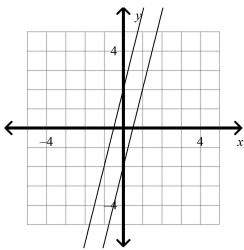
Unit 4 Test Alg 1

True/False

Indicate whether the statement is true or false.

1. True or false?

The graph shows the solution to the system y = 4x - 2 and $\frac{1}{2}y = 2x + 1$.



Multiple Choice

Identify the choice that best completes the statement or answers the question. Write the letter of your answer on the line provided to the left.

- 2. Tom has a collection of 30 CDs and Nita has a collection of 10 CDs. Tom is adding 3 CDs a month to his collection while Nita is adding 7 CDs a month to her collection. Find the number of months after which they will have the same number of CDs.
 - a. 2 months

c. 5 months

b. 3 months

d. 45 months

What is the solution of the system? Use substitution.

- a. (-4, -15)

- b. (2,3) c. (2,-3) d. (-2,-8)

How many solutions does the system have?

$$x = 3y - 4$$

$$5x - 15y = -20$$

a. one solution

c. infinitely many solutions

b. two solutions

d. no solution

5. Which solution is best found solving the system by substitution over graphing?

c. $\left(\frac{6}{11}, -\frac{9}{11}\right)$ d. $\left(-10, -\frac{1}{2}\right)$

b. (0,0)

6. A corner store sells two kinds of baked goods: cakes and pies. A cake costs \$13 and a pie costs \$10. In one day, the store sold 11 baked goods for a total of \$134. How many cakes did they sell?

a. 5 cakes

c. 11 cakes

b. 8 cakes

3 cakes d.

What is the solution of the system? Use elimination.

7. 2x - y = 2

2x + y = 2

- a. (-1, 0)
- b. (0, 1)
- c. (0,-1) d. (1,0)

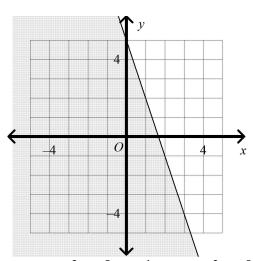
What is the solution of the system? Use elimination.

8. 5x = -30 + 5y

- 20y = 103 + 3x
- a. (5, 20)
- b. (5, -1)
- c. (-1, 5) d. (-1, 4)

Which inequality represents the graph?

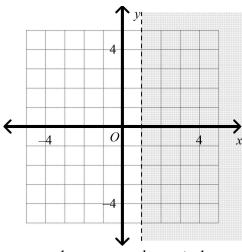
9.



- $y \leq -3x 5$

- b. $y \ge -3x + 5$ c. $y \ge -3x 5$ d. $y \le -3x + 5$

10.

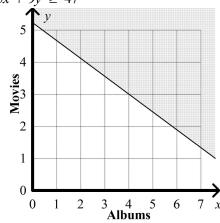


- a. y > 1
- b. $x \ge 1$
- c. $y \ge 1$ d. x > 1

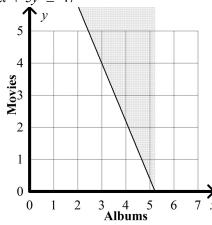
Which ordered pair is a solution of the inequality?

- 11. 2y + 6 < 6x
 - a. (5, 15)
- b. (3,-1) c. (3,6) d. (0,5)

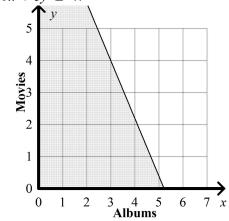
- 12. You have \$47 to spend on music and movie downloads. Each album download costs \$5 and each movie download costs \$9. Write and graph a linear inequality that represents this situation. Let *x* represent the number of albums and *y* the number of movies.
 - a. $5x + 9y \ge 47$



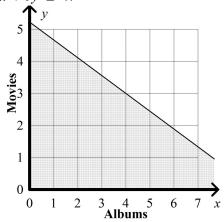
 $c. \quad 9x + 5y \ge 47$



b. $9x + 5y \le 47$



d. $5x + 9y \le 47$



- 13. Which inequality will use a solid line in its solution graph?
 - a. y > -3x 5

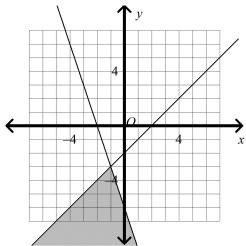
c. $y \le 4x + 1$

b. y > x

d. y < 2x

What system of inequalities is represented by the graph?

____ 14.



a.
$$y \ge x - 2$$

$$y \ge -3x - 6$$

b.
$$y \le x + 3$$

 $y \ge 2x - 6$

c.
$$y \le x - 2$$

$$y \le -3x - 6$$

$$d. \quad y \ge x + 3$$

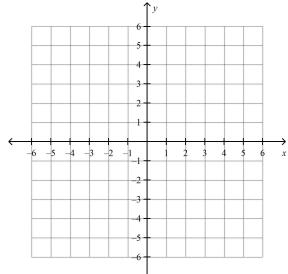
$$y \le 2x - 6$$

Short Answer: Show all work for credit. Write your final answer on the line provided.

What is the solution of the system? Use a graph.

15.
$$y = 5x + 1$$

 $y = x - 3$

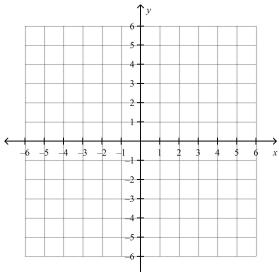


Solution:

What is the solution of the system? Use a graph.

16.
$$y = -2x + 3$$

 $y = -2x - 3$



Solution:

How many solutions does the system have?

17.
$$y = 4x + 6$$

 $4y - 16x = 12$

Number of solutions:_____

What is the solution of the system? Use substitution.

$$18. \quad y = 3x + 8$$
$$y = 4x$$

Solution:____

What is the solution of the system? Use elimination.

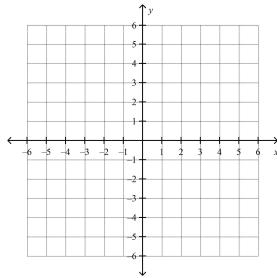
19.
$$4x + y = -16$$

 $x + 3y = 7$

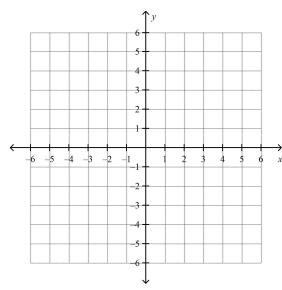
Solution:____

Graph the inequality.

20.
$$y > -4x + 5$$

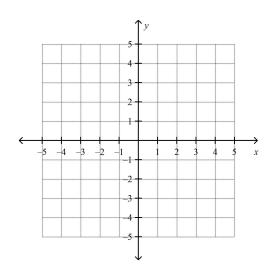


21. $4x + 2y \ge 12$



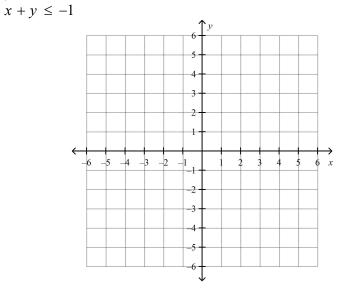
What is the graph of the inequality in the coordinate plane?

22. *y* < 1



23. What is the graph of the system?

$$y \le 3x + 1$$



24. Kendra owns a restaurant. She charges \$3.00 for 2 eggs and one piece of toast, and \$1.80 for one egg and one piece of toast. How much does Kendra charge for an egg? A piece of toast?

Cost for an egg:_____ Cost for a piece of toast:_____

Unit 4 Test Alg 1 Answer Section

TRUE/FALSE

1. ANS: T PTS: 1

TOP: 4-1 Example 2 Graph Systems of Equations With Infinitely Many Solutions or No Solution

MULTIPLE CHOICE

14. ANS: C

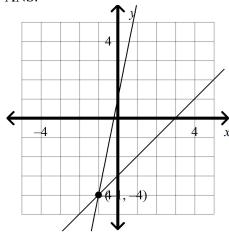
PTS: 1

TOP: 4-5 Example 2 Write a System of Inequalities from a Graph

_					
2.	ANS:	C PTS:	1 TC)P:	4-1 Example 3 Write a System of Equations
3.	ANS:	A PTS:	1		
	TOP:	4-2 Example 1 Solve Systems of Equations Using Substitution			
4.	ANS:	C PTS:	1		
	TOP:	4-2 Example 3 Systems With Infinitely Many Solutions or No Solution			
5.	ANS:	C PTS:	1		
	TOP:	4-2 Example 2 Compare Graphing and Substitution Methods			
6.	ANS:	B PTS:	1 TC	OP:	4-2 Example 4 Model Using Systems of Equations
7.	ANS:	D PTS:	1 TC	OP:	4-3 Example 1 Solve a System of Equations by Adding
8.	ANS:	C PTS:	1		
	TOP:	4-3 Example 2 Understand Equivalent Systems of Equations			
9.	ANS:	D PTS:	1 TC	OP:	4-4 Example 3 Write an Inequality From a Graph
10.	ANS:	D PTS:	1 TC	OP:	4-4 Example 3 Write an Inequality From a Graph
11.	ANS:	B PTS:	1		
	TOP:	4-4 Example 1 Understand an Inequality in Two Variables			
12.	ANS:	D PTS:	1 TC	OP:	4-4 Example 2 Rewrite an Inequality to Graph It
13.	ANS:	C PTS:	1		
	TOP:	4-4 Example 4 Inequalities in One Variable in the Coordinate Plane			

SHORT ANSWER

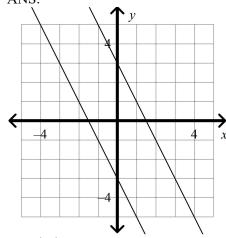
15. ANS:



PTS: 1

TOP: 4-1 Example 1 Solve a System of Equations by Graphing

16. ANS:



no solutions

PTS: 1

TOP: 4-1 Example 2 Graph Systems of Equations With Infinitely Many Solutions or No Solution

17. ANS:

no solution

PTS: 1

TOP: 4-2 Example 3 Systems With Infinitely Many Solutions or No Solution

18. ANS:

(8, 32)

PTS: 1

TOP: 4-2 Example 1 Solve Systems of Equations Using Substitution

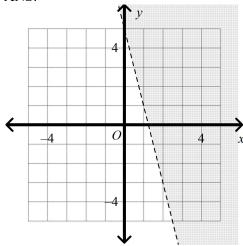
19. ANS:

(-5, 4)

PTS: 1

TOP: 4-3 Example 2 Understand Equivalent Systems of Equations

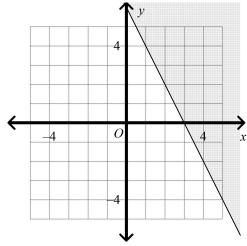
20. ANS:



PTS: 1

TOP: 4-4 Example 1 Understand an Inequality in Two Variables

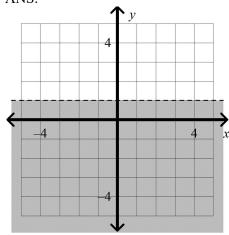
21. ANS:



PTS: 1

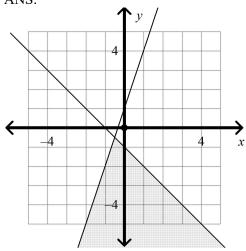
TOP: 4-4 Example 2 Rewrite an Inequality to Graph It

22. ANS:



PTS: 1 TOP: 4-4 Example 4 Inequalities in One Variable in the Coordinate Plane

23. ANS:



PTS: 1 TOP: 4-5 Example 1 Graph a System of Inequalities

24. ANS:

\$1.20 per egg; \$.60 for toast

PTS: 1 TOP: 4-1 Example 3 Write a System of Equations