

December 08, 2021

Algebra Quick Quiz

Question 1.

Which of the following tables represents a function?

**F**

$x$	$y$
4	-2
4	0
4	2
4	4

**G**

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

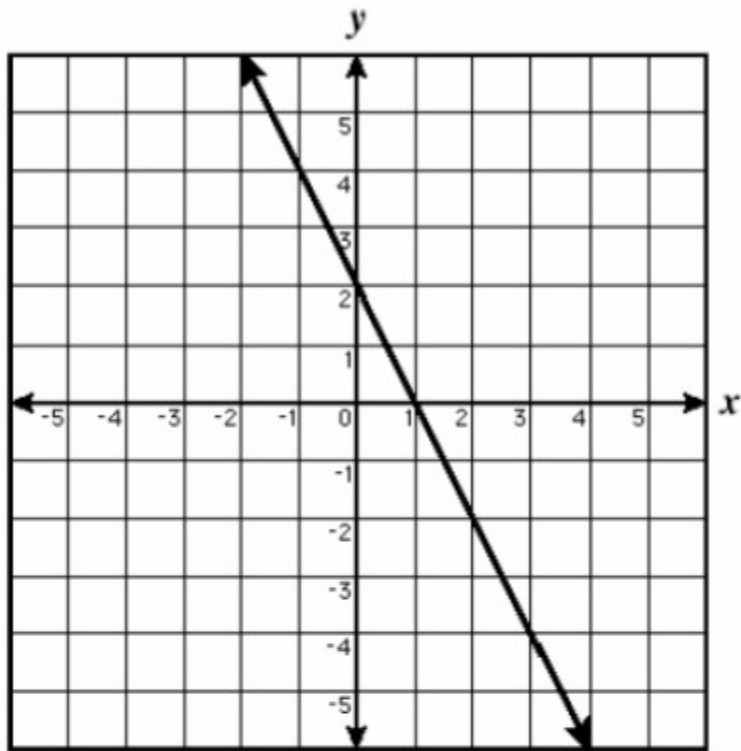
**H**

$x$	$y$
-1	1
0	0
1	1
2	4

**I**

$x$	$y$
2	-4
0	2
2	6
4	8

Question 2.



Which table most likely matches this graph?

**F**

$x$	$y$
2	0
2	2
0	1

**G**

$x$	$y$
1	0
2	3
3	1

**H**

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

**I**

$x$	$y$
0	1
2	2
4	3

Question. 3.

$(0, -3), (2, -2), (4, -1), (6, 0), \dots$

These ordered pairs follow a pattern. If  $(10, y)$  is in this pattern, what is the value of  $y$ ?

F 1

G 2

H 3

I 4

Question 4.

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

Using the same relationship between  $x$  and  $y$  as the table, what is the value of  $y$  when  $x$  is 8?

F -1

G 2

H 3

I 5

5.

What is the domain of the set of ordered pairs  $\{(-5, -4), (-4, 4), (2, 3), (4, 5)\}$ ?

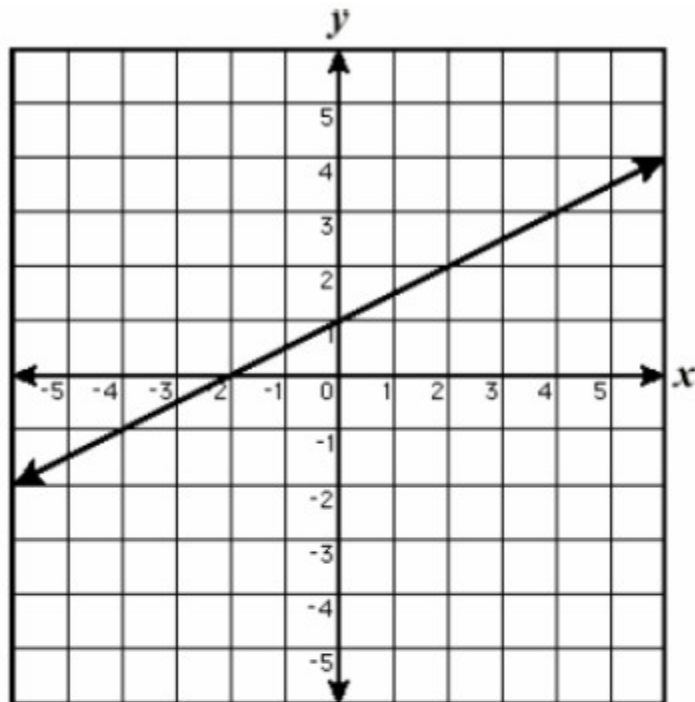
**F**  $\{-5, -4, 2, 4\}$

**G**  $\{-4, 3, 4, 5\}$

**H**  $\{-5, -4, 4, 5\}$

**I**  $\{-5, 2, 3, 4\}$

Question 6.



What is the domain of the function shown above?

**F** All integers

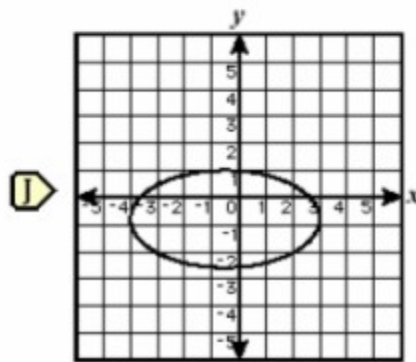
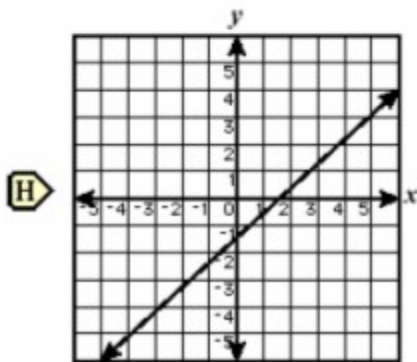
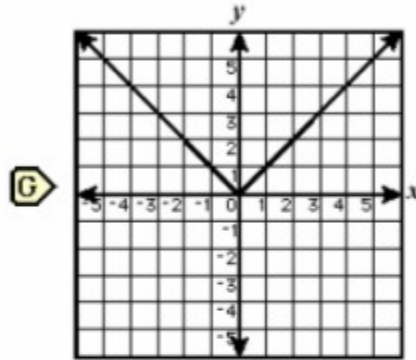
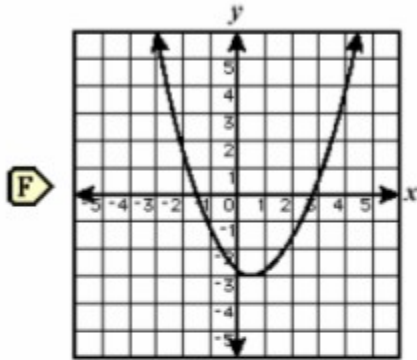
**G** All real numbers

**H** All natural numbers

**I** All whole numbers

Question 7.

Which of the following is not a graph of a function?

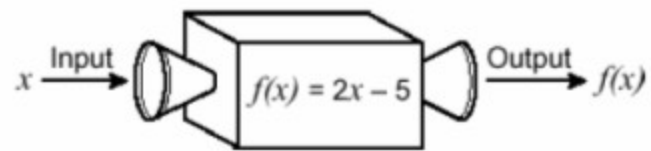


Question 8.

What is the range of the function  $f(x) = 5 - 8x$  when the domain is  $\{-2, 2, 4\}$ ?

- F**  $\{-27, -11\}$
- G**  $\{-27, -11, 21\}$
- H**  $\{-2, 2, 4\}$
- I**  $\{1/8, 3/8, 7/8\}$

Question 9.



Using the function machine in the diagram, what is the output when 12 is input?

- F 7
- G 8.5
- H 19
- J 29

Question 10.

If  $f(x) = (2/3)x - 6$ , what is  $f(12)$ ?

- F 2
- G 8
- H 14
- J 27

Bonus

Find the zeros of  $f(x) = (x - 3)^2 - 49$ , algebraically.