TEST NAME: **Math 1 online Jan 31**
TEST ID: **2842175**
GRADE: **09 - Ninth Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **My Classroom**

01/31/19, Math 1 online Jan 31

Student: ____________________

Class: ____________________

Date: ____________________

1. Two functions are shown below.

$$f(x) = 4x - 4$$
$$g(x) = 2(3)^x - 6$$

For which value of x does $f(x) = g(x)$?

A. $^-4$

B. $^-2$

C. 0

D. 2

2. **What values of x satisfy the inequality** $5x + 2a > 2x - a$?

A. $x < -a$

B. $x > -a$

C. $x < a$

D. $x > a$

3. What is the maximum number of intersections an exponential function can have with a linear function?

A. 0

B. 1

C. 2

D. 3

4. Ramone takes care of animals. He charges $12 per day for dogs and $5 per day for cats. In one month he earned $108. He took care of 3 times as many cats as dogs. How much of the money Ramone earned was from taking care of cats?

A. $20

B. $45

C. $48

D. $60

5. A book store sells used books.

- Paperback books cost $1.00.
- Hardback books sell for $5.00.
- The store sold 100 books and made $260 from the sale.

How many paperback books did the store sell?

A. 20

B. 40

C. 60

D. 80

6. The sum of two positive numbers is 45. The difference between the numbers is 9. What is the value of the larger number?

A. 9

B. 18

C. 27

D. 36

7. The length of a rectangle is 7 cm longer than the width. The perimeter of the rectangle is 46 cm. What is the length of the rectangle?

A. 15 cm

B. 16 cm

C. 20 cm

D. 23 cm

8. A store sells bracelets that cost x dollars and necklaces that cost y dollars. Jessica bought 4 bracelets and 7 necklaces for \$18. Brianna bought 5 bracelets and 4 necklaces for \$13. Gabby bought 3 bracelets and 2 necklaces. How much money did Gabby spend on bracelets and necklaces?

A. \$3

B. \$7

C. \$8

D. \$11

9. The difference between two numbers is one. Three times the larger number minus two times the smaller number is 9. What is the value of the larger number?

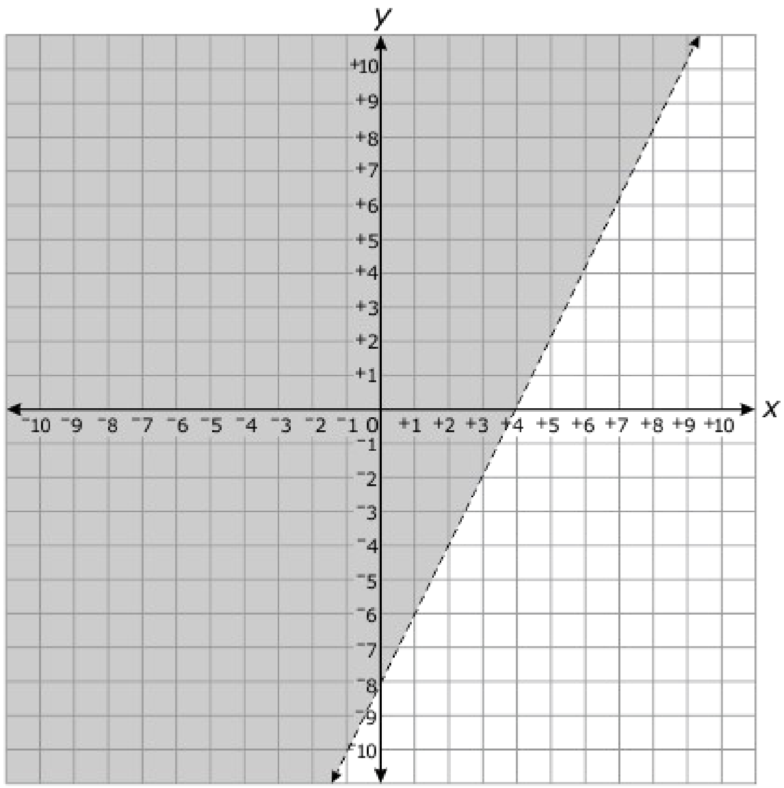
A. 5

B. 6

C. 7

D. 8

10. Which inequality is graphed below?



A. $2x - y > 8$

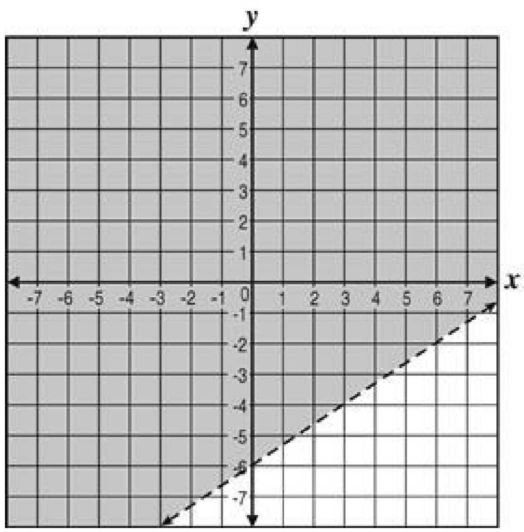
B. $2x - y < 8$

C. $2x - y \geq 8$

D. $2x - y \leq 8$

11. **Which graph represents the inequality** $2x - 3y > 18$**?**

A.



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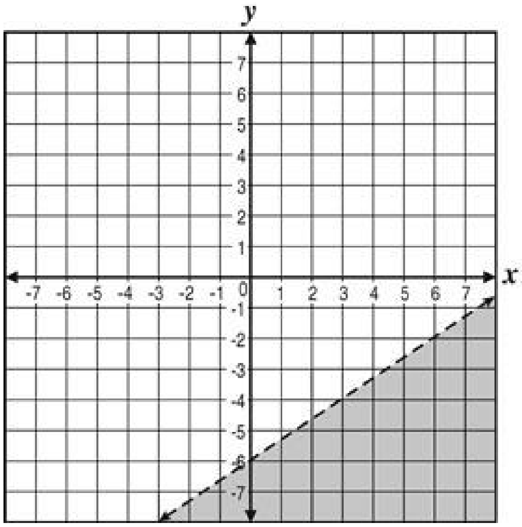

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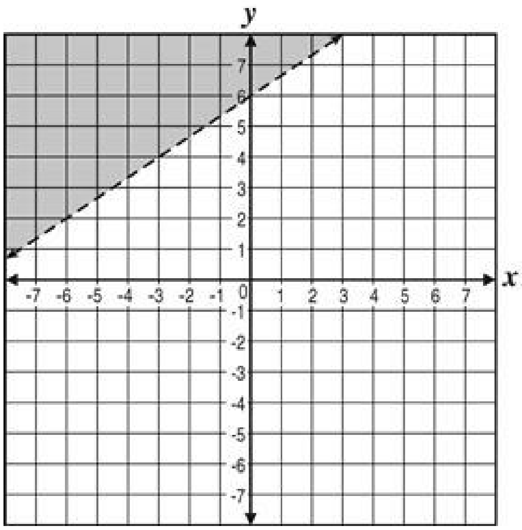

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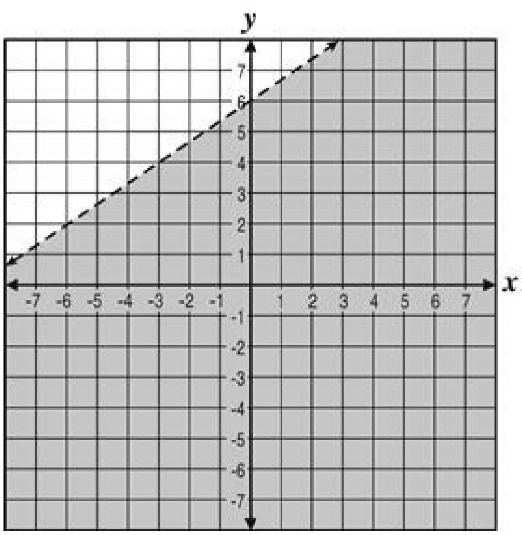
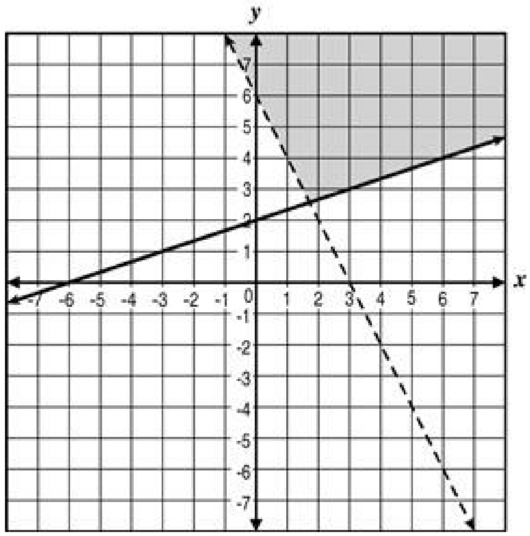


12. **Which graph represents the solution of this system of inequalities?**

$$\begin{cases} x - 3y \leq -6 \\ 2x + y > 6 \end{cases}$$

A.


y
x
7
6
5
4
3
2
1
0
-1
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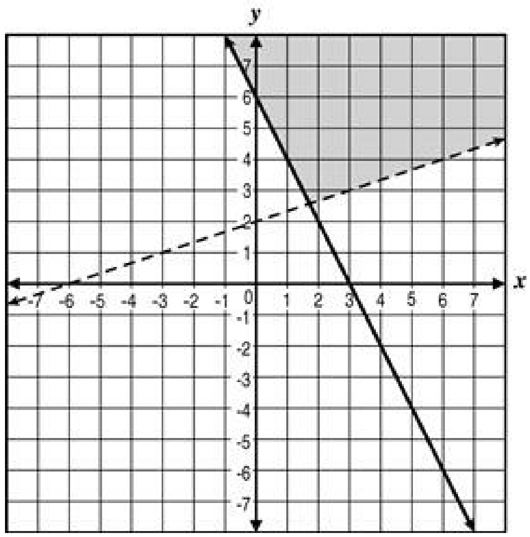
-6
-7
-7 -6 -5 -4 -3 -2 -1
1 2 3 4 5 6 7

B.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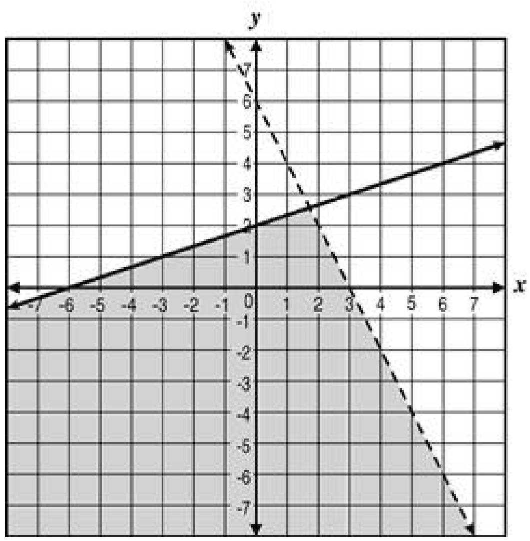
C.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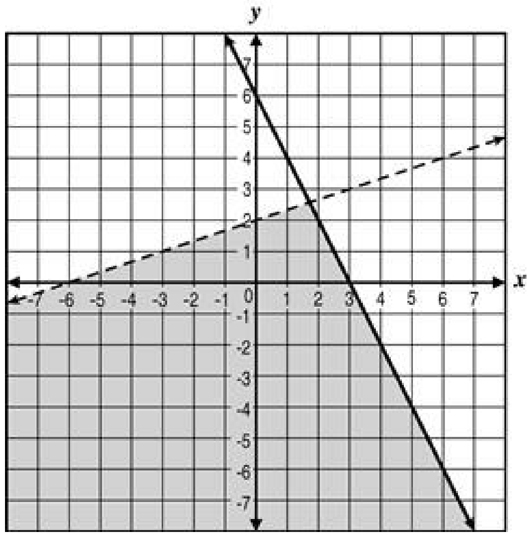
D.



13. A system of equations is shown below.

$$6x + 3y = 9$$
$$y = {}^{-}2x + 3$$

What is the solution to the system of equations?

A. $(3, {}^{-}3)$

B. $(0, 3)$

C. no solution

D. infinite solutions

14. Two types of bacteria are in a sample. There were originally 7 bacteria of the first type of bacteria and 815 of the second type of bacteria. The first type of bacteria doubles in size every day. The second type of bacteria increases by 25 every day. After how many days will the amounts of the two types of bacteria be ***about*** the same?

A. 4 days

B. 5 days

C. 6 days

D. 7 days

15. What is the value of x for $^{-}14(6x - 3) + 4x - 21 = 36 - 3(10x + 4)$?

A. $-\frac{3}{50}$

B. $-\frac{19}{70}$

C. $-\frac{37}{50}$

D. $-\frac{47}{70}$

16. What is the solution to the inequality $\frac{^{-}5x+3}{4} > {}^{-}8$?

A. $x > 7$

B. $x < 7$

C. $x > 4$

D. $x < 4$

17. What value of x satisfies the equation $5(x - 3) - 2(x + 1) = 4$?

A. $\frac{8}{3}$

B. 3

C. $\frac{17}{3}$

D. 7

18. What is the solution to the inequality $^{-}2(1 - 4x) + 5 \geq 1 - (x + 9)$?

A. $x \geq \frac{17}{9}$

B. $x \geq \frac{4}{9}$

C. $x \geq -\frac{11}{9}$

D. $x \leq -\frac{10}{7}$

19. What is the value of *x* in the equation $\frac{3}{4}(x-4)=\frac{2}{3}(x+1)$?

A. $-\frac{7}{36}$

B. $\frac{1}{4}$

C. 44

D. 60

20. **Which process was used to obtain the equation shown in Step 2?**

Step 1: $\frac{y}{3}-\frac{1}{4}=5$

Step 2: $4y-3=60$

A. added $\frac{1}{4}$ to both sides of the equation

B. added 5 to both sides of the equation

C. multiplied both sides of the equation by 12

D. divided both sides of the equation by 12