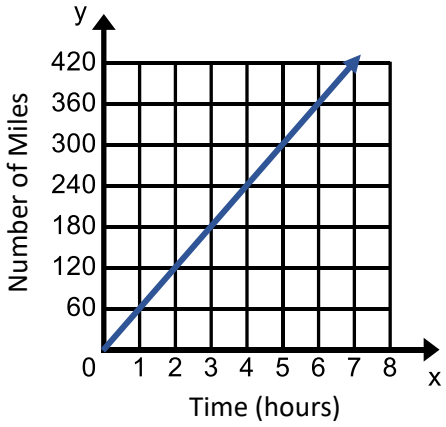
2. The graph shows the cost of purchasing T-shirts. Find the constant rate of change for the graph.

Explain what points (0, 0) and (1, 9) represent.



3. The Johnson family and the Jorgensen family each took a 4-hour road trip. The distances traveled by the Johnsons are shown in the table and the Jorgensens' data is in the graph below.

Time (hours)	Distance (miles)
2	90
3	135
4	180



Which family drove fewer miles per hour?
Explain your reasoning:

4. At 1:00 pm, the water level in a pool is 13 inches. At 1:30 pm, the water level is 18 inches. At 2:30 pm, the water level is 28 inches. What is the constant rate of change?

5. 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 the cost of 4 movie tickets?

6. Use the information to find the constant rate of change. (Multiple Choice)

Number of Apples	3	7	11
Number of Seeds	30	70	110

a) $\frac{4}{40}$ b) $\frac{40}{4}$ c) $\frac{1}{10}$ d) $\frac{10}{1}$

7. Complete the table below.

Number of Tickets (x)	1	2	3	4	5	6	7
Total cost (y)	$3	$6	$9	$12	$15		

a. Is the relationship in this table proportional?

b. Write an equation that is a rule for when you input a number of tickets (x) to get an output of cost (y). y =

c. What connections do you see between the unit rate, the table, and the equation?

d. Write an equation that is a rule for when you input cost (y) and get an output of number of tickets (x). x =

e. What is a situation when the equation in part b would be helpful?

f. What is a situation when the equation in part d would be helpful?

g. What is the mathematical relationship between the constant of proportionality in the two equations from part b and d?

8. Does the graph to the right show a proportional relationship?

What is the unit rate?

Write the equation relating cost to number of ice cream bars purchased.