Algebra 1 Quick quiz03082023

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. $20 + 0.05x \le 65$
b. $20 + 5x \le 65$

c. $20 + 0.05x \ge 65$
d. $20 + 5x \ge 65$

Question 2

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

a.

c.

b.

d.
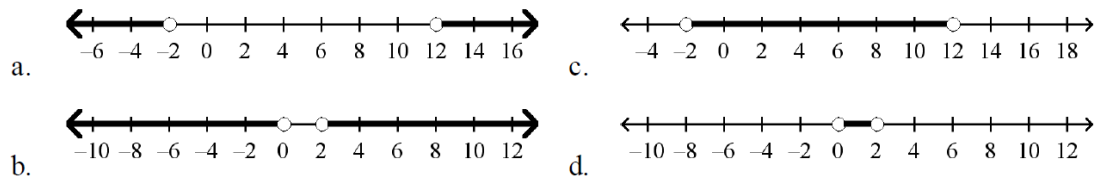
Question 3.

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 $\dfrac{4}{s} = \dfrac{-2}{9}$.
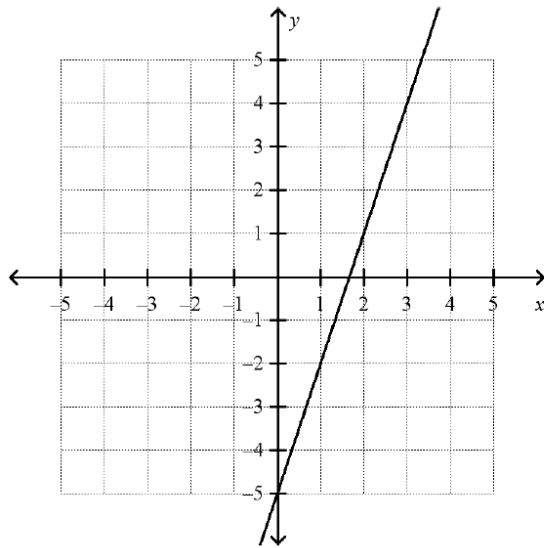
a. -4.5
b. -18

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. $y = 3x + \dfrac{3}{2}$

b. $y = -3x - 5$
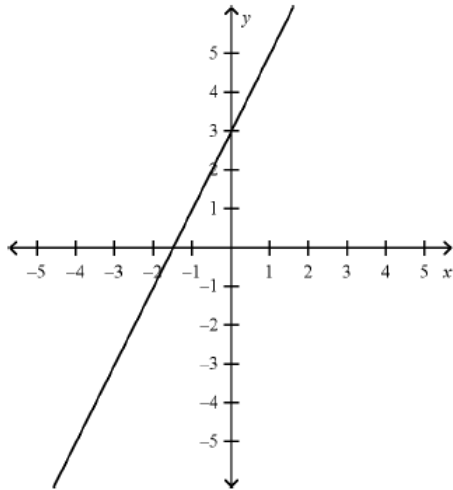
c. $y = 3x - 5$

d. $y = 2x - 5$

Question 7.

Solve $m - 8 \leq 14$.

a. $m \leq 6$
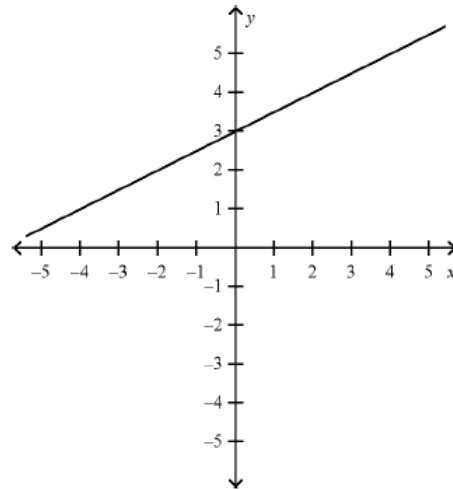b. $m \geq 6$

c. $m \leq 22$
d. $m \geq 22$

Question 8.

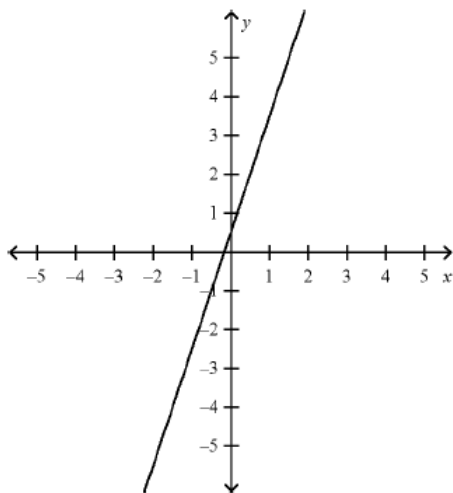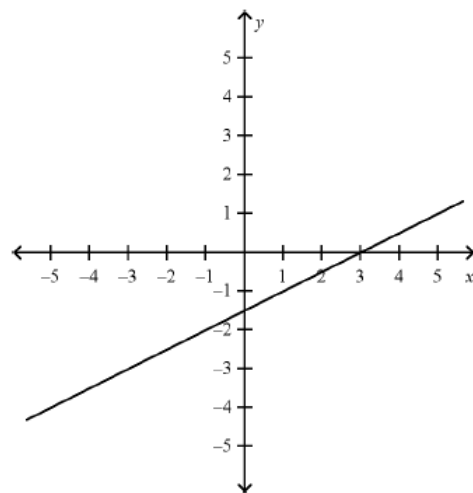Graph the line with the slope $\frac{1}{2}$ and y-intercept 3.

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