

TEST NAME: **Math 8 online Feb 21**
TEST ID: **2898690**
GRADE: **08 - Eighth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **My Classroom**

Student: _____

Class: _____

Date: _____

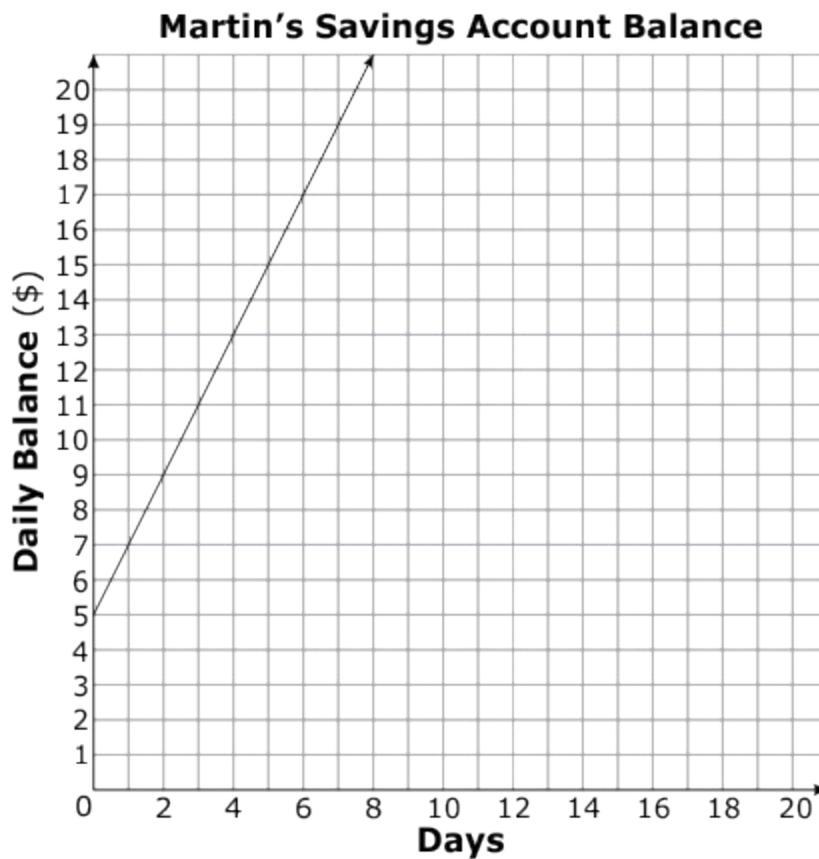
1. A recipe for chocolate chip cookies calls for 4 cups of flour and makes 72 cookies. A recipe for oatmeal cookies uses the table below to determine the amount of flour, x , to make y cookies.

Cup(s) of Flour (x)	Number of Cookies (y)
1	16
2	32
3	48

Which statement is true?

- A. The chocolate chip recipe makes 2 cookies more per cup of flour than the oatmeal recipe.
- B. The oatmeal recipe makes 2 cookies more per cup of flour than the chocolate chip recipe.
- C. The chocolate chip recipe makes 8 cookies more per cup of flour than the oatmeal recipe.
- D. The oatmeal recipe makes 8 cookies more per cup of flour than the chocolate chip recipe.

2. Martin's savings account balance is represented in the graph below.



Suzie's savings account balance is represented in the table below.

Days (x)	Account Balance (y)
3	\$19.50
6	\$24.00
10	\$30.00
15	\$37.50

Who has less money in their savings account on the 12th day, and by how much?

- A. Martin has \$4.00 less in his savings account than Suzie.
- B. Suzie has \$4.00 less in her savings account than Martin.
- C. Martin has \$10.00 less in his savings account than Suzie.
- D. Suzie has \$10.00 less in her savings account than Martin.

3. The equation $y = 1.50x - 6$ represents the profit, y , Tim earns selling x bracelets. The table below shows the profit Juanita earns after selling different numbers of bracelets.

Juanita's Profit

Number of Bracelets Sold	Profit
10	\$5.00
12	\$7.80
15	\$12.00

Which statement is true?

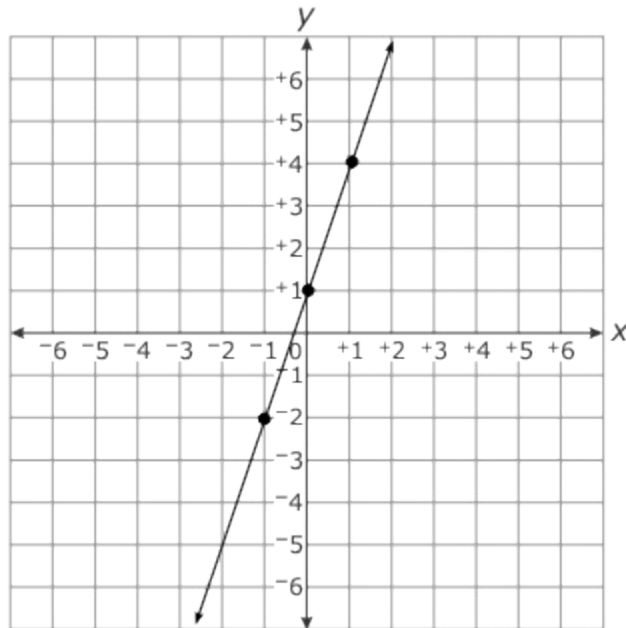
- A. Tim and Juanita will earn the same profit selling 20 bracelets.
- B. Juanita will earn more profit than Tim after selling 20 bracelets.
- C. Juanita will always earn more profit than Tim when equal numbers of bracelets are sold.
- D. Tim will always earn more profit than Juanita when equal numbers of bracelets are sold.

4. The table and graph below represent two different functions.

Function 1

x	y
3	-12
1	-2
0	3

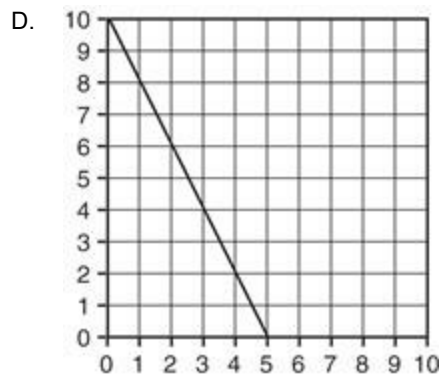
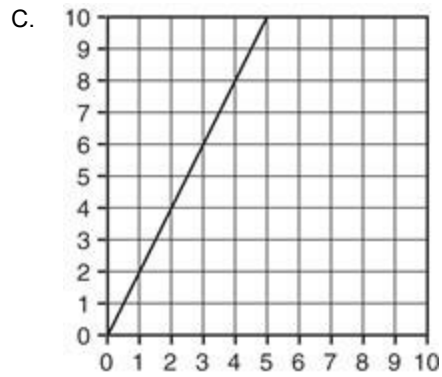
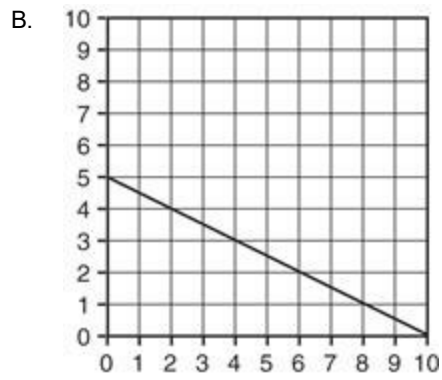
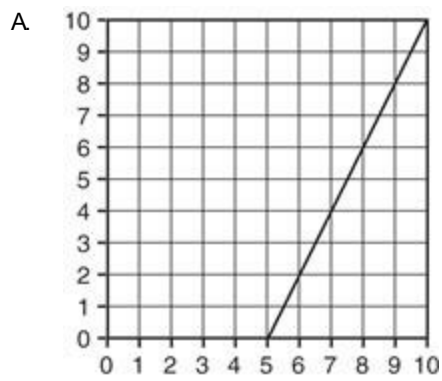
Function 2



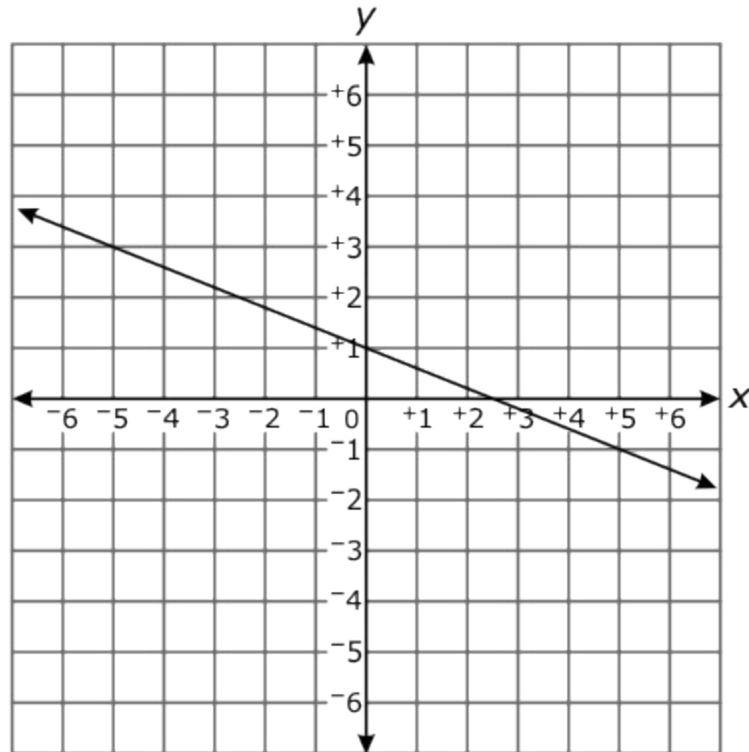
What is the difference between the slopes of the two functions?

- A. 2
- B. 4
- C. 6
- D. 8

5. Which graph BEST represents the equation $y = 10 - 2x$?



6. A linear function goes through the points $(-4, 2)$ and $(4, -4)$. A second linear function is shown on the graph below.



Which is the larger of the two slopes?

- A. $-\frac{2}{5}$
- B. $-\frac{3}{4}$
- C. $-\frac{4}{3}$
- D. $-\frac{5}{2}$

7. The estimated total weight of a tomato plant is determined by adding the weight of the vine and the weight of the fruit. Anna compared the weights of two of her tomato plants.
- Anna used the equation $y = \frac{1}{4}x + 1$, where x represents the number of tomatoes on the vine, to estimate the total weight, y , of her first tomato plant.
 - When her second tomato plant had 8 tomatoes on it, the total weight of the plant was 2 pounds.
 - When her second tomato plant had 16 tomatoes on it, the total weight of the plant was 3 pounds.

Which statement is true?

- A. The weight of a tomato on the first plant is twice the weight of a tomato on the second plant.
- B. The weight of a tomato on the first plant is half the weight of a tomato on the second plant.
- C. The weight of the vine on the first plant is half the weight of the vine on the second plant.
- D. The weight of the vine on the first plant is twice the weight of the vine on the second plant.
8. In which choice is y a nonlinear function of x ?

A. $y = \frac{1}{4}x$

B. $x = \frac{1}{4}y$

C. $y = 2 \div x$

D. $x = y \div 2$

9. Which equation is a linear function?

A. $y = x$

B. $y = x^2$

C. $y = x^3$

D. $y = x^4$

10. Which set of points are linear?

- A. $(-1, -2), (0, 6), (1, 2)$
- B. $(0, -4), (1, -1), (3, 5)$
- C. $(2, 3), (4, 2), (6, 3)$
- D. $(1, 1), (4, 16), (6, 36)$

11. Sandra determined that when the values in this table are graphed, they will produce a nonlinear function.

x	y
2	4
3	9
4	16
5	25

Which statement explains whether or not Sandra is correct?

- A. Sandra is incorrect because the x -values are greater than 1.
- B. Sandra is correct because the x -values and the y -values are greater than 1.
- C. Sandra is incorrect because the changes in the x -values and the y -values are both constant.
- D. Sandra is correct because the change in the x -values is constant and the change in the y -values is not constant.

12. Which represents a linear function?

A. $y = \frac{5}{x}$

B. $y = x^2 - 3$

C. $y = |x - 1|$

D. $y = \frac{1}{2}x + 2$

13. Which equation represents a linear function?

A. $y = 2x$

B. $6x + 4y = 3xy$

C. $y = 4 - x^2$

D. $7xy = 12$

14. In which table is y a linear function of x ?

A.

x	y
1	14
2	13
3	12
4	11

B.

x	y
1	7
2	11
5	9
7	4

C.

x	y
1	12
1	13
1	14
1	15

D.

x	y
0	2
1	4
2	8
3	16

15. In which table is y a linear function of x ?

A.

x	y
3	5
5	7
7	10
9	12

B.

x	y
1	-5
4	-3
7	0
10	2

C.

x	y
-8	6
-5	2
-1	-2
2	-6

D.

x	y
-2	6
-5	0
-8	-6
-10	-10