

Pre-Algebra, Unit 4 Practice Test: Introduction to Functions

Name: _____

Date: _____

1. Define the following:

a. *input*

b. *output*

2. Define the following:

a. *domain*

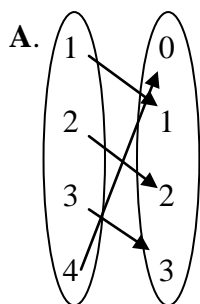
b. *range*

3. Define the following:

a. *relation*

b. *function*

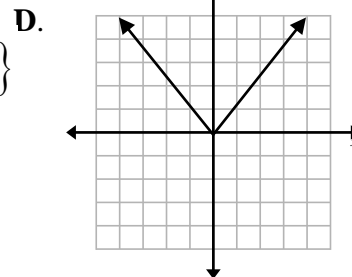
4. Which relation is NOT a function?



B.

<i>x</i>	1	2	3
<i>y</i>	6	6	6

C. $\{(1, 2), (1, 3), (1, 4)\}$

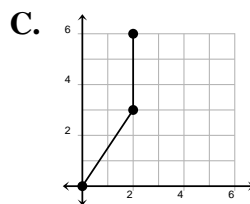


5. (SBAC F1) Select **all** relations that are functions.

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

B.

<i>x</i>	<i>y</i>
-3	-7
-1	-1
-1	-4
0	2
4	10



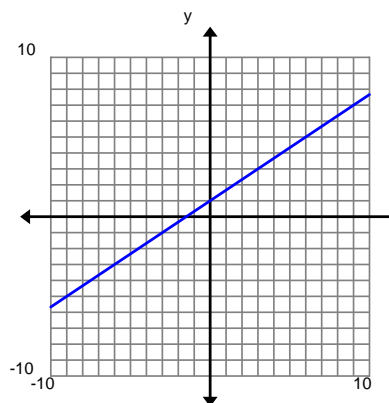
D. $\{(-1, 0) (0, 1) (1, 1) (2, 2)\}$

6. What is the domain of the relation $\{(3, -1), (5, 2), (1, 7), (4, 3)\}$?

- A. $\{-1, 2, 3, 7\}$
- B. $\{1, 3, 4, 5\}$
- C. $\{2, 7, 8\}$
- D. $\{-1, 1, 2, 3, 4, 5, 7\}$

7. (SE F1) Which input/output pairs match the graph?

- A. $\{(1,0)(-1,-3)(3,3)(5,6)\}$
- B. $\{(0,1)(3,3)(-1,-3)(6,5)\}$
- C. $\{(1,0)(6,5)(3,3)(-3,-1)\}$
- D. $\{(0,1)(-3,-1)(3,3)(6,5)\}$



8. (SE F1) Which of the following tables represent functions?

I.

Input	Output
0	-5
1	-2
2	1
3	4

II.

Input	Output
0	1
0	2
3	3
6	4

III.

Input	Output
2	-11
0	-8
2	-4
4	-7

IV.

Input	Output
-3	2
-2	-2
-1	-6
0	-10

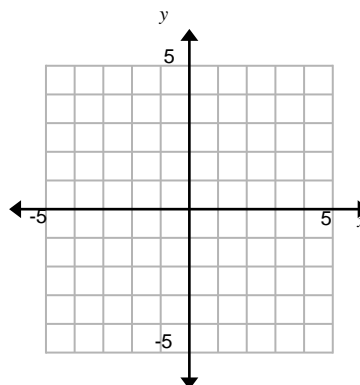
9. (SE/SBAC F1) For which equation is the set of ordered pairs a solution?

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

- A. $y = x + 3$
- B. $y = 3x + 3$
- C. $y = 3x - 3$
- D. $y = x - 3$

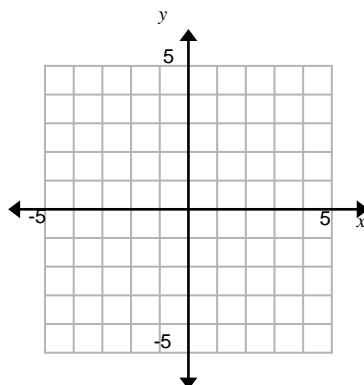
10. Graph $x = -2$.

x	y



11. Complete the table for $y = -2x + 1$. Graph.

x		y



12. (SBAC F2) Which table of values can be represented by the function $y = 2x - 1$?

A.

x	y
-4	-9
-3	-7
-2	-5
-1	-3
0	-1

B.

x	y
-9	-4
-7	-3
-5	-2
-3	-1
-1	0

C.

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

D.

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

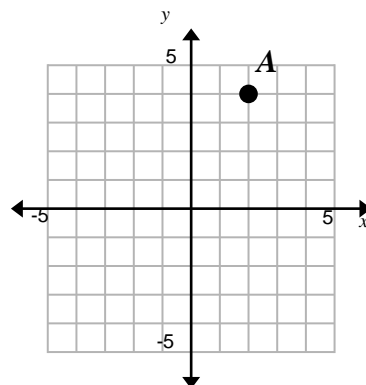
13. (SBAC F1) Fill in each x -value and y -value in the table to create a relation that is NOT a function.

x	y

14. (SBAC F1) Point A is plotted on the coordinate plane. Determine the location of a point B that meets the following criteria:

- Point B has integer coordinates
- The graph of line \overline{AB} is NOT a function.

Point B : _____



Long term memory review:

15. (SBAC/SE) Put a check in all of the columns that apply for each number.

Number	Integer	Rational	Irrational	Real
$\frac{2}{5}$				
$\sqrt{13}$				
π				
-2				

16. (SE) What is the solution to the equation below? Show your work.

$$-2(-3x+1) - 9x = 4$$