

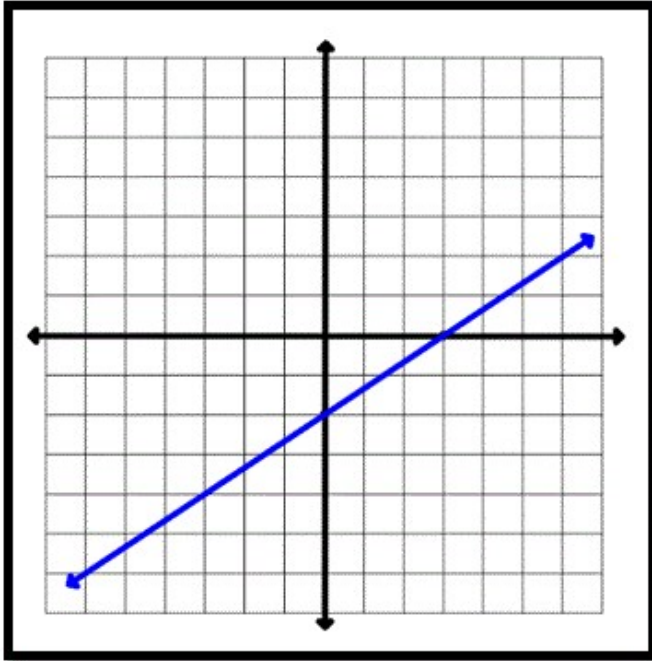
Name: _____

Class/Period: _____

Assignment: MM ALGEBRA ASSIGNMENT 5

Teacher: Villegas

1 What is the equation of the line graphed below?



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

2 $y = \frac{2}{3}x + 3$

3 $y = \frac{3}{2}x - 2$

4 $y = \frac{3}{2}x + 3$

2 The solution to $4p + 2 < 2(p + 5)$ is

1 $p > -6$

2 $p < -6$

3 $p > 4$

4 $p < 4$

3 Given the set $\{x \mid -2 \leq x \leq 2, \text{ where } x \text{ is an integer}\}$, what is the solution of $-2(x - 5) < 10$?

1 0, 1, 2

2 1, 2

3 -2, -1, 0

4 -2, -1

4 Which value or values for the variable x from the set below will make $4.5 + 1.2x \geq 10 - x$ true?

{3, 4, 5, 6}

- 1 only 3
- 2 3 and 4
- 3 3, 4, and 5
- 4 all values in the set

5 If x and y are defined as indicated by the accompanying table, which equation correctly represents the relationship between x and y ?

x	y
2	1
3	3
5	7
7	11

- 1 $y = x + 2$
- 2 $y = 2x + 2$
- 3 $y = 2x + 3$
- 4 $y = 2x - 3$

6 Cameron is going to the market to buy some vegetables. He has \$20 to spend. He plans on buying peppers and onions. If he spends more than \$12 on the onions, which inequality represents the amount of money Cameron can spend on peppers, p ?

- 1 $p < 8$
- 2 $p > 8$
- 3 $p < 32$
- 4 $p > 32$

7 Which chart could represent the function $f(x) = -2x + 6$?

1

x	$f(x)$
0	6
2	10
4	14
6	18

3

x	$f(x)$
0	8
2	10
4	12
6	14

2

x	$f(x)$
0	4
2	6
4	8
6	10

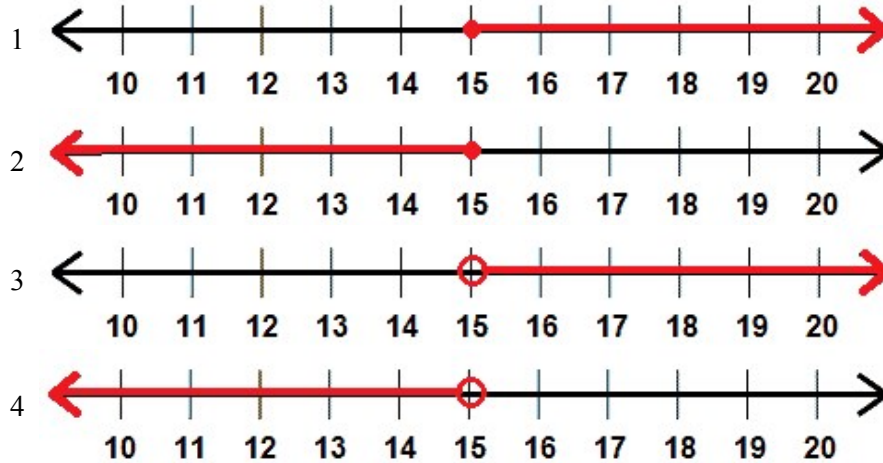
4

x	$f(x)$
0	6
2	2
4	-2
6	-6

8 When $3x + 2 \leq 5(x - 4)$ is solved for x , the solution is

- 1 $x \leq 3$
- 2 $x \geq 3$
- 3 $x \leq -11$
- 4 $x \geq 11$

9 Pizza Palace pays Tony \$40 a night plus \$2 for every delivery he makes. Which number line shows how many pizzas Tony must deliver to make at least \$70 a night?



10

Figure 1

The table below represents the number of hours a student worked and the amount of money the student earned.

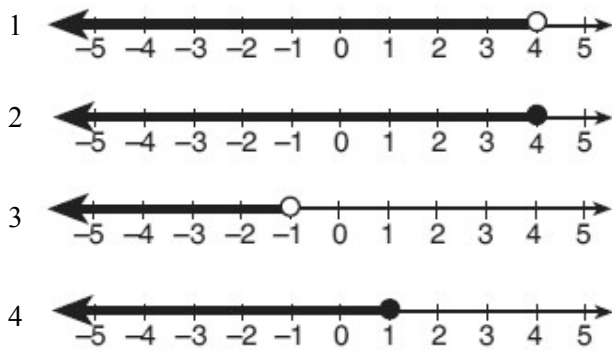
Number of Hours (h)	Dollars Earned (d)
8	\$50.00
15	\$93.75
19	\$118.75
30	\$187.50

Refer to Figure 1 and answer the following Question:

What equation correctly represents the number of dollars, d , earned in terms of the number of hours, h , worked?

- 1 $h = 6.25d$
- 2 $d = 6.25h$
- 3 $h = 50 + 6.25d$
- 4 $d = 50 + 6.25h$

11 Which graph represents the solution set of $2x - 5 < 3$?



12 Which equation represents the line whose slope is $\frac{1}{2}$ and whose y -intercept is 5?

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

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

3 $y = \frac{1}{2}x - 5$

4 $y = 5x - \frac{1}{2}$

13 A part of Jennifer's work to solve the equation $2(6x^2 - 3) = 11x^2 - x$ is shown below.

Given: $2(6x^2 - 3) = 11x^2 - x$

Step 1: $12x^2 - 6 = 11x^2 - x$

Which property justifies her first step

- 1 identity property of multiplication
- 2 multiplication property of equality
- 3 commutative property of multiplication
- 4 distributive property of multiplication over subtraction

14 What is the domain of the relation shown below?

$\{(4,2), (1,1), (0,0), (1,-1), (4,-2)\}$

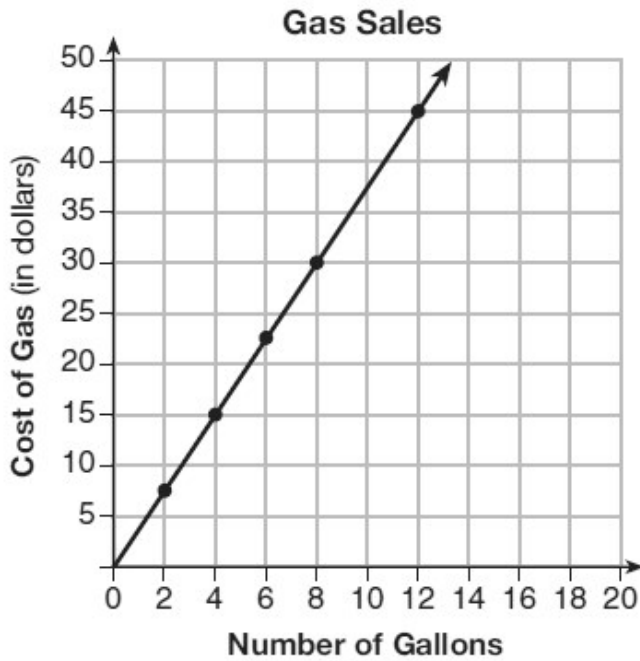
1 $\{0, 1, 4\}$

2 $\{-2, -1, 0, 1, 2\}$

3 $\{-2, -1, 0, 1, 2, 4\}$

4 $\{-2, -1, 0, 0, 1, 1, 1, 2, 4, 4\}$

15 The graph below was created by an employee at a gas station.



Which statement can be justified by using the graph?

- 1 If 10 gallons of gas was purchased, \$35 was paid.
- 2 For every gallon of gas purchased, \$3.75 was paid.
- 3 For every 2 gallons of gas purchased, \$5.00 was paid.
- 4 If zero gallons of gas were purchased, zero miles were driven.

16 The table below shows the cost of mailing a postcard in different years. During which time interval did the cost increase at the greatest average rate?

Year	1898	1971	1985	2006	2012
Cost (¢)	1	6	14	24	35

- 1 1898–1971
- 2 1971–1985
- 3 1985–2006
- 4 2006–2012

17 Which function is shown in the table below?

x	$f(x)$
-2	$\frac{1}{9}$
-1	$\frac{1}{3}$
0	1
1	3
2	9
3	27

- 1 $f(x) = 3x$
- 2 $f(x) = x + 3$
- 3 $f(x) = -x^3$
- 4 $f(x) = 3^x$

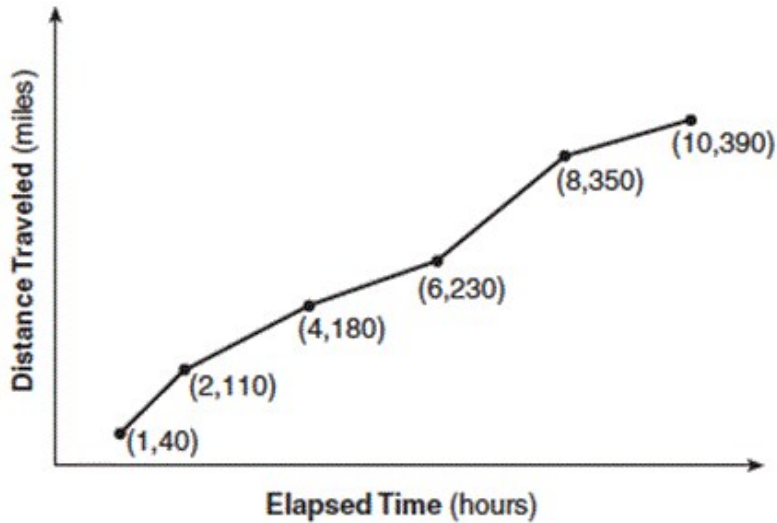
18 The table below represents the function F .

x	3	4	6	7	8
$F(x)$	9	17	65	129	257

The equation that represents this function is

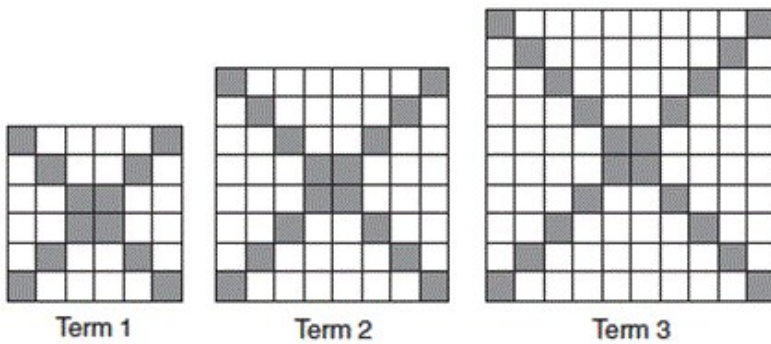
- 1 $F(x) = 3^x$
- 2 $F(x) = 3x$
- 3 $F(x) = 2^x + 1$
- 4 $F(x) = 2x + 3$

- 19 The Jamison family kept a log of the distance they traveled during a trip, as represented by the graph below.



During which interval was their average speed the greatest?

- 1 the first hour to the second hour
 - 2 the second hour to the fourth hour
 - 3 the sixth hour to the eighth hour
 - 4 the eighth hour to the tenth hour
- 20 The diagrams below represent the first three terms of a sequence.



Assuming the pattern continues, which formula determines a_n , the number of shaded squares in the n th term?

- 1 $a_n = 4n + 12$
 - 2 $a_n = 4n + 8$
 - 3 $a_n = 4n + 4$
 - 4 $a_n = 4n + 2$
- 21 The owner of a small computer repair business has one employee, who is paid an hourly rate of \$22. The owner estimates his weekly profit using the function $P(x) = 8600 - 22x$. In this function, x represents the number of
- 1 computers repaired per week
 - 2 hours worked per week
 - 3 customers served per week
 - 4 days worked per week

22 Peyton is a sprinter who can run the 40-yard dash in 4.5 seconds. He converts his speed into miles per hour, as shown below.

$$\frac{40 \text{ yd}}{4.5 \text{ sec}} \cdot \frac{3 \text{ ft}}{1 \text{ yd}} \cdot \frac{5280 \text{ ft}}{1 \text{ mi}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} \cdot \frac{60 \text{ min}}{1 \text{ hr}}$$

Which ratio is *incorrectly* written to convert his speed?

- 1 $\frac{3 \text{ ft}}{1 \text{ yd}}$
- 2 $\frac{5280 \text{ ft}}{1 \text{ mi}}$
- 3 $\frac{60 \text{ sec}}{1 \text{ min}}$
- 4 $\frac{60 \text{ min}}{1 \text{ hr}}$

23 Which table of values represents a linear relationship?

1

x	f(x)
-1	-3
0	-2
1	1
2	6
3	13

3

x	f(x)
-1	-3
0	-1
1	1
2	3
3	5

2

x	f(x)
-1	$\frac{1}{2}$
0	1
1	2
2	4
3	8

4

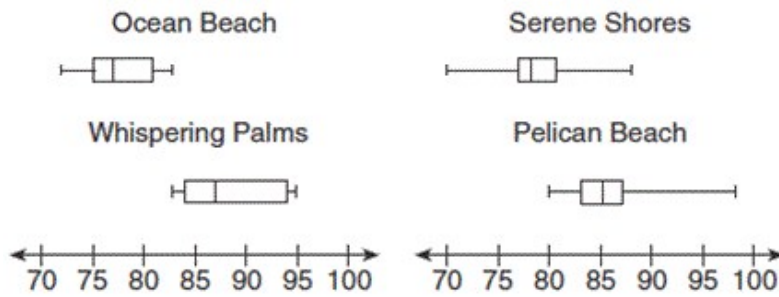
x	f(x)
-1	-1
0	0
1	1
2	8
3	27

- 24 Connor wants to attend the town carnival. The price of admission to the carnival is \$4.50, and each ride costs an additional 79 cents.

If he can spend at most \$16.00 at the carnival, which inequality can be used to solve for r , the number of rides Connor can go on, and what is the maximum number of rides he can go on?

- 1 $0.79 + 4.50r \leq 16.00$; 3 rides
- 2 $0.79 + 4.50r \leq 16.00$; 4 rides
- 3 $4.50 + 0.79r \leq 16.00$; 14 rides
- 4 $4.50 + 0.79r \leq 16.00$; 15 rides

- 25 Corinne is planning a beach vacation in July and is analyzing the daily high temperatures for her potential destination. She would like to choose a destination with a high median temperature and a small interquartile range. She constructed box plots shown in the diagram below.



Which destination has a median temperature above 80 degrees and the smallest interquartile range?

- 1 Ocean Beach
- 2 Whispering Palms
- 3 Serene Shores
- 4 Pelican Beach