

Name: _____

Parent Signature: _____

Function Test - Friday 10/28/16

1. What is the equation that defines a linear function? $y = \underline{mx + b}$

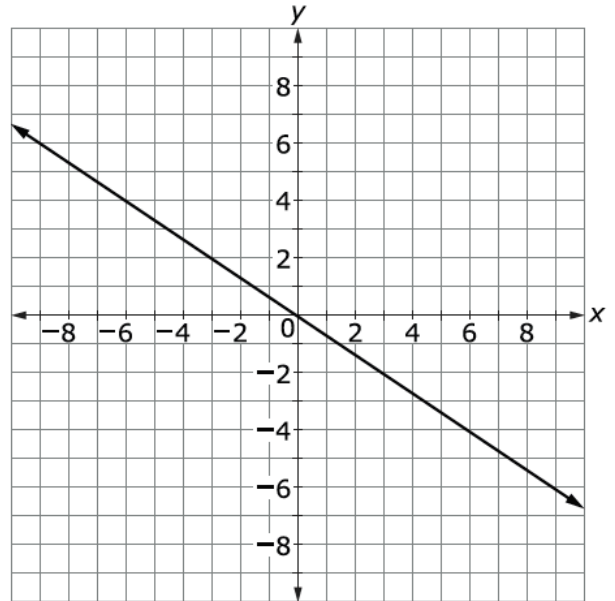
2. Find the rate of change for the linear functions below:

a.

x	y
-2	-8
3	-4
8	0

4/5

b. -2/3



c. $4y = 3x +$ 3/4 1

d. $y = \frac{4}{5}x$ 4/5

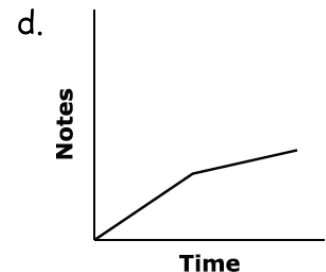
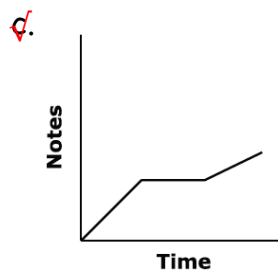
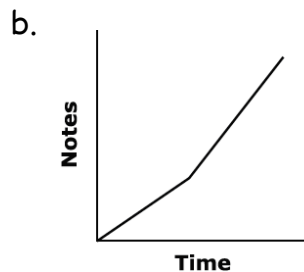
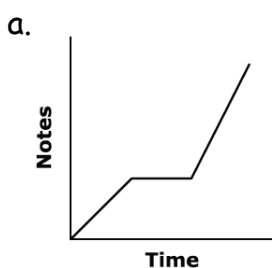
3. Which function has the greatest rate of change?

x	3	4	5	6
y	45	51	57	63

6

✓ $y = 7(x - 2) + 4$ 7

4. London plays a certain number of notes in a set amount of time on the flute. She rests for an equal amount of time, then play fewer notes in the same amount of time it took her to play the first set of notes. Which graph can be used to represent the situation?



5. Complete the table. Determine the rate of change (slope) and the y-intercept (initial value). Then write the equation for the linear function.

Flower Bouquets	0	2	4	6	8	10
Cost per bouquet	4.50	12.50	20.50	28.50	36.50	44.50

Equation: $y = 4x + 4.50$

6. The table shows the relationship between the average number of hours students study for a mathematics test and their average grade.

Hours studying	Average Grade
0	62
1	78
2	85
5	74

Does the diagram represent a function?

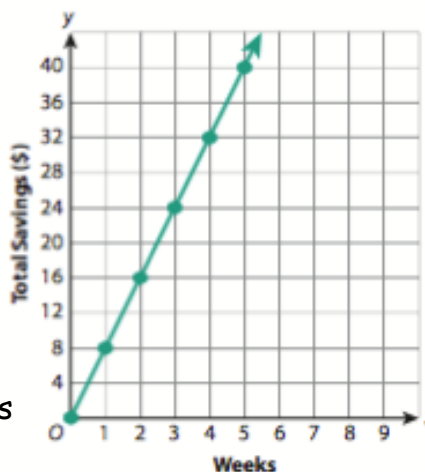
- a. linear function with positive slope
- b. linear function with negative slope
- c. non-linear function that decreases then increases
- ✓d. non-linear function that increases then decreases

7. The table and graph show data about the money saved over a number of weeks for students Dolan and Iman.

Dolan's Savings

Weeks	Savings
4	16
7	28
11	44

Iman's Savings



Equation: $y = 8x$

Equation: $y = 4x$

- a. Write the equation for both students
- b. How much does Dolan save per week? **\$4.00**
- c. How much does Iman save per week? **\$8.00**
- d. How many weeks does it take Iman to save the same as Dolan does in 8 weeks? **4 weeks**
- e. True or False: Each week Iman saves 4 times as much as Dolan? **false**
 Each week Dolan saves $\frac{1}{2}$ of what Iman saves? **true**
 Each week Iman saves twice as much as Dolan? **true**