NAME _____ DATE _____ PERIOD _____

Algebra II *Writing Linear Equations* (Sep 28th 2020)

Write an equation in slope-intercept form for the line described.

1. slope 3, y-intercept at –4

2. perpendicular to $y = \frac{1}{2} - 1$, Passing through (4,-2)

3. parallel to $y = \frac{2}{3}x + 6$, passes through (6, 7)

4. parallel to $y = -\frac{1}{4}x - 2$, passing through (0,2)

5. perpendicular to $y = -4x + 1$, passes through (–8, –1)

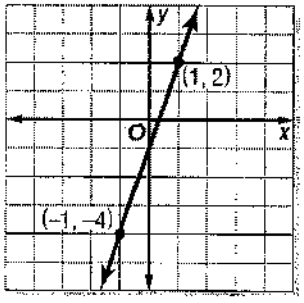
6. slope $\frac{3}{5}$, y-intercept at –10

7. parallel to $y = 9x + 3$, y-intercept at –2

8. slope $\frac{5}{6}$, passes through (12, 4)

Write an equation in slope-intercept form for each graph.

9.



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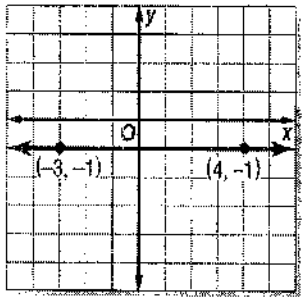

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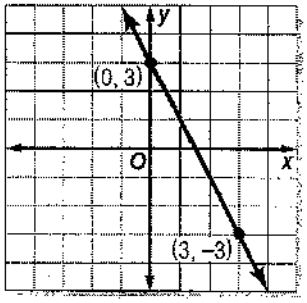


NAME _____ DATE _____ PERIOD _____

Writing Linear Equations with the given slope and passing through the given point (Sep 29th , 2020)

Write an equation in slope-intercept form for the line that satisfies each set of conditions.

1. slope 3, passes through (1, –3)

2. slope –1, passes through (0, 0)

3. slope –2, passes through (0, –5)

4. slope 3, passes through (2, 0)

5. passes through (–1, –2) and (–3, 1)

6. passes through (–2, –4) and (1, 8)

7. passes through (2, 0) and (0, –6)

8. passes through (2.5, 0) and (0, 5)

9. passes through (3, –1), perpendicular to the graph of $y = -\frac{1}{3}x - 4$.

NAME _____ DATE _____ PERIOD _____

Writing Linear Equations Review *(Sep 30th, 2020)*

Write an equation in slope-intercept form for the line described.

1. slope $\frac{3}{5}$, y-intercept at -10

2. perpendicular to $y = \frac{1}{2} + 1$, y-intercept at -4

3. parallel to $y = \frac{2}{3}x + 6$, passes through (1, 3)

4. parallel to $y = -\frac{1}{4}x + 2$, y-intercept at -3

5. perpendicular to $y = 9x + 3$ passes through (−8, 3)

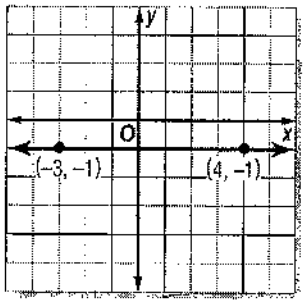
6. slope 2, y-intercept at -1

7. parallel to, $y = 4x + 1$, y-intercept at -2

8. slope $\frac{5}{6}$, passes through (1, 2)

Write an equation in slope-intercept form for each graph.

9.



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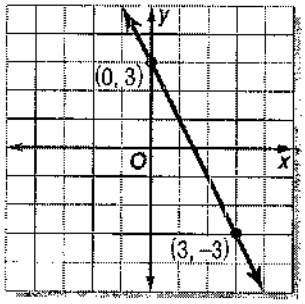

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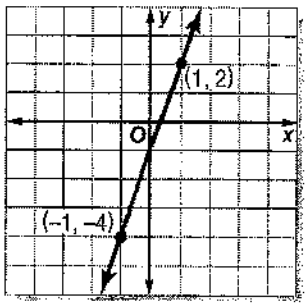


NAME _____ DATE _____ PERIOD _____

Write an equation in slope-intercept form for the line that satisfies each set of conditions.

12. slope 3, passes through (1, 0)

13. slope –3, passes through (-1, 2)

14. slope -2, passes through (-5, 0)

15. slope -1, passes through (-2, -1)

16. passes through (2, –1) and (2, -2)

17. passes through (-2, 4) and (1, -8)

18. passes through (0, 2) and (-5, -2)

19. passes through (2, 4) and (0, -5)

Algebra 2 Name_____ ID: 1

Quiz on writing Linear Equations of all types

Date Oct 1st, 2020 Period____

Write the slope-intercept form of the equation of each line given the slope and y-intercept.

1) Slope $= -\frac{5}{3}$, y-intercept $= -3$

A) $y = \frac{4}{3}x - 3$

B) $y = -\frac{4}{3}x - 3$

C) $y = -\frac{5}{3}x - 3$

D) $y = -3x - \frac{4}{3}$

2) Slope $= -1$, y-intercept $= 4$

A) $y = 4x - 1$ B) $y = -4x - 1$

C) $y = -x + 4$ D) $y = -x - 1$

3) Slope $= -\frac{8}{3}$, y-intercept $= 3$

A) $y = -3x + \frac{1}{3}$

B) $y = -\frac{8}{3}x + 3$

C) $y = \frac{1}{3}x + 3$

D) $y = 3x + \frac{1}{3}$

4) Slope $= \frac{3}{2}$, y-intercept $= -3$

A) $y = \frac{3}{2}x - 3$

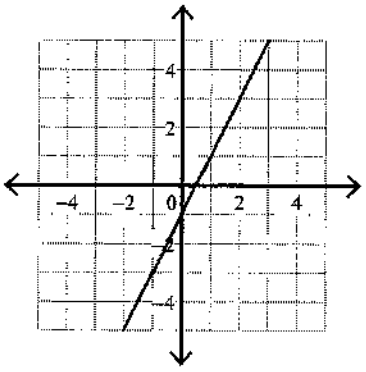
B) $y = -2x - 3$

C) $y = -3x + \frac{3}{2}$

D) $y = -\frac{3}{2}x - 3$

Write the slope-intercept form of the equation of each line.

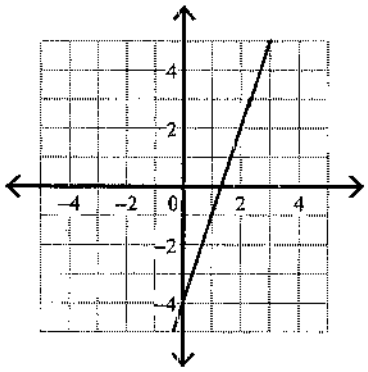
5)



A) $y = -2x + 2$ B) $y = 2x - 1$

C) $y = 2x + 2$ D) $y = -x + 2$

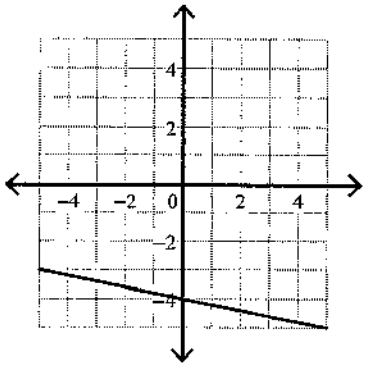
6)



A) $y = 3x - 4$ B) $y = -4x + 3$

C) $y = -x + 3$ D) $y = x + 3$

7)



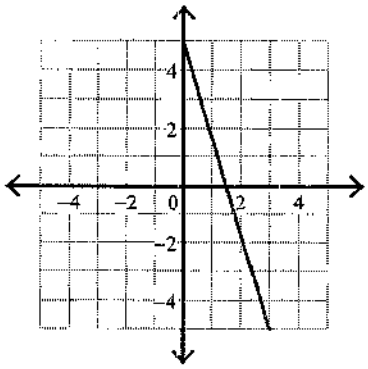
A) $y = -\frac{1}{5}x - 4$

B) $y = -4x - \frac{1}{5}$

C) $y = -\frac{1}{5}x - \frac{1}{5}$

D) $y = \frac{1}{5}x - \frac{1}{5}$

8)



A) $y = -\frac{10}{3}x + 5$

B) $y = 5x - \frac{10}{3}$

C) $y = \frac{2}{3}x - \frac{10}{3}$

D) $y = -5x - \frac{10}{3}$

Write the slope-intercept form of the equation of the line through the given point with the given slope.

9) through: $(-1, 0)$, slope = 4

A) $y = -4x + 4$ B) $y = -3x + 4$

C) $y = 4x + 4$ D) $y = 4x - 4$

10) through: $(1, 4)$, slope = undefined

A) $y = -x$ B) $y = -5x - 1$

C) $y = -1$ D) $x = 1$

11) through: (3, 3), slope $= \frac{2}{3}$

A) $y = \frac{1}{3}x + 1$

B) $y = -\frac{5}{3}x + 1$

C) $y = \frac{2}{3}x + 1$

D) $y = -\frac{2}{3}x + 1$

12) through: (–4, –4), slope $= \frac{9}{4}$

A) $y = 5x + \frac{9}{4}$

B) $y = \frac{9}{4}x + \frac{5}{4}$

C) $y = \frac{9}{4}x + 5$

D) $y = \frac{5}{4}x + \frac{9}{4}$

Write the slope-intercept form of the equation of the line through the given points.

13) through: (0, –5) and (3, –1)

A) $y = x - 5$

B) $y = 5x - 5$

C) $y = -\frac{4}{3}x - 5$

D) $y = \frac{4}{3}x - 5$

14) through: (–2, 2) and (1, –5)

A) $y = -x - \frac{8}{3}$

B) $y = x - \frac{8}{3}$

C) $y = -\frac{7}{3}x - \frac{8}{3}$

D) $y = -\frac{5}{3}x - \frac{8}{3}$

15) through: (3, 4) and (0, 2)

A) $y = -\frac{2}{3}x + 2$

B) $y = 2x + \frac{2}{3}$

C) $y = \frac{2}{3}x + 2$

D) $y = -\frac{4}{3}x + \frac{2}{3}$

16) through: (–4, –2) and (–3, –4)

A) $y = -2x - 10$

B) $y = 2x - 10$

C) $y = 10x - 2$

D) $y = -10x - 2$

Write the slope-intercept form of the equation of the line described.

17) through: $(-5, -5)$, parallel to $y = 2x - 5$

A) $y = 2x + 5$ B) $y = 5x + 2$

C) $y = -5x + 2$ D) $y = -2x + 5$

18) through: $(-5, 2)$, parallel to $y = \frac{2}{5}x - 5$

A) $y = x + \frac{2}{5}$ B) $y = -4x + \frac{2}{5}$

C) $y = \frac{2}{5}x + 4$ D) $y = 4x + \frac{2}{5}$

19) through: $(5, -3)$, parallel to $y = -x$

A) $y = -4x + 2$ B) $y = x + 2$

C) $y = -x + 2$ D) $y = 2x - 1$

20) through: $(-2, -4)$, parallel to $y = \frac{5}{2}x - 3$

A) $y = 4x + 1$ B) $y = x + 4$

C) $y = x + 1$ D) $y = \frac{5}{2}x + 1$

21) through: $(3, 0)$, perp. to $y = \frac{3}{4}x - 4$

A) $y = -\frac{4}{3}x + 4$

B) $y = \frac{4}{3}x + 4$

C) $y = 4x - \frac{5}{3}$

D) $y = -\frac{5}{3}x + 4$

22) through: $(2, 0)$, perp. to $y = -2x + 3$

A) $y = \frac{1}{2}x - \frac{1}{2}$

B) $y = -\frac{1}{2}x + \frac{1}{2}$

C) $y = \frac{1}{2}x - 1$

D) $y = -x + \frac{1}{2}$

23) through: $(5, 2)$, perp. to $y = -\frac{5}{6}x - 1$

A) $y = 4x + \frac{6}{5}$ B) $y = \frac{6}{5}x - 4$

C) $y = \frac{4}{5}x + \frac{6}{5}$ D) $y = -4x + \frac{6}{5}$

24) through: $(3, 0)$, perp. to $y = -x + 2$

A) $y = 3x + 1$ B) $y = -4x + 1$

C) $y = x - 3$ D) $y = -3x + 1$

NAME _____ DATE _____ PERIOD _____

Study Guide *Graphing Linear Inequalities (Oct 2nd, 2020)*

Graph Linear Inequalities A **linear inequality**, like $y \geq 2x - 1$, resembles a linear equation, but with an inequality sign instead of an equals sign. The graph of the related linear equation separates the coordinate plane into two half-planes. The line is the boundary of each half-plane.

To graph a linear inequality, follow these steps.

Step 1 Graph the boundary; that is, the related linear equation. If the inequality symbol is $\leq$ or $\geq$, the boundary is solid. If the inequality symbol is $<$ or $>$, the boundary is dashed.

Step 2 Choose a point not on the boundary and test it in the inequality. (0, 0) is a good point to choose if the boundary does not pass through the origin.

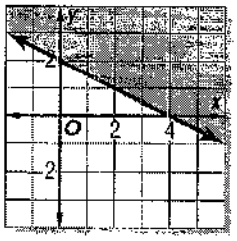
Step 3 If a true inequality results, shade the half–plane containing your test point. If a false inequality results, shade the other half-plane.

Example: Graph $x + 2y \geq 4$.

The boundary is the graph of $x + 2y = 4$.

Use the slope-intercept form, $y = -\frac{1}{2}x + 2$, to graph the boundary line.

The boundary line should be solid.



Test the point (0, 0).

$0 + 2(0) \stackrel{?}{\geq} 4$ $\quad (x, y) = (0, 0)$

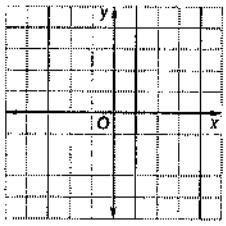
$0 \geq 4$ $\quad$ false

Shade the region that does *not* contain (0, 0).

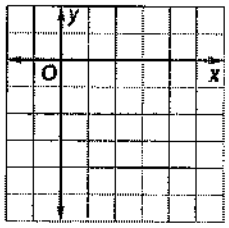
Exercises

Graph each inequality.

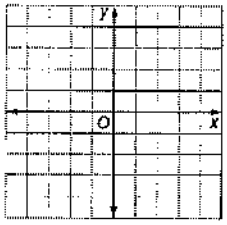
1. $y < 3x + 1$



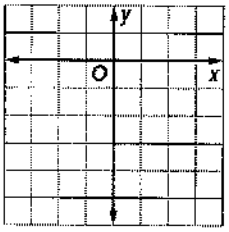
2. $y \geq x - 5$



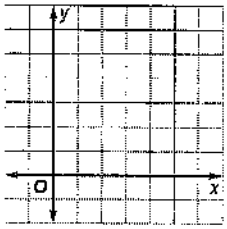
3. $4x + y \leq -1$



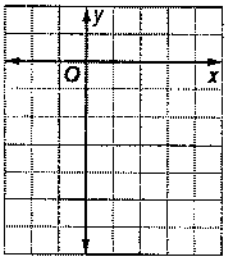
4. $y < \frac{x}{2} - 4$



5. $x + y > 6$



6. $0.5x - 0.25y < 1.5$



NAME _____ DATE _____ PERIOD _____

Study Guide and *Graphing Linear Inequalities*

Apply Linear Inequalities A **constraint** is a condition that the solution of a problem must satisfy.

Example: A manufacturing company wants to determine the possible size of containers in the shape of rectangular prisms to use to store their products. It has been determined that the sum of height of the prism and the perimeter of the base must be less than or equal to 419 inches. Write an inequality to represent the possible height and perimeter of base of the storage containers. Then graph the inequality.

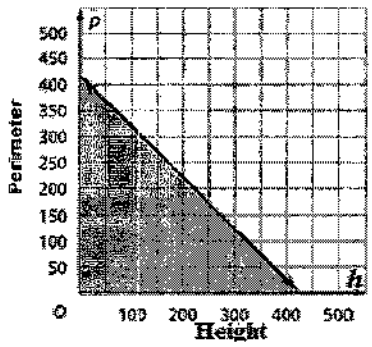
Define variables.

Let h represent the height of a storage box.
Let p represent the perimeter of the base of a storage box.

Identify the inequality symbol and write the inequality.

The sum can equal 419 inches, but not exceed 419 inches, so the inequality symbol is $\leq$.
The inequality is $h + p \leq 419$.

Graph the boundary line $h + p = 419$.



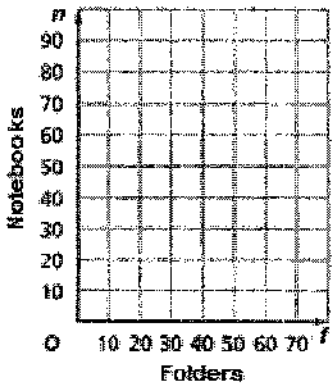
Test the point (0, 0).

$h + p \leq 419$	Original inequality
$(0) + (0) \stackrel{?}{\leq} 419$	$(h, p) = (0, 0)$
$0 \leq 419$	true

Shade the region that contains (0, 0).

Exercises

1. A bookstore sells folders and notebooks. Folders each cost \$2.50 and notebooks each cost \$1.25. The manager of the bookstore wants to earn at least \$100 each week for selling folders and notebooks. Define variables and write an inequality to represent the possible numbers of folders and notebooks that need to be sold each week to meet the manager's goal. Then graph the inequality.

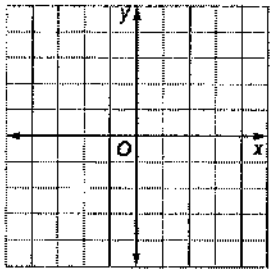


NAME _____ DATE _____ PERIOD _____

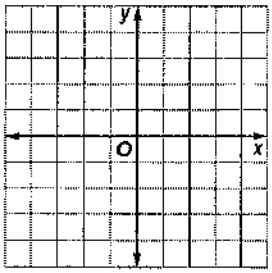
Graphing Linear Inequalities (Oct 5th, 2020)

Graph each inequality.

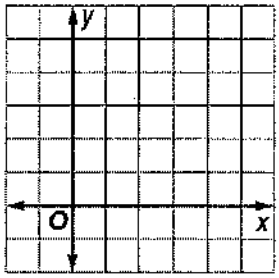
1. $y > 1$



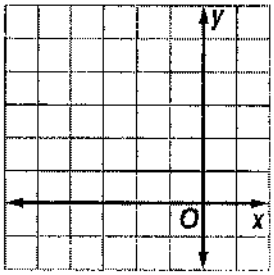
2. $y \leq x + 2$



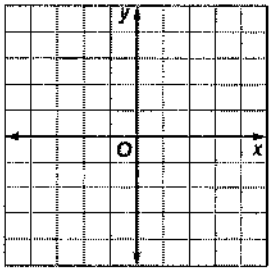
3. $x + y \leq 4$



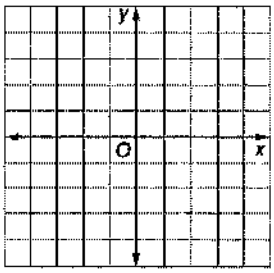
4. $x + 3 < y$



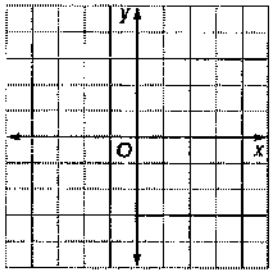
5. $2 - y < x$



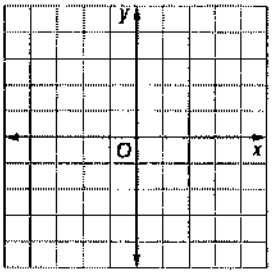
6. $y \geq -x$



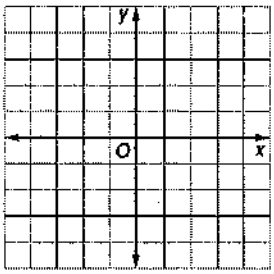
7. $x - y > -2$



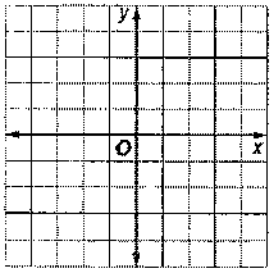
8. $9x + 3y - 6 \leq 0$



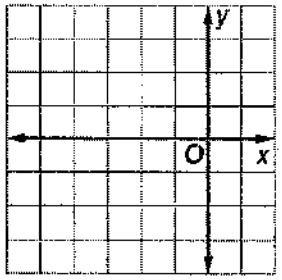
9. $y + 1 \geq 2x$



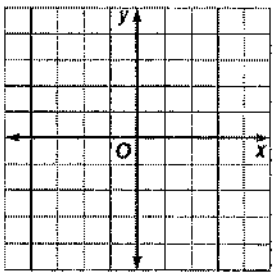
10. $y - 7 \leq -9$



11. $x > -5$



12. $y - x > 1$



NAME _____ DATE 10/06/2020 _____ PERIOD

Chapter 1 Mid-Chapter Test

SCORE _____

Part I

For Questions 1–5, write the letter for the correct answer in the blank at the right of each question.

1. **MULTIPLE CHOICE** If $7n + 3 = \frac{4}{3}$, what is the value of $7n + 5$?

   A $-\frac{5}{3}$ **B** $\frac{10}{3}$ **C** $\frac{13}{3}$ **D** $-\frac{5}{21}$

   1. _____

2. Solve $6(x - 5) = x + 5$.

   F 2 **G** 0 **H** 7 **J** 5

   2. _____

3. Write an equation in standard form for the line that is parallel to the graph of $-8x = 5 - 4y$ and has y-intercept -0.5.

   A $x - 0.5y = 0.25$ **B** $10x - 5y = 2.5$ **C** $4x - 2y = 1$ **D** $2x - y = 1$

   3. _____

4. Find the slope of the line that passes through $\left(-4.5, \frac{7}{2}\right)$ and (3, 3.5).

   F $-\frac{1}{6}$ **G** -6 **H** undefined **J** 0

   4. _____

5. The graphs of which pair of lines are perpendicular?

   A $2x - 3y = 12$, $y = -\frac{2}{3}x + 5$
   B $3x + 2y = 6$, $2x - 3y = 7$
   C $y = 4x + 13$, $y = \frac{1}{4}x - 13$
   D $x + y = 1$, $2y = -2x + 2$

   5. _____

Part II

6. Solve $2x + 5 > 11$.

   6. _____

7. Define a variable, write an equation, and solve the problem. Adults' tickets to a play cost \$5 and students' tickets cost \$2. If 295 tickets were sold and a total of \$950 was collected, how many students' tickets were sold?

   7. _____

8. Solve $h = \frac{-b}{2a}$ for b.

   8. _____

9. Write an equation in slope-intercept form for the line that has a slope of $-\frac{1}{3}$ and passes through (–6, 1).

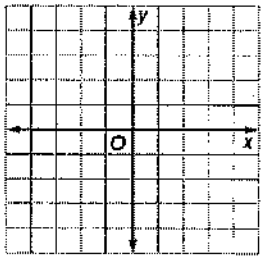
   9. _____

10. Write an equation in slope intercept form for the line that passes through (3, 5) and is perpendicular to the line with equation $y = \frac{1}{2}(x + 2)$.

    10. _____

11. Graph $y > -2x$.

    11.



Algebra 2 Name_____ ID: 1

writing equations in slope intercept form (oct 6th, 2020) Date_____ Period____

Write the slope-intercept form of the equation of each line.

1) $11x + 3y = 9$

2) $5x - 4y = 10$

3) $13x + 5y = -40$

4) $2x - y = -8$

5) $9x + y = -4$

6) $3x + 5y = -35$

7) $5x - 7y = -21$

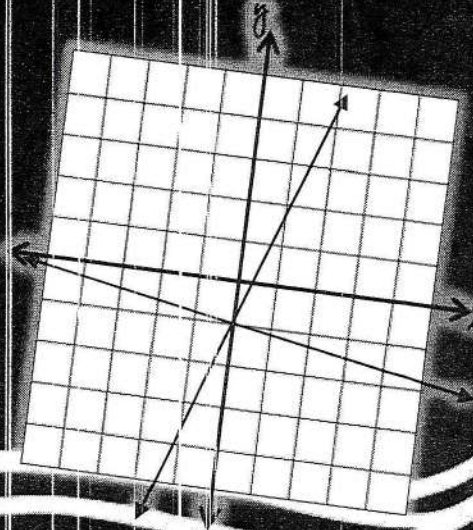
8) $2x + y = -6$

9) $12x + 7y = -49$

10) $2x - 3y = -9$

Investigation

Solving Systems of Equations



Inquiry based, discovery activity

Name_____ Date oct 7th & 8th Per ____

Investigation: Solutions to Systems of Equations

1. Show that the following points are solutions to the equation $y = 3x - 1$. Explain. (Hint: plug the values from the ordered pair into the equation for x and y)

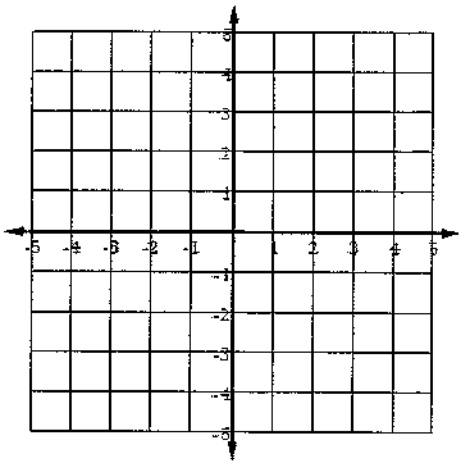
(1, 2)	(2, 5)

Two solutions to $y = 3x - 1$ are _____ and _____

2. Graph the line $y = 3x - 1$

3. Do the points (1, 2) and (2, 5) lie directly on the line you graphed of $y = 3x - 1$

4. Choose a different point that lies directly on the graph of the line $y = 3x - 1$. (_____,_____) Show algebraically that the point you chose is also solution to the equation $y = 3x - 1$.



5. Based on your answers in #1, #3 and #4, make a conjecture about the location of ALL of the points in the coordinate plane that are the solutions to $y = 3x - 1$. Will they lie on the line, above the line, or below the line?

6. List one more solution to the equation $y = 3x - 1$ by looking at the graph and using your conjecture from #5.

7. Graph the line $y = -2x + 4$ on the same coordinate plane above.

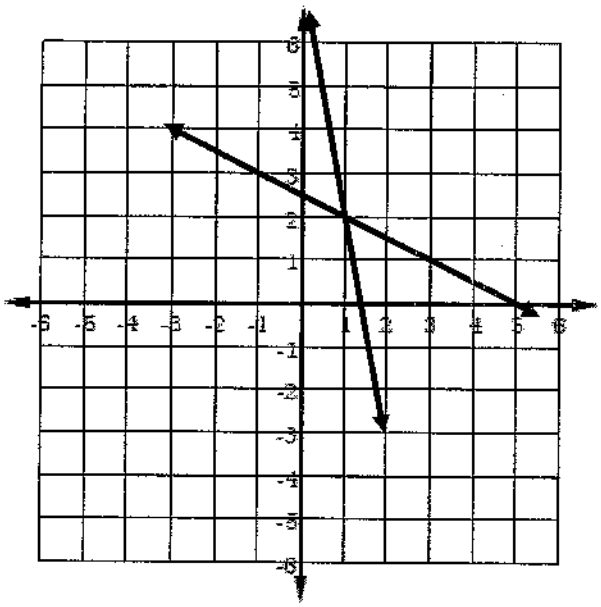
8. List two solutions to $y = -2x + 4$ by looking at the graph and using your conjecture from #5.

9. Do the lines $y = -2x + 4$ and $y = 3x - 1$ have any points in common? If so, list them here.

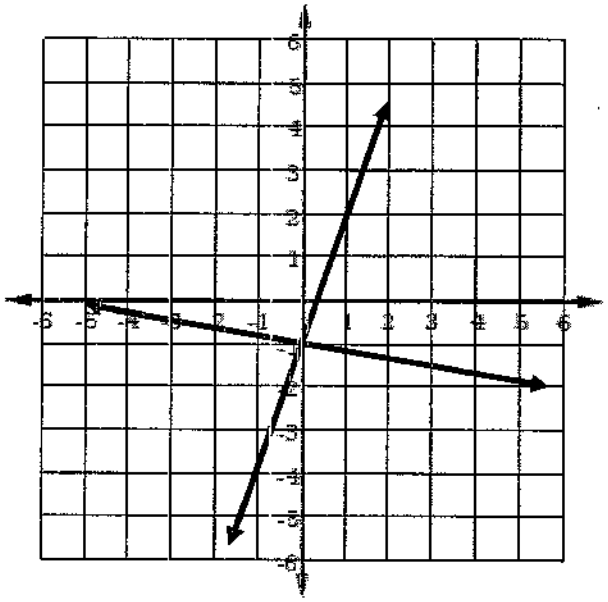
10. Is the point you listed in #9 a solution to both of the equations $y = -2x + 4$ and $y = 3x - 1$? Explain how you know.

11. Summarize how you can find a solution that satisfies two linear equations simultaneously, by looking at their graphs.

A. Use the graphs to identify the solution to each system of equations.



1. Solution: ____

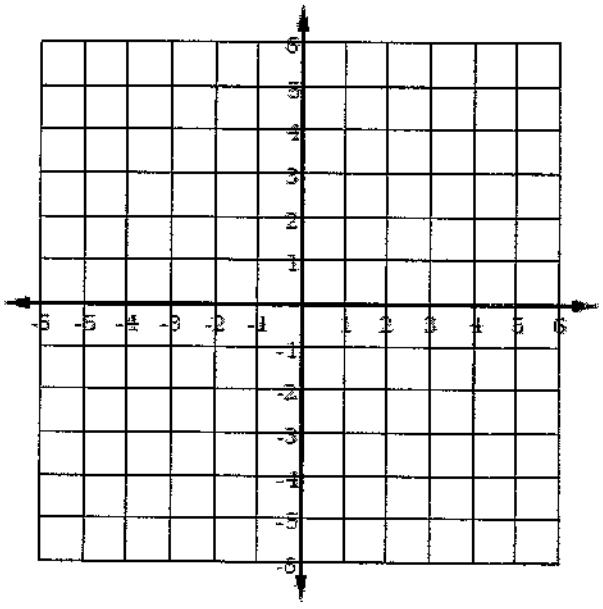


2. Solution: ____

B. Solve each system of equations by graphing.

$y = \frac{1}{2}x - 4$

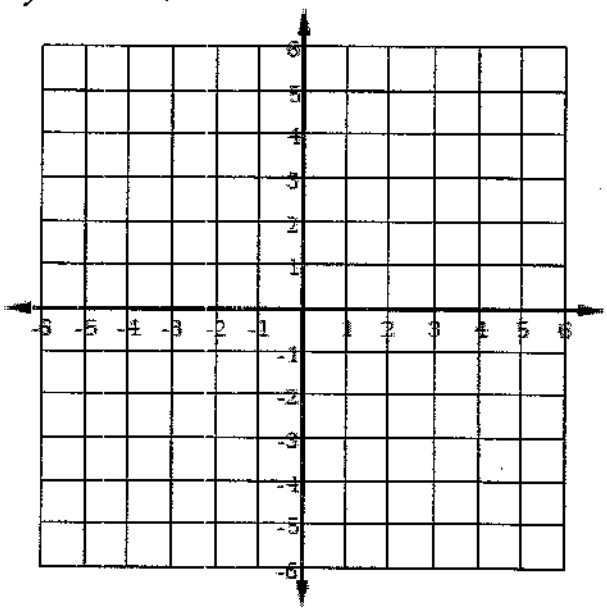
$y = -x + 2$



3. Solution: ____

$y = -\frac{2}{3}x + 2$

$y = 2x - 6$



4. Solution: ____

Name_____ Date oct 7th, 8th. Per ____

Investigation: Solutions to Systems of Equations

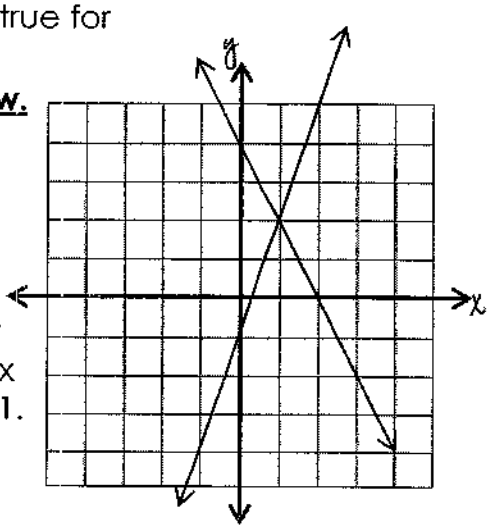
1. Are the following points solutions to y = 3x -1? Explain how you know. (hint: plug the values in for x and y into the equation)

(1, 2): 2=3(1)-1

(2, 5): 5=3(2)-1

Yes these points are both solutions since the equations are true for each set of values.

Graph the line y = 3x - 1 and then answer the questions below.



2. Do the points (1, 2) and (2, 5) lie directly **on** the line you graphed of y = 3x -1?

Yes

3. Choose a different point on the line y = 3x -1 by looking at the graph. Prove algebraically, by plugging in the values for x and y, that the point you chose is a solution to the line y =3x-1.

(0,-1): -1=3(0)-1

4. Based on your answers in #1, #2 and #3, where on the coordinate plane do you think ***all*** of the solutions to y = 3x -1 will lie? On the line, above the line, or below the line?

On the line

5. List one more solution to the equation y = 3x -1 by looking at the graph and using your conjecture from #4.

(-1, -4)

Now graph y = -2x + 4 on the same coordinate plane above.

7. List two solutions to y = -2x + 4 by looking at the graph and using your conjecture from #4.

(2, 0), (0,4)

8. Do the lines y = -2x + 4 and y = 3x - 1 have any points in common? If so, list them here.

(1,2)

9. Is the point you listed in #8 a solution to both of the equations y = -2x + 4 and y = 3x - 1? Explain how you know.

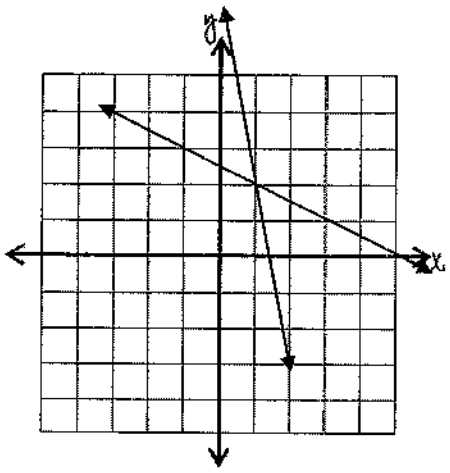
yes, solutions to the equations are points on the lines

10. Summarize how you can find a solution that satisfies two linear equations simultaneously by looking at their graphs.

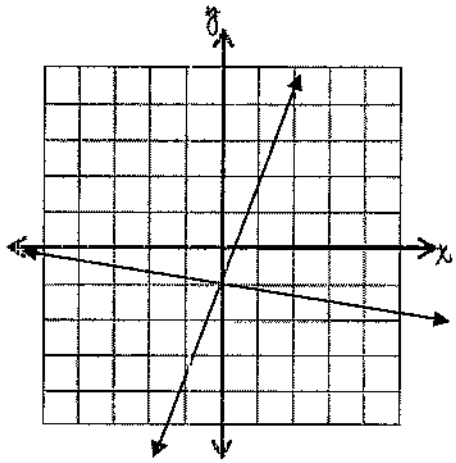
look for the point on both lines, where they intersect

oct 7th; 8th

A. Write the solution to each system of equations.



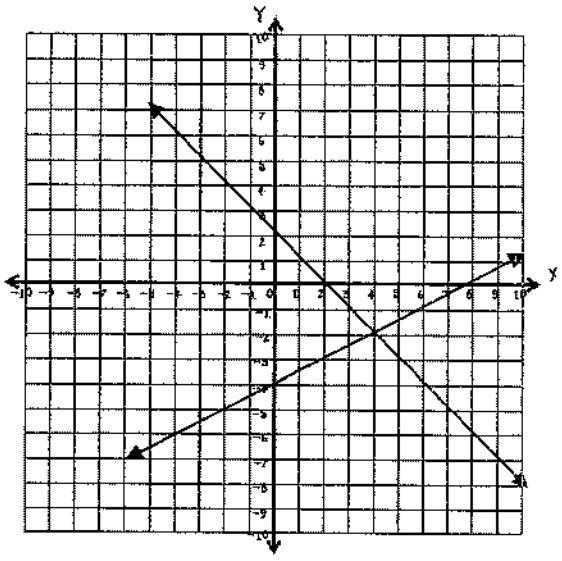
1. Solution: ____



2. Solution: ____

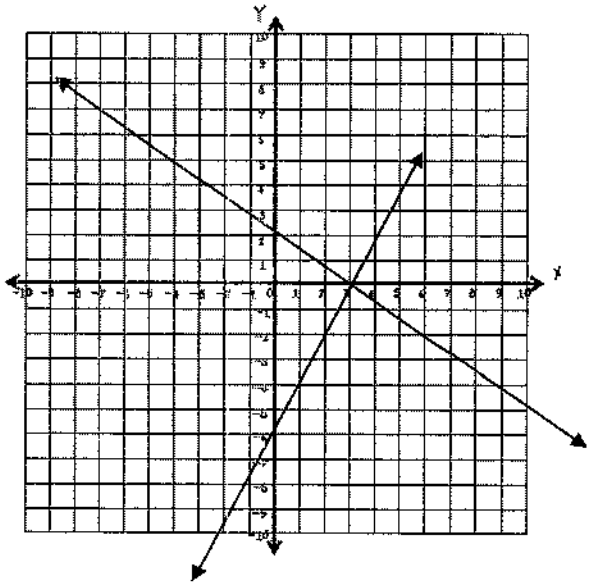
B. Solve each system of equations by graphing.

$y = \frac{1}{2}x - 4$
$y = -x + 2$



3. Solution: ____

$y = -\frac{2}{3}x + 2$
$y = 2x - 6$



4. Solution: ____

NAME _____ DATE 10/9/2020 _____ PERIOD _____

Study Guide ***Solving Systems of Equations***

Solve Systems Algebraically To solve a system of linear equations by **substitution**, first solve for one variable in terms of the other in one of the equations. Then substitute this expression into the other equation and simplify. To solve a system of linear equations by **elimination**, add or subtract the equations to eliminate one of the variables.

Example 1: Use substitution to solve the system of equations. $2x - y = 9$, $x + 3y = -6$

Solve the first equation for y in terms of x.

$2x - y = 9$	First equation
$-y = -2x + 9$	Subtract $2x$ from both sides.
$y = 2x - 9$	Multiply both sides by -1.

Substitute the expression $2x - 9$ for y into the second equation and solve for x.

$x + 3y = -6$	Second equation
$x + 3(2x - 9) = -6$	Substitute $2x - 9$ for y.
$x + 6x - 27 = -6$	Distributive Property
$7x - 27 = -6$	Simplify.
$7x = 21$	Add 27 to each side.
$x = 3$	Divide each side by 7.

Now, substitute the value 3 for x in either original equation and solve for y.

$2x - y = 9$	First equation
$2(3) - y = 9$	Replace x with 3.
$6 - y = 9$	Simplify.
$-y = 3$	Subtract 6 from each side.
$y = -3$	Multiply each side by -1.

The solution of the system is $(3, -3)$.

Example 2: Use the elimination method to solve the system of equations.

$3x - 2y = 4$

$5x + 3y = -25$

Multiply the first equation by 3 and the second equation by 2. Then add the equations to eliminate the y variable.

$3x - 2y = 4$	**Multiply by 3.**	$9x - 6y =$	12
$5x + 3y = -25$	**Multiply by 2.**	$10x + 6y =$	-50
		$19x$	$= -38$
		x	$= -2$

Replace x with -2 and solve for y.

$3x - 2y = 4$

$3(-2) - 2y = 4$

$-6 - 2y = 4$

$-2y = 10$

$y = -5$

The solution is $(-2, -5)$

Exercises

Solve each system of equations.

1. $3x + y = 7$, $4x + 2y = 16$

2. $2x + y = 5$, $3x - 3y = 3$

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

4. $2x - y = 7$, $6x - 3y = 14$

5. $4x - y = 6$, $2x - \frac{y}{2} = 4$

6. $5x + 2y = 12$, $-6x - 2y = -14$

7. $2x + y = 8$, $3x + \frac{3}{2}y = 12$

8. $7x + 2y = -1$, $4x - 3y = -13$

9. $3x + 8y = -6$, $x - y = 9$

NAME _____ DATE 10/6/2020 _____ PERIOD _____

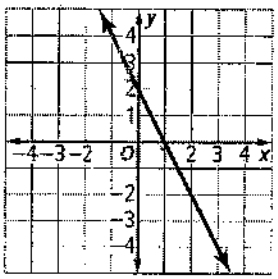
Study Guide *Solving Equations by Graphing* *(continued)*

Solving Equations by Using Graphs of Related Functions The solution of an equation is called the **root of the equation**. The root of an equation is related to the zero of a function. The **zero of a function** f is the value of x for which $f(x) = 0$.

Example: Find the root of the quadratic equation $-2x + 2 = 0$, by graphing the related function.

Step 1: Write the related function.
Equation: $-2x + 2 = 0$
Related Function: $f(x) = -2x + 2$

Step 2: Graph the function.

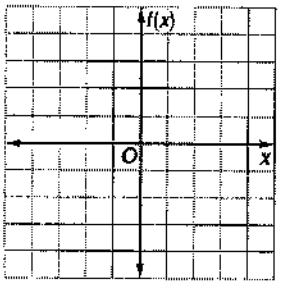


Step 3: Find the zero of the function.
The zero of the function is the x-intercept.
The x-intercept of the graph is 1.
So the solution, or root, to the original equation, $-2x + 2 = 0$, is 1.

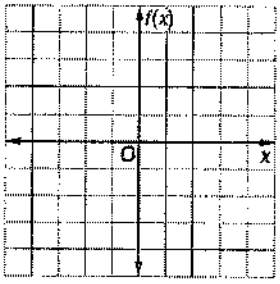
Exercises

Solve each equation by graphing its related function.

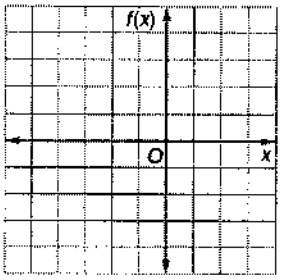
1. $\frac{1}{2}x - 2 = 0$



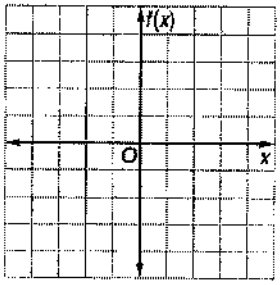
2. $x + 4 = 0$



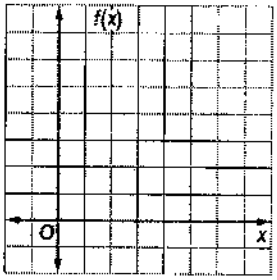
3. $-x + 3 = 0$



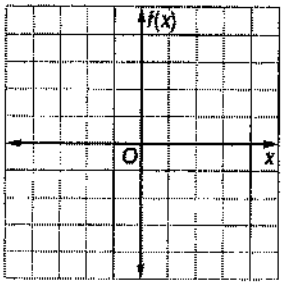
4. $x + 5 = 0$



5. $-\frac{2}{3}x + 2 = 0$



6. $-x = 0$



NAME _____ DATE 10/12/2020 _____ PERIOD _____

Skills Practice *Solving Systems of Equations*

Solve each system of equations by elimination.

1. $-r + t = 5$
$-2r + t = 4$

2. $2x - y = -5$
$4x + y = 2$

3. $x - 3y = -12$
$2x + y = 11$

4. $2p - 3r = 6$
$-2p + 3r = -6$

5. $6w - 8z = 16$
$3w - 4z = 8$

6. $c + d = 6$
$c - d = 0$

7. $2u + 4x = -6$
$u + 2x = 3$

8. $3a + b = -1$
$-3a + b = 5$

9. $2x + y = 6$
$3x - 2y = 16$

10. $3y - z = -6$
$-3y - z = 6$

11. $c + 2d = -2$
$-2c - 5d = 3$

12. $3r - 2t = 1$
$2r - 3t = 9$

13. The sum of two numbers is 12. The difference of the same two numbers is –4. Find the numbers.

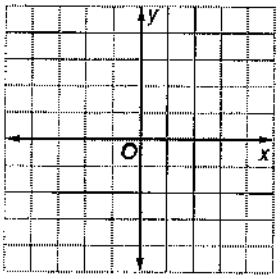
14. Twice a number minus a second number is –1. Twice the second number added to three times the first number is 9. Find the two numbers.

NAME _____ DATE 10/13/2020 _____ PERIOD _____

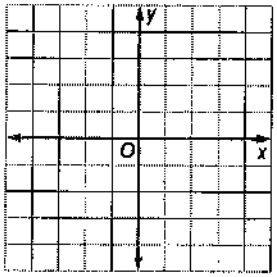
Skills Practice *Solving Systems of Inequalities by Graphing*

Solve each system of inequalities by graphing.

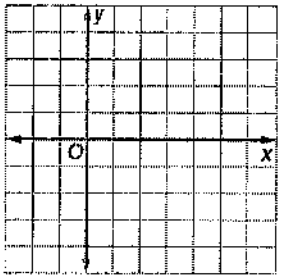
1. $x < 1$
$y \geq -1$



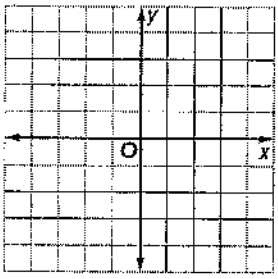
2. $x \geq -3$
$y \geq -3$



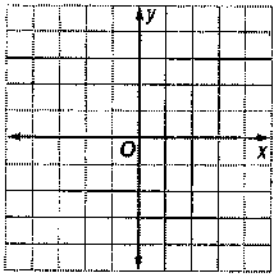
3. $x \leq 2$
$x > 4$



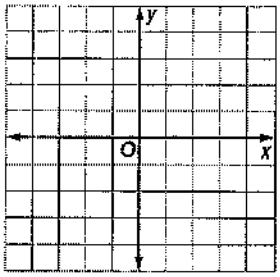
4. $y \geq x$
$y \geq -x$



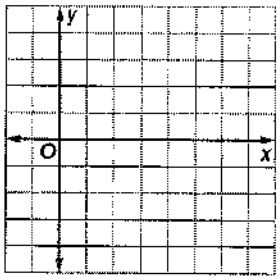
5. $y < -4x$
$y \geq 3x - 2$



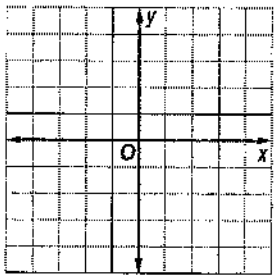
6. $x - y \geq -1$
$3x - y \leq 4$



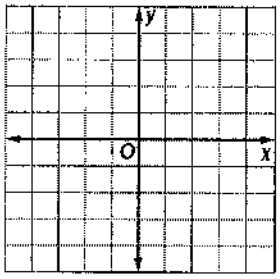
7. $y < 3$
$x + 2y < 12$



8. $y < -2x + 3$
$y \leq x - 2$



9. $x - y \leq 4$
$2x + y < 4$



Algebra 2 Name_____

solving systems by substitution (oct 14th) Date_____ Period____

Solve each system by substitution.

1) $-2x + y = -8$
$-x - y = 8$

2) $5x + 2y = -19$
$-4x + y = -3$

3) $-8x - 5y = 9$
$x + 4y = -18$

4) $x + 2y = 0$
$-7x - 7y = -21$

5) $x + 2y = -5$
$-x + 2y = -3$

6) $-2x + y = -10$
$-4x + 5y = -20$

7) $3x + y = 11$
$2x + 4y = -16$

8) $-8x + y = -7$
$24x - 3y = 7$

9) $-7x + y = -9$
$2x + 3y = 19$

10) $-6x + y = 11$
$-x - 4y = -19$

11) $y = 0$
$8x - 5y = -24$

12) $x - 8y = -14$
$-2x + 5y = 6$

13) $4x - 5y = 16$
$x - 4y = 15$

14) $-3x + 8y = -17$
$-2x + y = 6$

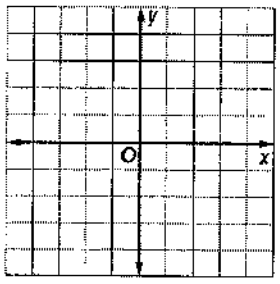
NAME _____ DATE 10/14/2020 _____ PERIOD _____

Practice *Solving Systems of Inequalities by Graphing*

Solve each system of inequalities by graphing.

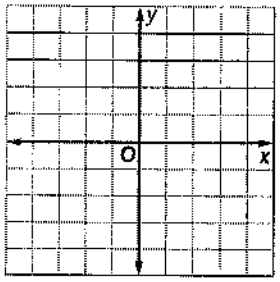
1. $y + 1 < -x$

$y \geq 1$



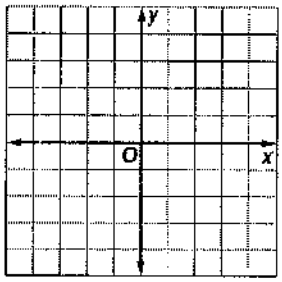
2. $x > -2$

$2y \geq 3x + 6$



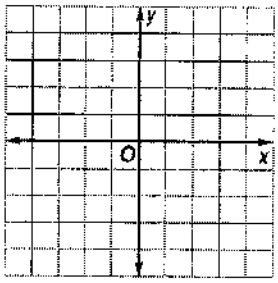
3. $y \leq 2x - 3$

$y \leq -\frac{1}{2}x + 2$



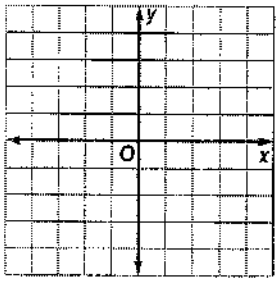
4. $x + y > -2$

$3x - y \geq -2$



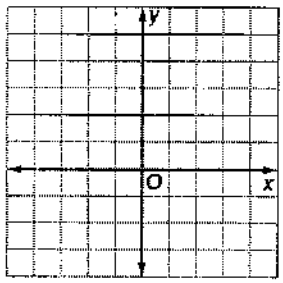
5. $y \leq 1$

$y < x - 1$



6. $3y > 4x$

$2x - 3y > -6$



Find the coordinates of the vertices of the triangle formed by each system of inequalities.

7. $y \geq 1 - x$

$y \leq x - 1$

$x \leq 3$

8. $x - y \leq 2$

$x + y \leq 2$

$x \geq -2$

9. $y \geq 2x - 2$

$2x + 3y \geq 6$

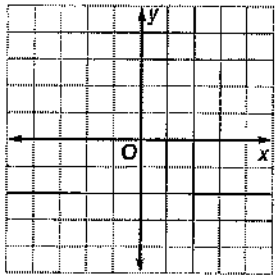
$y < 4$

NAME _____ DATE 10/15/2020 _____ PERIOD _____

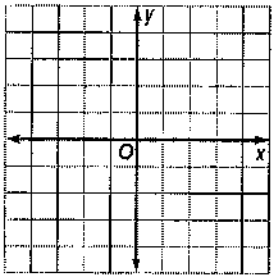
Skills Practice *Solving Systems of Inequalities by Graphing*

Solve each system of inequalities by graphing.

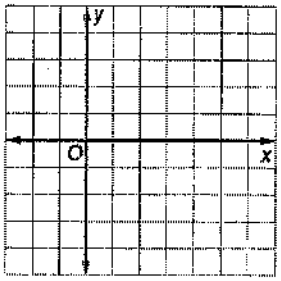
1. $x < 1$
$y \geq -1$



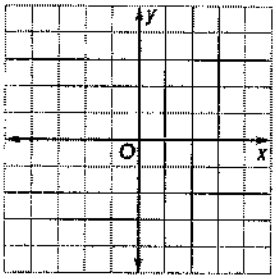
2. $x \geq -3$
$y \geq -3$



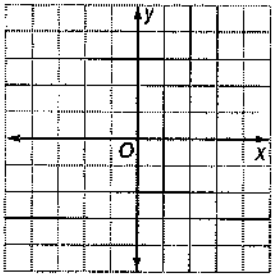
3. $x \leq 2$
$x > 4$



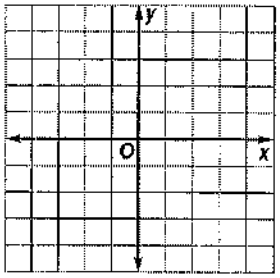
4. $y \geq x$
$y \geq -x$



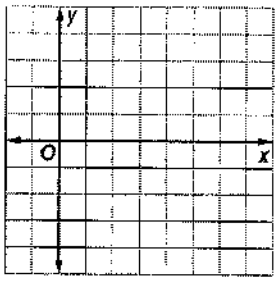
5. $y < -4x$
$y \geq 3x - 2$



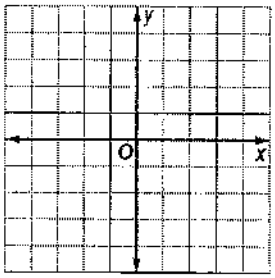
6. $x - y \geq -1$
$3x - y \leq 4$



7. $y < 3$
$x + 2y < 12$



8. $y < -2x + 3$
$y \leq x - 2$



9. $x - y \leq 4$
$2x + y < 4$