

8.F.2 Compare properties of two functions each represented in a

Mattie created two functions.

For Function A, the value of y is two less than four times the value of x . The table to the right represents Function B.

$y = 4x - 2$ (Function A)

Function B

x	y
-3	-9
-1	-5
1	-1
3	3

In comparing the rates of change, which statement is true?

- a) Function A and Function B have the same rate of change.
- b) Function A has a greater rate of change than Function B has.
- c) Function A and Function B both have negative rates of change.
- d) Function A has a negative rate of change and Function B has a positive rate of change.

Salary Plan 1

$y = 7x + 100$

$m = 7$

Salary Plan 2

x	y
10	152
20	252
30	352
40	452

John was given a choice between two weekly salary plans. He plans to work for one year. What information should he use to choose?

- a) He chose Plan 1 because of the \$100.
- b) He chose Plan 2 because of the \$152.
- c) He chose Plan 1 because of the \$7.
- d) He chose Plan 2 because of the \$100/10.

hourly rate

Michelle planted two plants. After each plant had grown a little, she began using them for a science experiment.

Plant 1:

Number of Days (x)	0	1	2	3	4
Height in cm (y)	1.5	3.5	5.5	7.5	9.5

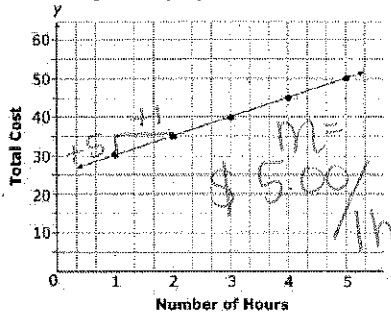
Plant 2:

The equation $y = 3 + 1.5x$ represents y , the height in centimeters, of Plant 2 over x days.

The correct rates of change for Plant 1 and 2 are?

- a) Plant 1 is 1.5 ; Plant 2 is 1.5
- b) Plant 1 is 1.0 ; Plant 2 is 3
- c) Plant 1 is 1.5 ; Plant 2 is 3
- d) Plant 1 is 2.0 ; Plant 2 is 1.5

Kelly's Equipment Rental



Wendy's Watersports

Hours	Cost
2	\$35
5	\$65
7	\$85

The FFA leader was trying to decide which kayak rental was a better deal, which is correct?

- a) Wendy's charges \$10 less per hour.
- b) Kelly's charges \$10 less per hour.
- c) Wendy's charges \$5 less per hour.
- d) Kelly's charges \$5 less per hour.

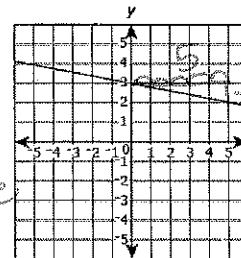
Two relations are given in different formats.

Use these relations to answer the questions.

Part A: Determine whether or not each relation represents a function. Justify your answers.

relation 1 is a function b/c each coordinate pair has an x value with only one y value. No 2 pts share the same x value. relation 2 is a function b/c x doesn't repeat.

Relation 1



Relation 2

m	t
-3	10
-2	5
-1	2
0	1
1	2
2	5
3	10

Part B: Determine whether each function identified in Part A is linear or nonlinear. Explain how you know.

relation 1 is linear because it forms a straight line. relation 2 is not linear because it doesn't have a constant rate of change.

Part C: Write an equation for each linear function identified in Part B. Explain what each part of your equation(s) represents.

Relation 1: $b = 3$ (y-int.)
 $m = -\frac{1}{5}$ (slope) $y = -\frac{1}{5}x + 3$