

# Algebra Quick Quiz 01292020

## Question 1.

George is helping the manager of the local produce market expand her business by distributing flyers around the neighborhood. He gets paid \$20 a day as well as \$0.05 for every flyer he distributes. George would like to earn at least \$65 each day. Which of the following represents this situation, where  $x$  is the number of flyers distributed.

a.  $20 + 0.05x \leq 65$

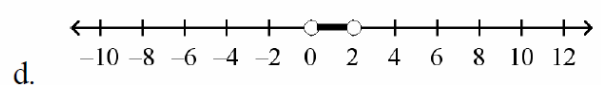
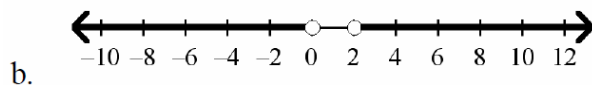
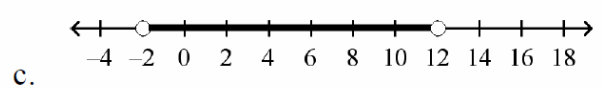
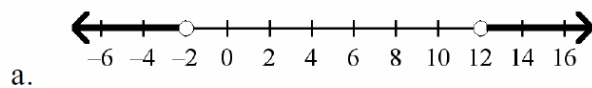
b.  $20 + 5x \leq 65$

c.  $20 + 0.05x \geq 65$

d.  $20 + 5x \geq 65$

## Question 2

Which graph represents the solutions of  $p + 1 < -1$  OR  $p - 5 > 7$ ?



### Question 3.

John is considering accepting one of two sales positions. ABC Company offers a yearly salary of \$45,000. XYZ Company offers a yearly salary of \$38,000 plus a 2% annual commission on sales. For what amount of sales  $s$  is the salary at XYZ Company greater than the salary at ABC Company?

- a.  $s > 7000$
- b.  $s > 35,000$
- c.  $s > 70,000$
- d.  $s > 350,000$

### Question 4.

Solve  $\frac{4}{s} = \frac{-2}{9}$ .

- a.  $-4.5$
- b.  $-18$
- c.  $18$
- d.  $4.5$

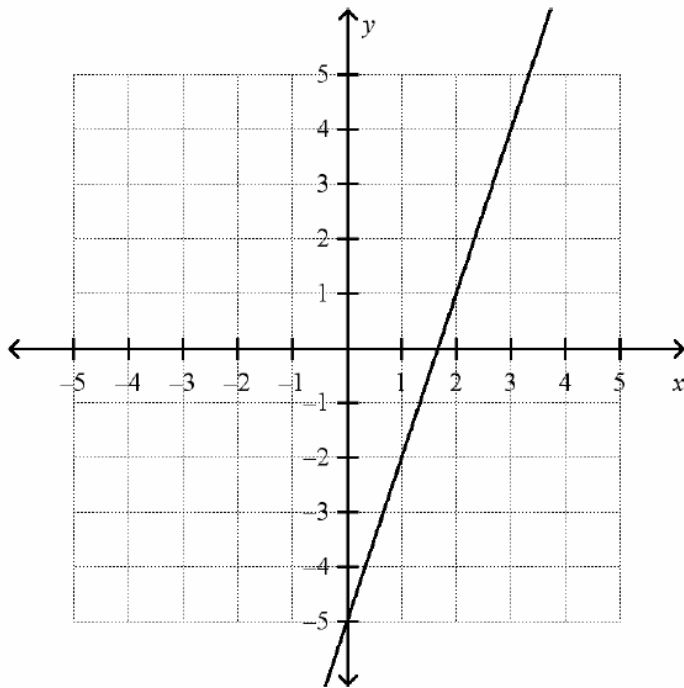
### Question 5.

The average of Paula's two test scores must be 80 or more for her to get at least a B in the class. She got a 72 on her first test. What grades can she get on the second test to make at least a B in the class?

- a. at least 76
- b. at least 84
- c. at least 88
- d. at least 92

### Question 6.

What is the equation of the line shown in the graph?



- a.  $y = 3x + \frac{3}{2}$
- b.  $y = -3x - 5$
- c.  $y = 3x - 5$
- d.  $y = 2x - 5$

### Question 7.

Solve  $m - 8 \leq 14$ .

a.  $m \leq 6$

b.  $m \geq 6$

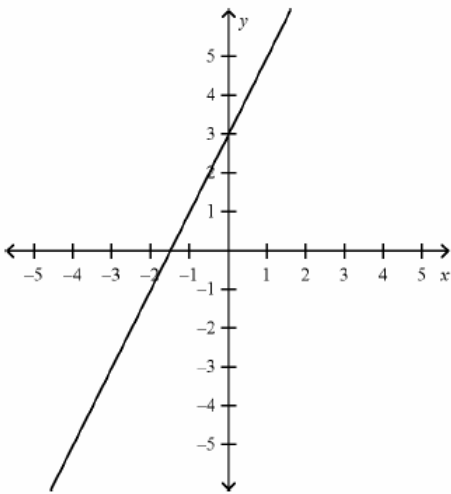
c.  $m \leq 22$

d.  $m \geq 22$

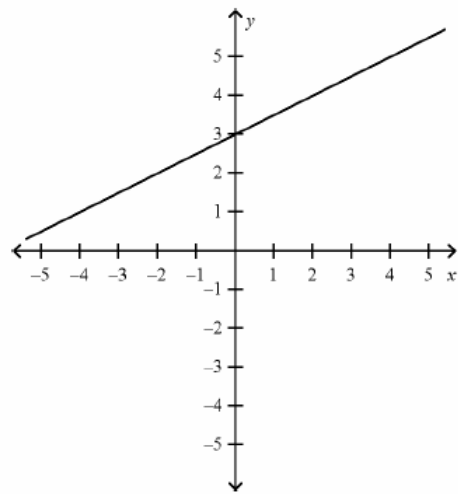
### Question 8.

Graph the line with the slope  $\frac{1}{2}$  and  $y$ -intercept 3.

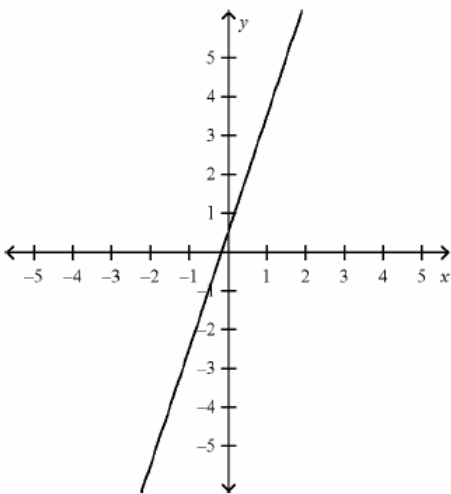
a.



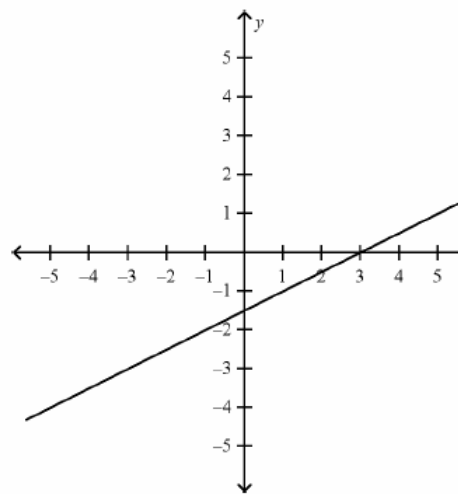
c.



b.



d.



Question 9.

Which of the following relations is a function?

- a.  $\{(-2, -2), (-2, -1), (-2, 0), (-2, 1), (-2, 2)\}$
- b.  $\{(1, 0), (-1, 0), (2, 1), (-2, 1), (3, 2), (-3, 2)\}$
- c.  $\{(-2, 1), (-1, 2), (0, 0), (-1, 1), (2, -2)\}$
- d.  $\{(-3, 3), (1, 3), (-3, 2), (1, 2), (-3, 1), (1, 1)\}$

Question 10.

Simplify  $(a^3 b)^2$ .

- a.  $a^3 b^2$
- b.  $a^6 b$
- c.  $a^6 b^2$
- d.  $a^9 b^2$

## Bonus Question

### Question 11

#### Part A

The function  $f$  is defined by  $f(x) = x^2 - 2x - 24$ .

If  $f(x+4) = x^2 + kx - 16$  what is the value of  $k$ ?

#### Part B

What are the zero(s) of  $f(x+4)$ ?

Select ALL that apply.

- a) -4
- b) -8
- c) +8
- d) 2
- e) -2
- f) 4
- g) 16
- h) 1