TEST NAME: **8.F 1,2,3 Review**
TEST ID: **963502**
GRADE: **08 - Eighth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **Shared Classroom Assessments**

03/18/16, 8.F 1,2,3 Review

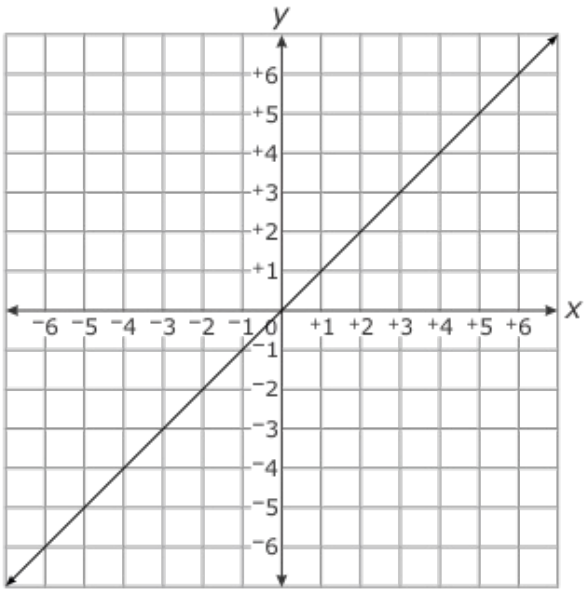
Student: _____

Class: _____

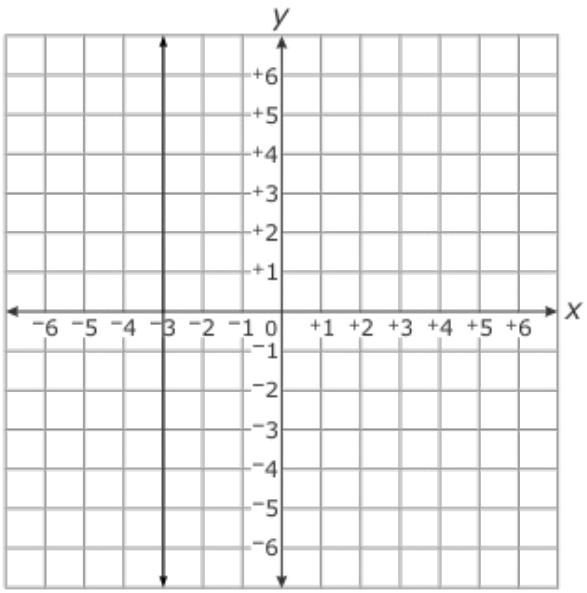
Date: _____

1. In which graph is *y* ***not*** a function of *x*?

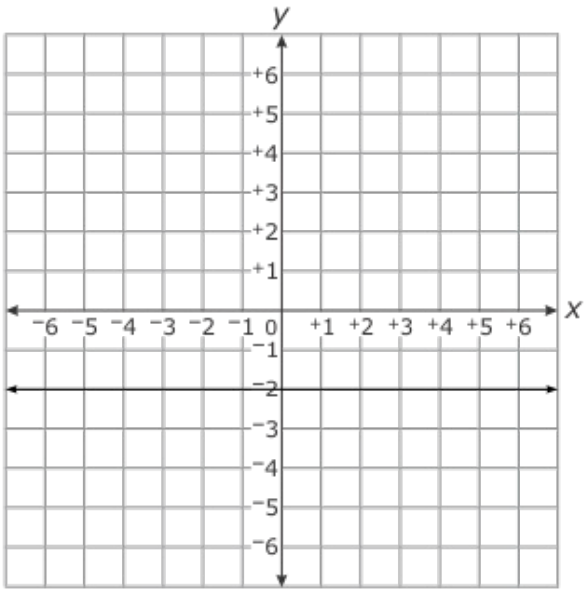
A.



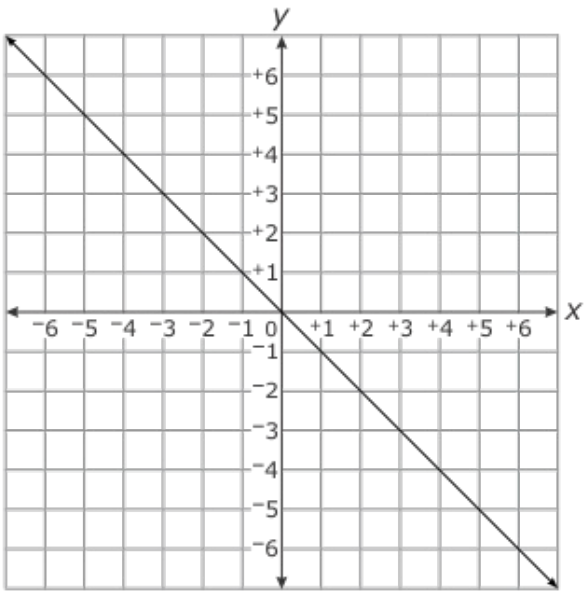
B.



C.



D.



2. Which choice represents a function?

A. $x = 4$

B. $y = x - 9$

C.

x	*y*
−2	3
4	3
−1	4
−2	4
5	5

D. {(2, 3), (4, 5), (6, 7), (2, 9), (3, 10)}

3. Which equation is ***not*** a function?

A. $y = x^2 + 9$

B. $y = -2 - 2x$

C. $x = y$

D. $x = 3$

4. In which set of ordered pairs is y a function of x?

A. {(1, 3), (2, 3), (3, 3), (4, 3)}

B. {(0, 2), (2, 5), (0, 4), (1, 5)}

C. {(−1, 5), (2, 6), (4, 8), (−1, 4)}

D. {(1, 3), (−2, 5), (−2, 7), (3, 5)}

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

A.

x	y
-4	-3
-2	1
0	5
2	9

B.

x	y
-3	-9
-2	-4
-1	-1
0	0

C.

x	y
1	1
2	8
-1	-1
-2	-8

D.

x	y
-1	1
-2	-2
-3	3
-4	-4

6. Two stores sell used DVDs. Both stores charge a flat fee for shipping, plus the same price for any used DVD. Store A charges a total of $20.99 for 4 used DVDs and $32.99 for 7 used DVDs. Store B's costs are represented in the table below.

Store B

Number of DVDs	**Total Cost** ($)
4	20.99
6	29.49
9	42.24

Which statement is true?

A. Store A charges $0.25 more per DVD than Store B.

B. Store A charges $1.00 more for shipping than Store B.

C. Store B charges $0.25 more for shipping than Store A.

D. Store B charges $1.00 more per DVD than Store A.

7. Two functions are shown below.

Function 1: $y = \frac{6}{5}x + 2$

Function 2:

x	***y***
$^{-}4$	$^{-}12$
$^{-}2$	$^{-}9$
0	$^{-}6$
2	$^{-}3$
4	0

Which statement is true?

A. The y-intercepts are the same.

B. The slope of Function 1 is greater than the slope of Function 2.

C. The slope of Function 2 is greater than the slope of Function 1.

D. The y-intercept of Function 2 is greater than the y-intercept of Function 1.

8. Taxi Company #1 uses the equation $y = 4x + 2$ to calculate the cost, y, to ride x number of miles. Taxi Company #2 uses the table below to calculate the cost for a ride.

Taxi Company #2

Miles	Cost
3	$14.95
5	$23.75
8	$36.95

Which company charges the most per mile and by how much?

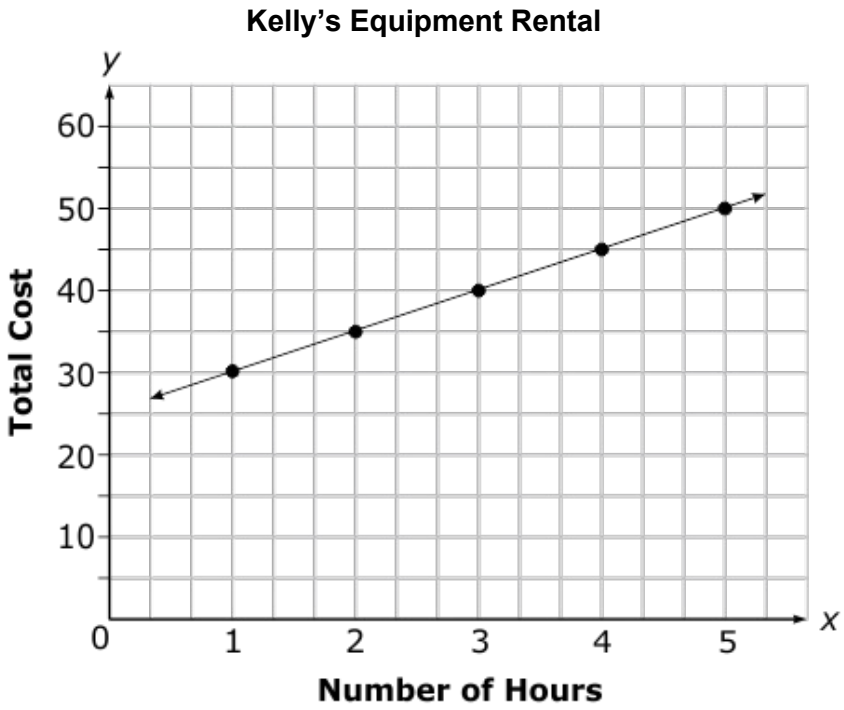
A. Taxi Company #1, by $0.25

B. Taxi Company #2, by $0.25

C. Taxi Company #1, by $0.40

D. Taxi Company #2, by $0.40

9. Kelly's Equipment Rental and Wendy's Watersports charge by the hour to rent a kayak. The graph below shows the total cost to rent a kayak from Kelly's Equipment Rental based on different numbers of hours.



The total costs to rent a kayak from Wendy's Watersports are listed in the table below.

Wendy's Watersports

Hours	Cost
2	$35
5	$65
7	$85

Who charges less per hour, and by how much?

A. Kelly's Equipment Rental charges $10 less per hour.

B. Wendy's Watersports charges $10 less per hour.

C. Kelly's Equipment Rental charges $5 less per hour.

D. Wendy's Watersports charges $5 less per hour.

10. Laura's cell phone service costs $65 per month, plus an additional $0.10 per text message sent. The table below shows the cost for Zach's cell phone service based on the number of texts messages he sends.

Number of Texts (x)	**Total Cost** (y)
20	$50.00
50	$57.50
100	$70.00

How much cheaper is Zach's cell phone service than Laura's when no text messages are sent?

A. $15

B. $20

C. $35

D. $40

11. Pizza Village uses the equation $y = 1.10x + 9$ to calculate the cost of a cheese pizza with x additional toppings. The table below shows the cost of cheese pizza from Mama Mia's based on the number of additional toppings.

Number of Toppings	**Total Cost**
3	$11.75
5	$14.25
8	$18.00

Which statement is true?

A. Mama Mia's charges $2.82 more per topping than Pizza Village.

B. Pizza Village charges $2.82 more per topping than Mama Mia's.

C. Mama Mia's charges $0.15 more per topping than Pizza Village.

D. Pizza Village charges $0.15 more per topping than Mama Mia's.

12. Ronaldo's Heating and Cooling company uses the equation, $y = 35x + 39.99$ to calculate the cost, y, of working on equipment x number of hours. Brennan's Heating and Cooling company uses the table below to calculate the cost of working on equipment for different numbers of hours.

Brennan's Heating and Cooling

Working Hours (x)	**Total Cost** (y)
2	$114.99
4	$179.99
6	$244.99

If it takes 5 hours to work on equipment, which heating and cooling company charges less and by how much less?

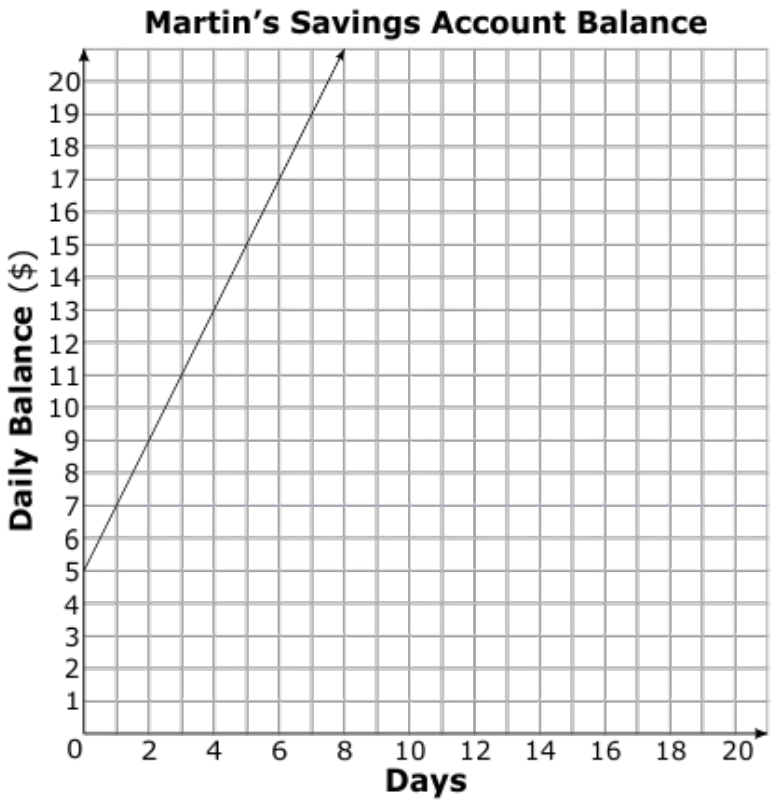
A. Ronaldo's Heating and Cooling company charges $2.50 less for 5 hours of work.

B. Brennan's Heating and Cooling company charges $2.50 less for 5 hours of work.

C. Ronaldo's Heating and Cooling company charges $5.00 less for 5 hours of work.

D. Brennan's Heating and Cooling company charges $5.00 less for 5 hours of work.

13. 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.

14. Which equation represents a linear function?

A. $y = 2x$

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

C. $y = 4 - x^2$

D. $7xy = 12$

15. Which choice is a linear function?

A.

x	*y*
0	0
1	1
2	9

B.

x	*y*
2	2
4	9
6	8

C. $y = 2x^2 - 10$

D. $2x + 3y = 12$

16. Which set of points are linear?

A. $(^{-}1, ^{-}2), (0, 6), (1, 2)$

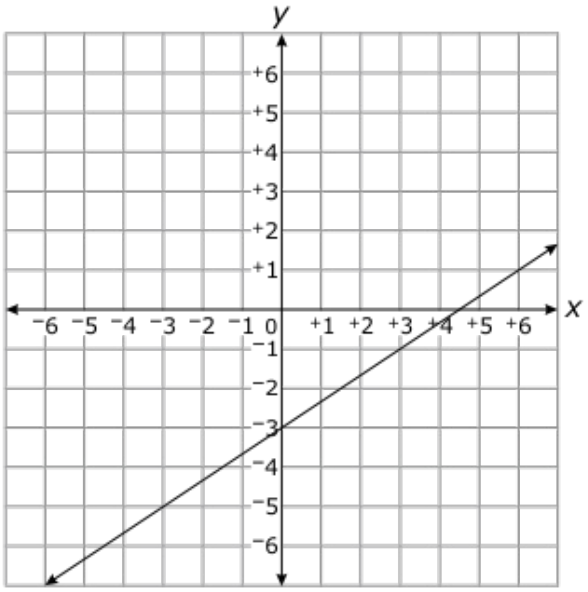
B. $(0, ^{-}4), (1, ^{-}1), (3, 5)$

C. $(2, 3), (4, 2), (6, 3)$

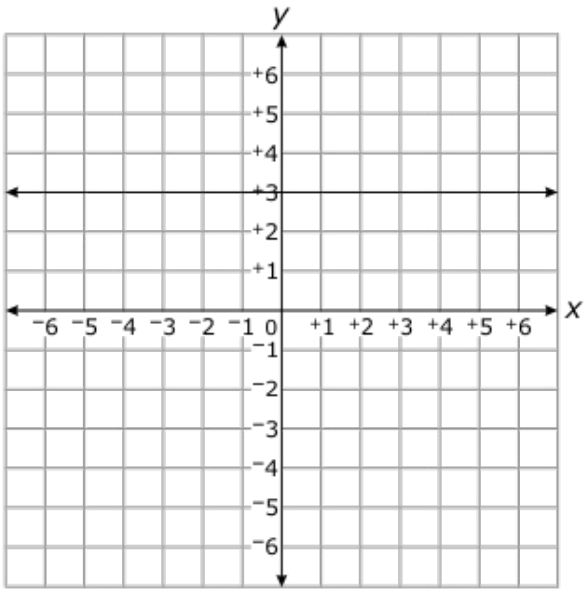
D. $(1, 1), (4, 16), (6, 36)$

17. In which graph is *y* a nonlinear function of *x*?

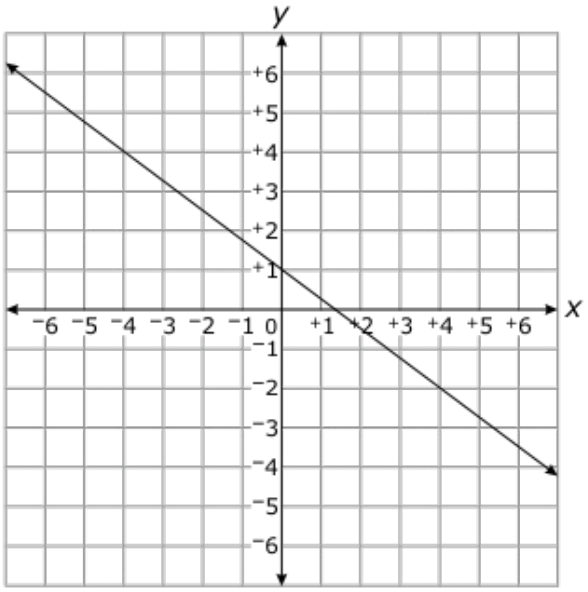
A.


y
x
+6
+5
+4
+3
+2
+1
−6 −5 −4 −3 −2 −1 0 +1 +2 +3 +4 +5 +6
−1
−2
−3
−4
−5
−6

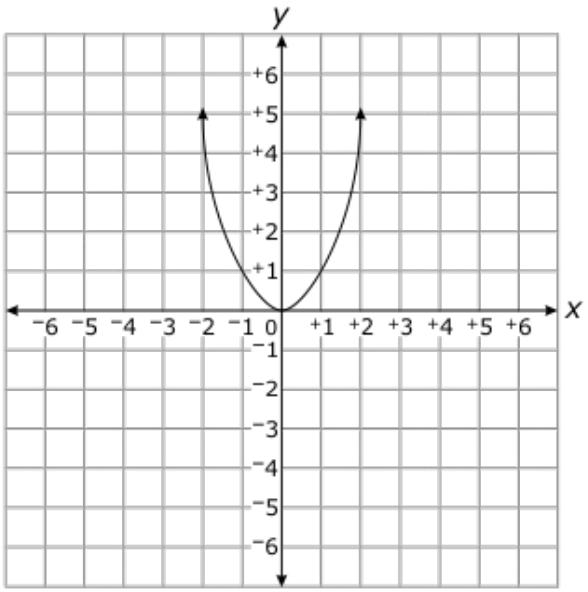
B.


y
x
+6
+5
+4
+3
+2
+1
−6 −5 −4 −3 −2 −1 0 +1 +2 +3 +4 +5 +6
−1
−2
−3
−4
−5
−6

C.



D.



18. In which equation is y a nonlinear function of x?

A. $y = 3$

B. $y = 3x$

C. $y = x^2 + 1$

D. $y = -2x + 2$

19. Which equation is a linear function?

A. $y = x^2$

B. $y = \frac{2}{x}$

C. $x = y - 2$

D. $x = y^2$

20. Which equation is non-linear?

A. $\frac{y+1}{2} = \frac{x-1}{3}$

B. $x = 2y - 7$

C. $x + 4 = -2$

D. $y + 1 = x^2 - 3$