

February 28, 2019, Monday  
February, 30, 2019 Wednesday

If you are solving a linear system what does this mean:

$12 = 12$ , it is equal therefore infinite solutions

$0 \neq 6$  not equal, no solution

Jan 25-8:47 AM

Algebra 1 U2 SG Systems of Linear Equations

Solve each system by graphing:

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

2)  $3x + 2y = 6$   
 $y = -18x + 3$

Solve each system by substitution:

3)  $y = -3x - 7$   
 $3x + 2(-3x - 7) = -8$   
 $3x - 6x - 14 = -8$   
 $-3x - 14 = -8$   
 $-3x = 6$   
 $x = -2$

4)  $y = -3x - 7$   
 $4(y - 6) + 4y = 0$   
 $4y - 24 + 4y = 0$   
 $8y - 24 = 0$   
 $8y = 24$   
 $y = 3$

5)  $x - y = -6$   
 $x + 4y = 11$

6)  $x = 3 - 6$   
 $x = -3$

7)  $x = -2$   
 $y = 3$

8)  $(-2, 3)$

Jan 30-8:04 AM

Solve each system by elimination:

$2x + 2y = -4$   
 $x + 3y = -6$

$4y = -12$   
 $y = -3$

$2x + 2(-3) = -4$   
 $2x - 6 = -4$   
 $2x = 2$   
 $x = 1$

9)  $5x + 6y = 101$   
 $5x + 3y = 68$

$3y = 33$   
 $y = 11$

10)  $6x + 5y = 115$   
 $1x + 1y = 21$

11)  $10x + 11y = 21$

Jan 30-8:04 AM

Ways of Solving a System

Method	When do we use it?	Example:
Graphing	When we want to find an approximate solution.	$y = -2x + 1$ $y = 3x - 4$ (1, -1)
Substitution	When one (or both) equation(s) is solved for one variable.	$2x - 4(x + 3) = -12$ $2x - 4x - 12 = -12$ $-2x - 12 = -12$ $-2x = 0$ $x = 0$ $y = x + 3 = 3$ $(0, 3)$
Elimination	When both equations are written in standard form.	$3x = 9$ $x = 3$ $-x + 3y = 3$ $-3 + 3y = 3$ $3y = 6$ $y = 2$ $(3, 2)$

Jan 25-8:51 AM

### Special Types of Systems

Lines have _____ slopes	Have _____ slope, but different y-intercepts.	Have _____ slope and same _____
Example: $2x + 8y = 16$ $-3x + 6y = 30$	Example: $y = -2x + 4$ $2x + y = 1$	Example: $y = 2x + 3$ $-4x + 2y = 6$
Lines are _____ Exactly _____ solution.	Lines are _____. There is _____ solution.	Lines are the _____. There are _____ many solutions.

Jan 25-8:51 AM

Algebra 1 U2 SG Systems of Linear Equations

Solve each system by graphing:

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

2)  $3 - y = 0$   
 $-9 = -18x + 3y$

Solve each system by substitution:

3)  $y = -3x - 7$   
 $3x + 2y = -8$

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

Jan 25-8:52 AM

Solve each system by elimination.

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

6)  $4x - 2y = 4$   
 $8x + 3y = -6$

7) Natalie and Krystal each improved their yards by planting rose bushes and geraniums. They bought their supplies from the same store. Natalie spent \$101 on 1 rose bushes and 6 geraniums. Krystal spent \$68 on 3 rose bushes and 3 geraniums. What is the cost of one rose bush and the cost of one geranium?

8) NOTE: Set up the linear system. DO NOT SOLVE.  
 Mike and Flynn are selling cookie dough for a school fundraiser. Customers can buy packages of sugar cookie dough and packages of gingerbread cookie dough. Mike sold 8 packages of sugar cookie dough and 7 packages of gingerbread cookie dough for a total of \$115. Flynn sold 1 package of sugar cookie dough and 1 package of gingerbread cookie dough for a total of \$21. Find the cost each of one package of sugar cookie dough and one package of gingerbread cookie dough.

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Jan 25-8:52 AM

January 29, 2019, Tuesday

January 31, 2019, Thursday

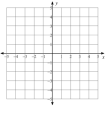
Graphically show an example of a system with one solution and another with no solution.

Jan 25-8:52 AM

Algebra 1 Name \_\_\_\_\_ ID: 1  
 Linear Systems Practice Date \_\_\_\_\_ Period \_\_\_\_\_

Solve each system by graphing.

1)  $y = 4x + 3$   
 $y = -x - 2$



Solve each system by substitution.

2)  $-3x - 7y = 4$   
 $y = 3x + 20$

Solve each system by elimination.

3)  $-x + y = -1$   
 $-6x - 9y = -30$

4) Amanda's school is selling tickets to a fall musical. On the first day of ticket sales the school sold 7 adult tickets and 1 child ticket for a total of \$101. The school took in \$110 on the second day by selling 7 adult tickets and 6 child tickets. Find the price of an adult ticket and the price of a child ticket.

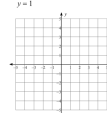
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Jan 25-8:54 AM

Algebra 1 Name \_\_\_\_\_ ID: 2  
 Linear Systems Practice Date \_\_\_\_\_ Period \_\_\_\_\_

Solve each system by graphing.

1)  $y = \frac{3}{4}x + 4$   
 $y = 1$



Solve each system by substitution.

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

Solve each system by elimination.

3)  $-x + 7y = -17$   
 $-4x - y = -10$

4) Shayna's school is selling tickets to a play. On the first day of ticket sales the school sold 10 adult tickets and 8 child tickets for a total of \$146. The school took in \$134 on the second day by selling 10 adult tickets and 7 child tickets. What is the price each of one adult ticket and one child ticket?

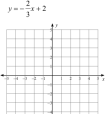
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Jan 25-8:54 AM

Algebra 1 Name \_\_\_\_\_ ID: 3  
 Linear Systems Practice Date \_\_\_\_\_ Period \_\_\_\_\_

Solve each system by graphing.

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



Solve each system by substitution.

2)  $-5x - 7y = -22$   
 $y = 3x + 18$

Solve each system by elimination.

3)  $12x + 3y = 6$   
 $4x + y = 2$

4) Inami and Rob are selling pies for a school fundraiser. Customers can buy cherry pies and blackberry pies. Inami sold 11 cherry pies and 10 blackberry pies for a total of \$288. Rob sold 11 cherry pies and 14 blackberry pies for a total of \$368. Find the cost each of one cherry pie and one blackberry pie.

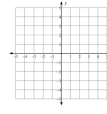
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Jan 25-8:55 AM

Algebra 1 Name \_\_\_\_\_ ID: 4  
 Linear Systems Practice Date \_\_\_\_\_ Period \_\_\_\_\_

Solve each system by graphing.

1)  $3y + x = -12$   
 $3y = 2x - 3$



Solve each system by substitution.

2)  $-4x - y = 1$   
 $2x + y = 1$

Solve each system by elimination.

3)  $2x + 4y = 12$   
 $x - 4y = -24$

4) Stephanie and Willie are selling pies for a school fundraiser. Customers can buy blueberry pies and pumpkin pies. Stephanie sold 6 blueberry pies and 2 pumpkin pies for a total of \$64. Willie sold 6 blueberry pies and 3 pumpkin pies for a total of \$81. Find the cost each of one blueberry pie and one pumpkin pie.

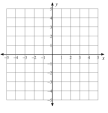
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Jan 25-8:55 AM

Algebra I Name \_\_\_\_\_ ID: 5  
 Linear Systems Practice Date \_\_\_\_\_ Period \_\_\_\_\_

Solve each system by graphing.

1)  $y = 2x - 5$   
 $-3 - y = 0$



Solve each system by substitution.

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

Solve each system by elimination.

3)  $x - 8y = -26$   
 $-x + 7y = 23$

4) Rob and Adam are selling fruit for a school fundraiser. Customers can buy small boxes of tangerines and large boxes of tangerines. Rob sold 9 small boxes of tangerines and 12 large boxes of tangerines for a total of \$198. Adam sold 9 small boxes of tangerines and 14 large boxes of tangerines for a total of \$222. Find the cost each of one small box of tangerines and one large box of tangerines.

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January 30, 2019, Wednesday  
 February 1, 2019, Friday

$y = mx + b$

Would you choose graphing, substitution or elimination? Why?

$y = -x + 3$   
 $5x + y = -1$     Substitution

$-2(-3x + y = -1)$   
 $-6x + 2y = -2$   
 $6x - 2y = 2$     Elimination

....quiz

Jan 25-8:56 AM

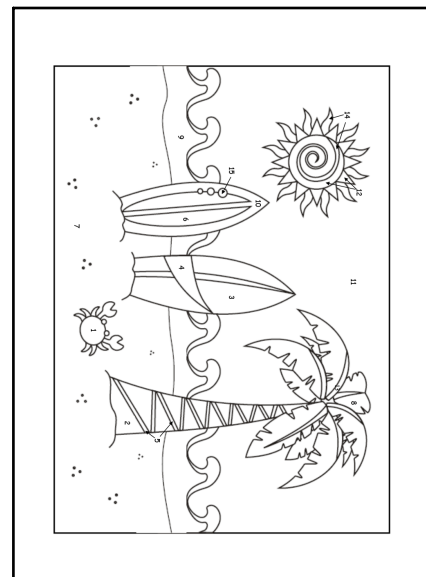
Systems by Substitution - Color-by-Number Name \_\_\_\_\_

On a separate sheet of paper (or the back of this one), solve each system using substitution. Find your answer in one of the two boxes, and color in your coloring page accordingly!

#	Problem	Answer One	Answer Two
1	$y = 4x$ $y = -2x - 6$	(-1, -4)	(-3, -12)
2	$y = 2x + 4$ $y = 2$	(-1, 2)	(0, 2)
3	$-3x - 3y = -12$ $y = 0$	(0, 4)	(4, 0)
4	$-4x - y = 4$ $y = 2x + 2$	(-1, 0)	(1, 4)
5	$x - y = 5$ $3x + 2y = 12$	(4, -1)	(2, -3)
6	$2x + 3y = 4$ $y = 2$	(-1, 2)	(-2, 2)
7	$y = -2x - 1$ $y = -4x - 5$	(-2, 3)	(-1, -3)
8	$y = -2x + 8$ $y = x - 2$	(-10, -8)	(2, 4)
9	$2x - 3y = 6$ $y = 4x$	(1, 4)	(-1, -4)
10	$y = x + 3$ $-3x + 2y = 6$	(0, -3)	(0, 3)
11	$-2x + y = -11$ $4x + 4y = 4$	(4, -3)	(-12, -35)
12	$4x + 2y = -12$ $3x + y = -10$	(8, -34)	(-4, 2)
13	$y = x + 4$ $8x + 3y = -4$	(-1, 3)	(-2, 2)
14	$-8x - 2y = 24$ $y = 2x$	(-2, -4)	(0, 0)
15	$y = 2x + 4$ $6x - 3y = -12$	(NS)	(MS)

\*on the color by number page, color in all pieces that are like the one with the number in it

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Jan 25-8:58 AM

January 31, 2019, Thursday

Highly missed quiz problems

Jan 25-8:59 AM

Graphing Linear Inequalities

- Solve for y! Make sure the equation is in Slope-intercept form.
- Graph using slope and y-intercept.
- Solid or dashed line?
- Shade above or below?

\*\*Vertical Lines will be shaded to the right or left  
 \*\* When the sign in front of the Y is negative, the direction of the inequality changes!

Solid Line

Dashed Line

Shade above

Shade below

Graph:  $x > 3$

Graph:  $y \leq -3$

Graph:  $y < -\frac{1}{2}x + 2$

Graph:  $2x - 3y \geq 12$

Jan 25-8:59 AM

GSE Algebra 1 Unit 2 - Solving Equations & Inequalities  
 Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Graphing Linear Inequalities**

Sketch the graph of each linear inequality.

1)  $y < -2x - 2$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

2)  $y \leq -2/3x + 8$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

3)  $y < -5x - 5$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

4)  $y \geq 1/3x + 1$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

5)  $y > -2/5x - 2$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

6)  $y \leq x + 3$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

Jan 25-9:00 AM

GSE Algebra 1 Unit 2 - Solving Equations & Inequalities  
 Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Graphing Linear Inequalities**

Sketch the graph of each linear inequality.

1)  $y < -2x - 2$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

2)  $y \leq -2/3x + 8$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

3)  $y < -5x - 5$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

4)  $y \geq 1/3x + 1$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

5)  $y > -2/5x - 2$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

6)  $y \leq x + 3$   $m = \underline{\hspace{1cm}}$   $b = \underline{\hspace{1cm}}$

Jan 25-9:00 AM

February 1, 2019, Friday

Graph the following  
 $Y = 4$   
 $Y = 2x + 5$

Jan 25-9:02 AM

Kuta Software - Infinite Algebra 1  
 Graphing Linear Inequalities  
 Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

Sketch the graph of each linear inequality.

1)  $y < -3x + 4$

2)  $y \leq \frac{3}{5}x - 5$

3)  $y > -x - 5$

4)  $y > -4$

5)  $y > 2x - 5$

6)  $y > \frac{3}{4}x + 2$

Jan 25-9:02 AM

7)  $x < -5$

8)  $y \leq \frac{4}{3}x - 4$

9)  $3x - 2y < 10$

10)  $5x - 3y \leq -15$

11)  $y > 4$

12)  $x - y > 2$

Jan 25-9:02 AM

GSE Algebra 1 Unit 2 - Solving Equations and Inequalities Review  
 Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Unit 2A - Study Guide**

Find the solution of the linear system graphically. Write your solution in the blank provided.

1.  $y = -x + 3$

2.  $y = -2x + 7$

3.  $y = x + 1$

4.  $-3x + 6y = 12$

Use substitution to solve the linear system. SHOW ALL WORK.

5.  $y = 2x - 2$

6.  $4x - y = -6$

7.  $6x + 2y = 16$

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

a)  $(-2, -2)$

b)  $(2, -2)$

c)  $(2/3, 10/3)$

d)  $(2, -2)$

Use elimination to solve the linear system. SHOW ALL WORK.

9.  $5x - 3y = 7$

10.  $-3x + 3y = -9$

11.  $x + 3y = 5$

12.  $6x + 2y = 2$

a)  $(1, -2)$

b)  $(2, -1)$

c)  $(1, 2)$

d)  $(2, 3)$

Jan 25-9:04 AM

7. A store sold 32 pairs of jeans for a total of \$1050. Brand A sold for \$30 per pair and Brand B sold for \$35 per pair. How many of Brand A were sold?

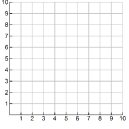
a) 12    b) 16    c) 14    d) 18

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8. You are selling tickets for a basketball game. Student tickets cost \$3 and general admission tickets cost \$5. You sell 350 tickets and collect \$1450. How many of each type of ticket did you sell?

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9. You are looking to buy a bouquet of flowers for your favorite math teacher. Lilies cost \$3.00 each and roses cost \$4.00 each. You have budgeted *no more than* \$28 to spend on flowers. Graph a linear inequality to illustrate how many of each type of flower you can purchase.




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10. Solve the equation and write the reason for each step in solving the equation.

Equation	Steps
$2(4x + 30) = 76$	Original Equation

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11. Create and solve the inequality. Then, graph the solution on the given number line.

"5 more than 2 times a number is greater than 21"




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Solve the literal equation for the indicated variable

12.  $\frac{2}{5}x - y = z$ , for  $x$

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13.  $\frac{3x+3}{2} = c$ , for  $a$

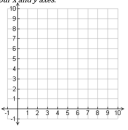
a)  $a = \frac{2c-c}{4}$     b)  $a = \frac{4+2c}{3}$     c)  $a = \frac{3c-2}{4}$     d)  $a = 3b - c$

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14. You have \$20 to spend. You need to buy chips and salsa for your friends. Chips cost \$1 per bag and salsa costs \$2 per jar.

a. Write the standard form equation. Let  $x$  represent chips and  $y$  represent salsa.

b. Rewrite your equation in slope-intercept form and graph. Label your  $x$  and  $y$  axes.



c. If I buy 6 bags of chips how many jars of salsa can I buy?

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15. Given the equation  $2x + 3y = 12$ , identify the slope once the equation is put into slope-intercept form.

a)  $-\frac{2}{3}$     b)  $\frac{1}{2}$     c)  $-\frac{3}{2}$     d) 4

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16. Which property appropriately justifies the missing step?

Equation	Steps
$3k - 5 = 7$	Original Equation
$3k = 12$	?
$k = 4$	Division Property of Equality

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17. Write a linear equation to model the situation: A cell phone plan costs \$50 and \$0.50 per minute.

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18. What is the solution to the inequality  $5x - 15 \geq 2x + 6$ ?

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19. The formula  $d = rt$  tells the distance traveled at a given rate and time. Solve the equation for  $t$ . A car drove 100 miles at a rate of 20 miles per hour. For how many hours was the car driving?

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20. Explain the ways you can determine if a system of equations will have (by graphing and solving algebraically).

a) Infinitely many solutions

b) No solution

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