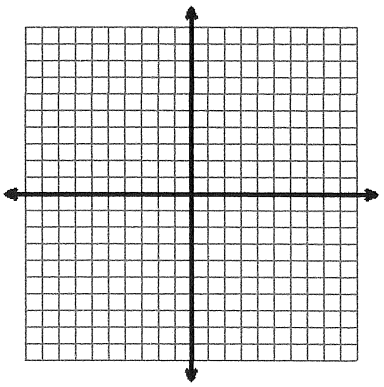
Name: _____

Algebra I Review Functions

Complete the table and graph the following

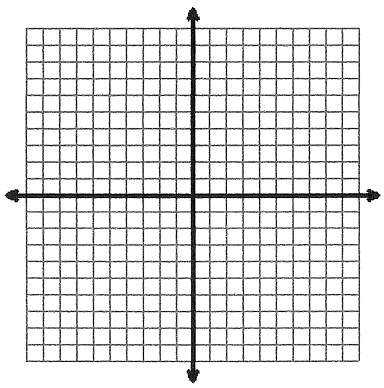
1. $f(x) = 2x + 2$

x	y



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

x	y



Determine if the following are functions.

_____ 3.

x	y
2	1
3	2
4	1
5	4

_____ 4.

x	3	3	3	3
y	1	2	3	4

5. Find the range of this function if the domain is {-1, 0, 5}?
   $y = -3x + 5$

_____
Answer

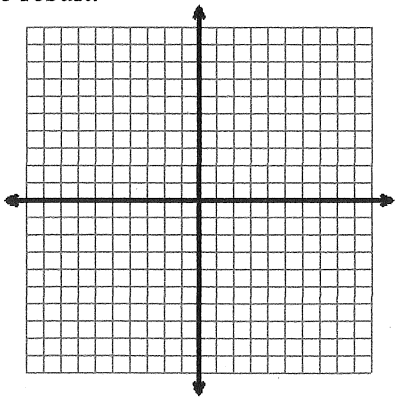
6. Find the domain of this function if the range is {-3, 0}?
   $y = -3x + 6$

_____
Answer

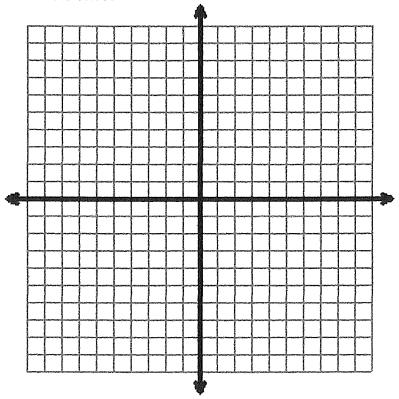
7. Solve for y.
   $4x + 3y = 24$

_____
Answer

8. Solve for y. Graph the result.
   $3y + 2x = -12$



9. Solve for y. Graph the result.
   $3x + 4y = -8$



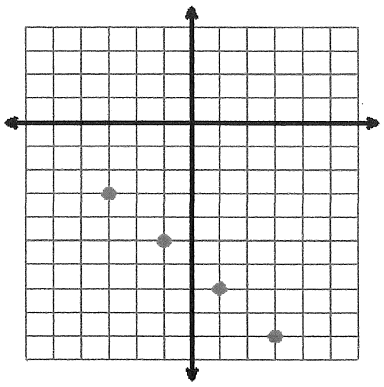
10. If $(x, -8)$ is a solution to $14x - 6y = 12$, what is the value of x?

_____
Answer

11. If $(-4, y)$ is a solution to $y = 3x - 7$, what is the value of y?

_____
Answer

12. Use the graph on the right to answer the following.



Domain: _____

Range: _____

Function rule: _____

13. Which ordered pair is NOT on the graph of $5x + y = 1$?

A. (0,1) B. (-1, 5) C. (1, -4) D. (-1, 6)

14. Write the function rule for the table.

a.

x	y
-2	-3
-1	-1
0	1
1	3

Function rule: _____

b.

x	y
0	2
1	5
2	8
3	11

Function rule: _____

_____ 15. Daisy was picking flowers to give to her friends. Each bouquet contained 6 freshly picked flowers. Which of the following statements is true?

a. The number of flowers is independent of the number of bouquets.
b. The number of bouquets is dependent on the number of flowers picked.
c. The number of flowers is dependent on the number of bouquets.
d. Not enough information.

16. Bilbo and Frodo decided to open a business selling class rings. The rings cost $250 for every ounce of gold and $50 for the stone. The total cost of a ring is represented by the function:

$$C = 250z + 50$$

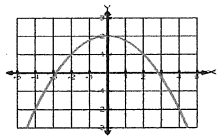
Where C is the total cost and z is the weight of gold in ounces. Determine the independent and dependent variables.

Independent: _____ Dependent: _____

17. If $(-2, y)$ is a solution to $4x - y = 9$, find the value of y.
Show your work.

18. Determine which relation is *not* a function.

A.



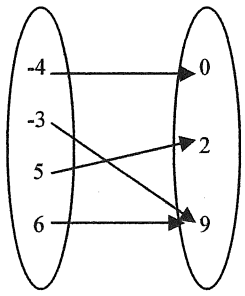
B.

x	-2	0	1	3
y	0	0	2	1

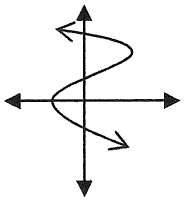
C.

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

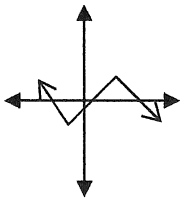
D.



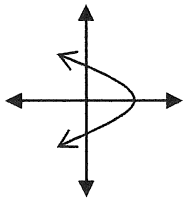
_____ 19. Which one of the following graphs is a function?



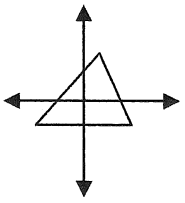
A.



B.



C.



D.

Identify the independent and dependent variables.

20. Weight of apples, cost of apples

Dependent Variables: _____

Independent Variable: _____

21. Total cost of books, and the number of books

Dependent Variable: _____

Independent Variable: _____

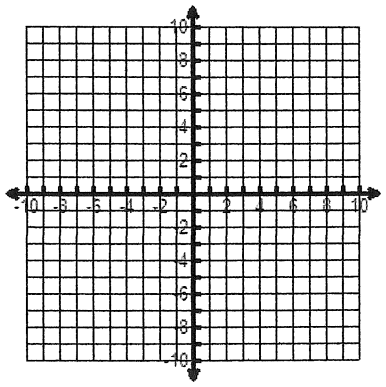
22.

x	y
-4	-2
-2	-1
6	3
8	4

22. Function rule: _____

23. **Graph the data.**

x	y
0	0
1	3
3	5
5	7
7	9



Function Notation- use the following information to answer.

$f(x) = 2x - 4$ $g(x) = x^2 - 4x$

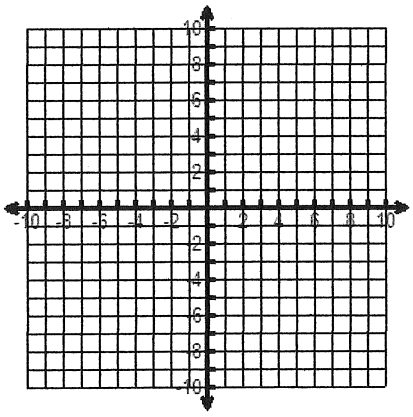
24.) $f(-5) =$ _____ 25.) $g(-3) =$ _____

26.) $f(3) - 1 =$ _____ 27.) $2f(3) =$ _____

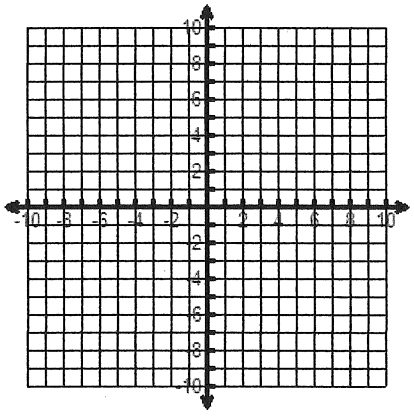
28.) $f(2) + 3 =$ _____ 29.)* $g(f(4)) =$ _____

Graph the function with the given domain.

30. $y = 3x - 4$; domain $\{x \mid x \leq 2\}$



31. $y = -4$; domain $\{x \mid x \geq -4\}$



_____32. You pay \$50 to attend dance camp. You pay \$5 for transportation each day. Which of the following expresses the total cost C (in dollars) as a function of the number of days d that you attend camp?

A. $C = 55d$ B. $C = 50 + 5d$

C. $C = 50d + 5$ D. Not here

_____ 33. If $(x, -16)$ is a solution to $14x - 6y = 12$, what is the value of x?