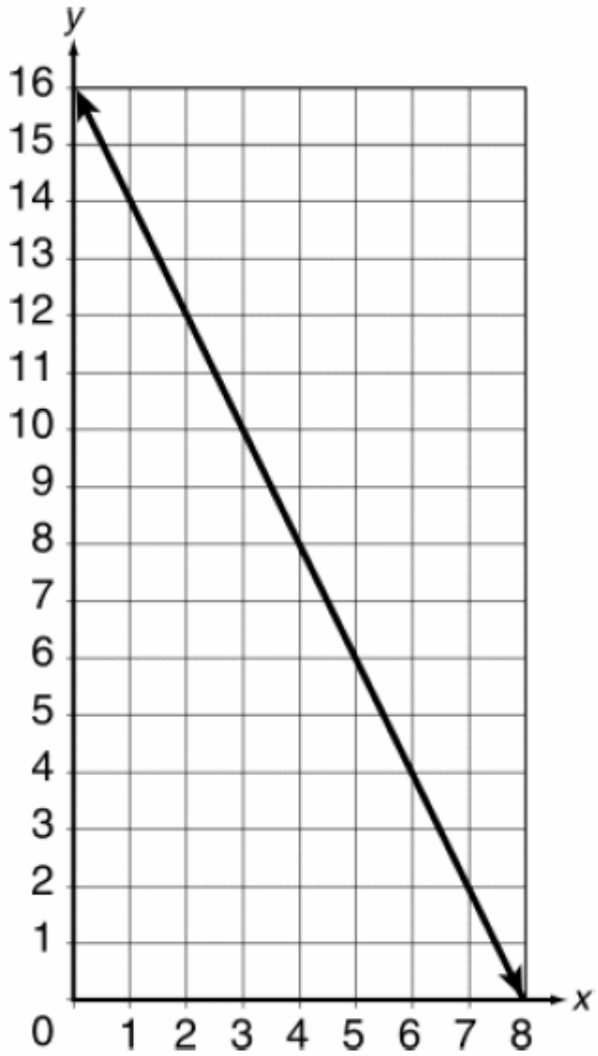
Algebra Quick Quiz 10242019

Question 1.



Which equation best describes this graph?

F $y = 20 - 4x$

G $y = x + 14 - x^2$

H $y = 16 - 2x$

J $y = x^2 - 5x + 18$

Question 2

x	$^{-}6$	2	10
y	1	3	5

Which equation is satisfied by all the points in the table?

F x - 4y = 10
G 4y - x = 10
H 7y - x = 20
J x - 7y = 20

Question 3.

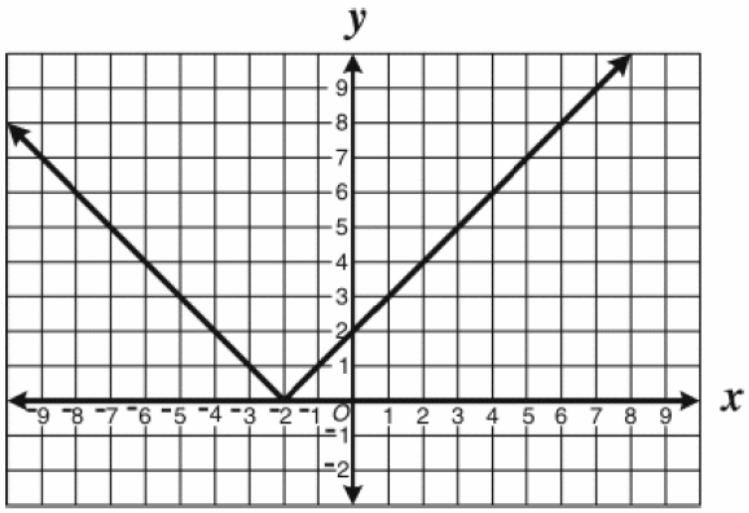
The ordered pairs in the table follow a quadratic pattern.

8	2	7	9	4	x
64	4	49	81	16	25

What is the value of x?

F 10
G 6
H 5
J 3

Question 4.



What is the domain of the function shown?

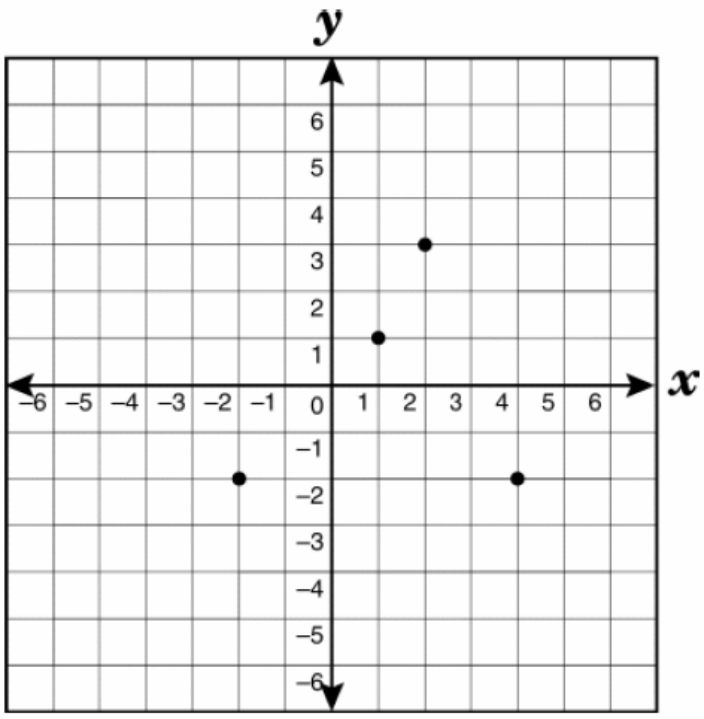
F {All real numbers greater than zero}

G {All real numbers}

H {All real numbers less than -2}

J {All real numbers greater than -2}

Question 5.



What is the apparent range of the relation shown on the grid?

F {-2, 1, 3}

G {-2, 1, 2, 4}

H {1, 2, 3, 4}

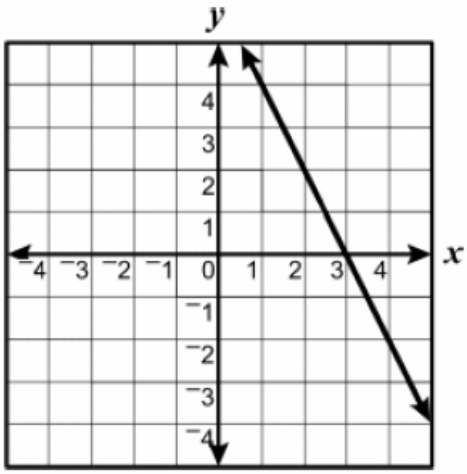
J {-2, 2, 3, 4}

Question 6.

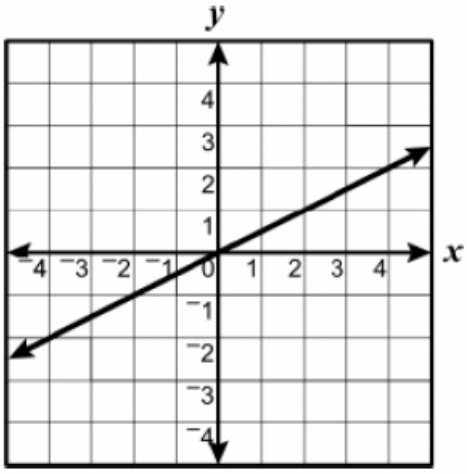
x	1	4	3
y	4	$^{-}2$	0

Which graph appears to contain all the points in the table?

F



G



Question 7.

Which set of ordered pairs is not a function?

F {(-2, 3), (4, 1), (2, 1), (1, 5)}

G {(1, 4), (2, 3), (3, 2), (4, 3)}

H {(2, 3), (3, 2), (4, 4), (5, 2)}

J {(-2, 3), (1, 4), (2, 3), (1, 5)}

Question 8.

The stress distribution on a structure is given by $s = 2x^2 + 4x - 30$ where s is stress in pounds per square inch and x is the distance in feet from a reference point. At what distance is the stress equal to 0?

F 3 ft

G 5 ft

H 6 ft

J 12 ft

Question 9.

Which is a zero of the function f(x) = 3x - 21?

F -21

G -7

H 0

J 7

Question 10.

A lumber yard sells square scraps of plywood with sides varying from 1 foot to 4 feet. Ed wants to use some of these pieces to build storage cubes. The relationship between the length of the side of a cube and the volume of the cube is expressed by the function

$$f(x) = x^3$$

where x is the length of a side of the cube. What is the range of this function in cubic feet for the domain given?

F Range varies from 1 to 64

G Range varies from 1 to 16

H {1, 64}

J {1, 16}

11.

Bonus

Let $f(x) = \begin{cases} x^2 & \text{if} \quad x \leq -1 \\ \sqrt{1-x^2} & \text{if} \quad -1 < x \leq 1 \\ x & \text{if} \quad x > 1 \end{cases}$ Compute the following function values.

(a) $f(4)$

(b) $f(-3)$

(d) $f(0)$

(e) $f(-1)$