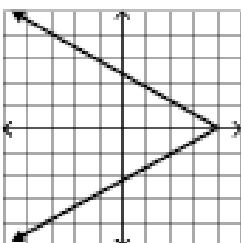
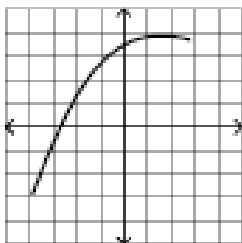


## Unit 2A Test Review – with answers

1. KNOW DOMAIN AND RANGE FROM GRAPHS. THERE WILL BE 3 PROBLEMS!

1.



Solve each system.

2. 
$$\begin{cases} x + y = 2 \\ 2x - y = 7 \end{cases}$$

3. 
$$\begin{cases} 3x - 2y = -2 \\ 3x + y = 10 \end{cases}$$

4. 
$$\begin{cases} x + y = -7 \\ x - y = 5 \end{cases}$$

5. At a bakery, Riley bought 3 bagels and 2 muffins for \$7.25. Karen bought 5 bagels and 4 muffins for \$13.25. What is the cost of each item?

Write a system of equations and solve.

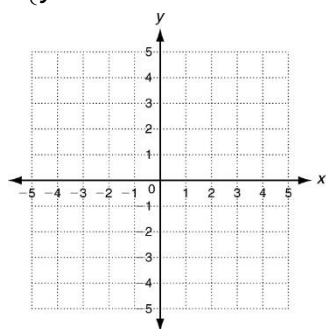
Solve each system of linear equations. Tell whether the system has no solution or infinitely many solutions.

6. 
$$\begin{cases} 2x + y = 1 \\ 2x + y = -3 \end{cases}$$

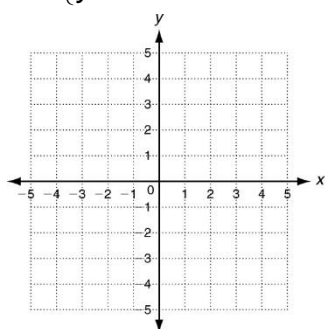
7. 
$$\begin{cases} y = 5x + 2 \\ y - 5x = 2 \end{cases}$$

Graph the system of linear inequalities.

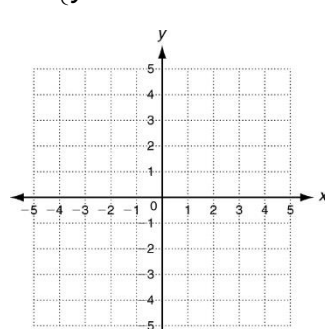
8. 
$$\begin{cases} y \geq x + 1 \\ y \leq -2x \end{cases}$$



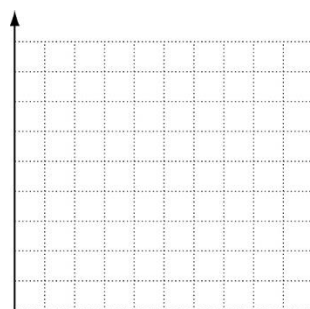
9. 
$$\begin{cases} y < 2x + 4 \\ y > x - 1 \end{cases}$$



10. 
$$\begin{cases} y > -x \\ y > -x + 3 \end{cases}$$



11. Lou is buying macaroni salad and potato salad for a picnic. Macaroni salad costs \$4 per pound and potato salad costs \$2 per pound. Lou would like to buy at least 6 pounds of salads and wants to spend no more than \$20.



a. Write a system of linear inequalities.

Let  $x$  = pounds of macaroni salad

Let  $y$  = pounds of potato salad

b. Graph the solutions of the system.

c. List two possible combinations. \_\_\_\_\_

## Answers

1. Domain:  $[-4, 3]$  or  $-4 \leq x \leq 3$

Range:  $[-3, 4]$  or  $-3 \leq y \leq 4$

Domain:  $(-\infty, 4]$  or  $x \leq 4$

Range:  $(-\infty, \infty)$  or *All Real Numbers* or  $\mathbb{R}$

2.  $(3, -1)$

3.  $(2, 4)$

4.  $(-1, -6)$

5.  $3x + 2y = 7.25$

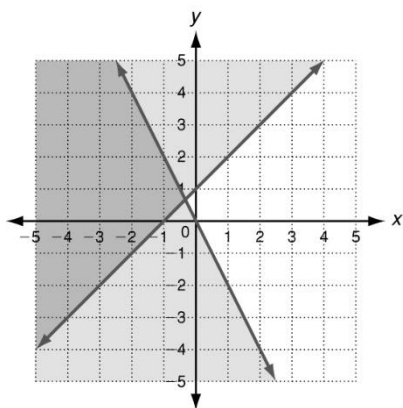
$5x + 4y = 13.25$

Answer: Bagel: \$1.25, Muffin: \$1.75

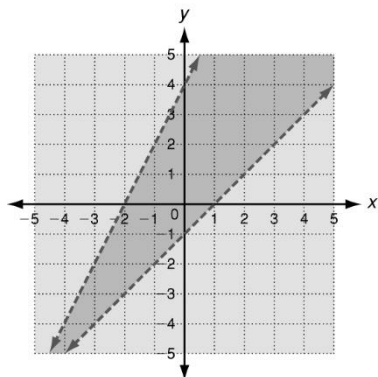
6. no solution

7. infinitely many solutions

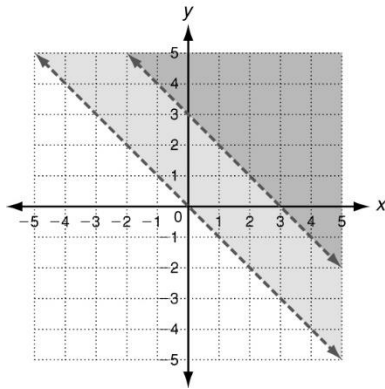
8.



9.

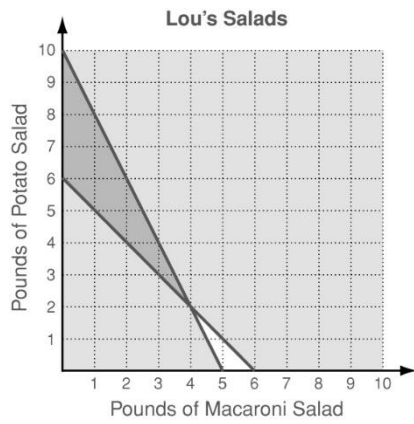


10.



11.a. 
$$\begin{cases} x + y \geq 6 \\ 4x + 2y \leq 20 \end{cases}$$

b.



- c. answers may vary: 2 lbs mac. salad, 5 lbs potato salad;  
3 lbs mac. salad, 4 lbs potato salad