Chapter 6 Student Success Sheet (SSS)

Systems of Equations and Inequalities

Olathe East High School – Intermediate Algebra

Name:_____

Hour: _____

Reminders:

- Homework is completed in **homework notebook only.**
- **All pages** in homework notebook should be labeled accordingly:
  Unit _____ Concept _____ - (title of assignment)

Examples:

Unit 1 Concept 1 – Practice Quiz
Unit 1 Concept 1-4 – Practice Test

Need Help? Support is available!

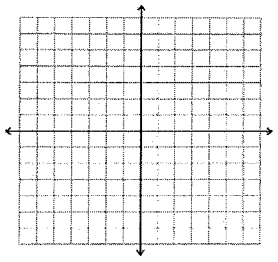
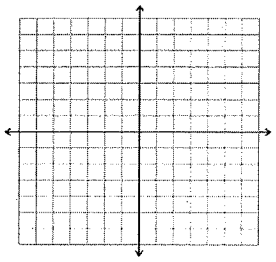
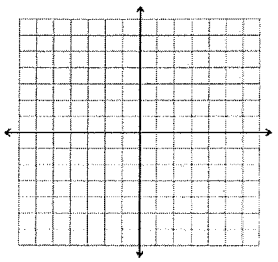
- www.mhollan.weebly.com
- www.srushingoe.weebly.com

"The difference between a successful person and others is not a lack of strength, not a lack of knowledge, but rather in a lack of will."

Vincent T. Lombardi

Concept #	What we will be learning…	Mandatory Practice
1	Finding slopes of parallel and perpendicular lines	Practice Quiz 1
2	Identifying if two lines are parallel, perpendicular, or neither	Practice Quiz 2
3	Writing equations of parallel and perpendicular lines	Practice Quiz 3
4	Solving systems by graphing	Practice Quiz 4
5	Solving systems by substitution	Practice Quiz 5
6	Solving systems using elimination/linear combination	Practice Quiz 6
7	Graphing linear inequalities on a coordinate plane	Practice Quiz 7
8	Graphing systems of linear inequalities	Practice Quiz 8

#1 Finding slopes of parallel and perpendicular lines.

	Parallel lines	Perpendicular lines	NEITHER parallel nor perpendicular, called _____
Described as...	Two lines that	Two lines that	Two lines that
Looks like...			
Symbol			**NO SYMBOL! ☹**
Sample equations			
The tricky ones... (horizontal and vertical lines)			
Key word to remember			

GIVEN EQUATION	Slope	Par. slope	Perp. slope
1. $y = 1$			
2. $y = -\frac{2}{5}x - 1$			
3. $y = x + 2$			
4. $y = \frac{3}{4}x + 2$			
5. $y = -x + 3$			
6. $x = -2$			
7. $y = 2x - 5$			
8. $y = -\frac{1}{5}x + 4$			

GIVEN EQUATION	Slope	Par. slope	Perp. slope
13. $y = -x + 4$			
14. $y = -\frac{3}{4}x + 3$			
15. $y = x$			
16. $y = \frac{4}{5}x - 5$			
17. $y = 5x - 5$			
18. $y = -3x - 4$			
19. $x = 4$			

9. $x-y=-1$			
10. $6x-y=-5$			
11. $3x-y=-3$			
12. $3x+2y=2$			

20. $y=2x-3$			
21. $y=x-1$			
22. $y=-6x-2$			
23. $y=\frac{1}{2}x$			
24. $y=5$			
25. $y=5x+1$			
26. $y=-7x+3$			
27. $y=x+4$			
28. $y=-\frac{6}{5}x+4$			

#2 Identifying if 2 lines are parallel, perpendicular, or neither.

If they are parallel, they will have the _____ slope

If they are perpendicular, their slopes will be _____ _____

If the slopes are not the _____ OR _____ _____, then the lines are _____!

29) $y=\frac{1}{2}x-1$
$y=\frac{5}{2}x+3$

30) $y=\frac{4}{3}x-1$
$y=\frac{1}{3}x+2$

31) $y=\frac{5}{2}x+3$
$y=\frac{5}{2}x-4$

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

33) $x-y=-3$
$x-y=3$

34) $2x-y=1$
$x+2y=8$

35) $x-y=3$
$x+y=-1$

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

#3 Writing equations of parallel and perpendicular lines.

1. Use what you know about parallel and perpendicular lines to find m
2. Identify m= ____, x= ___, y= ___
3. Write out y = mx + b like ___=___ (___) + b
4. Plug in m, x, and y into the formula
5. Solve for b
6. Plug in m and b into your equation as your final answer.

37. through: $(3, 0)$, parallel to $y = 4$

Current slope:	Parallel slope:	m=	___ = ___ (___) + b
		x=	
		y=	

38. through: $(-1, 4)$, parallel to $y = -4x - 3$

Current slope:	Parallel slope:	m=	___ = ___ (___) + b
		x=	
		y=	

39. through: $(-4, 4)$, parallel to $y = -\frac{3}{4}x + 3$

Current slope:	Parallel slope:	m=	___ = ___ (___) + b
		x=	
		y=	

40. through: $(1, -5)$, parallel to $y = -7x + 4$

Current slope:	Parallel slope:	m=	___ = ___ (___) + b
		x=	
		y=	

41. through: $(-5, -4)$, parallel to $y = \frac{7}{5}x - 1$

Current slope:	Parallel slope:	m=	___ = ___ (___) + b
		x=	
		y=	

42. through: $(5, 0)$, parallel to $y = -\frac{1}{5}x + 4$

Current slope:	Parallel slope:	m=	___ = ___ (___) + b
		x=	
		y=	

43. through: $(2, -1)$, perp. to $y = 3x - 4$

Current slope:	Perpend-icular slope:	m=	___ = ___ (___) + b
		x=	
		y=	

44. through: $(-5, -1)$, perp. to $y = -x + 3$

Current slope:	Perpend-icular slope:	m=	___ = ___ (___) + b
		x=	
		y=	

45. through: $(-3, -2)$, perp. to $y = -\frac{3}{7}x + 2$

Current slope:	Perpend-icular slope:	m=	___ = ___ (___) + b
		x=	
		y=	

46. through: $(1, 0)$, perp. to $y = -4$

Current slope:	Perpend-icular slope:	m=	___ = ___ (___) + b
		x=	
		y=	

47. through: $(-3, 3)$, perp. to $y = -\frac{3}{2}x - 1$

Current slope:	Perpend -icular slope:	m=	___ = ___ (___) + b
		x=	
		y=	

48. through: $(1, 1)$, perp. to $y = -\frac{1}{4}x + 2$

Current slope:	Perpend -icular slope:	m=	___ = ___ (___) + b
		x=	
		y=	

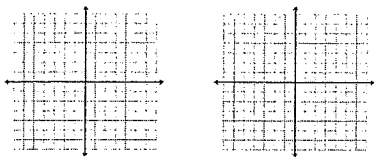
#4 Solving systems by graphing.

A SYSTEM OF EQUATIONS is _____, **A SOLUTION to a SYSTEM is** _____

2 Lines can cross _____

(could be _____**,**

could be _____**)**

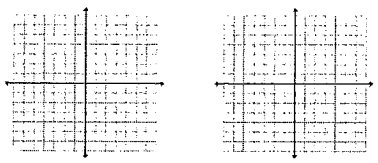


_____ **solution**

You check your answer by:

2 Lines can cross _____

(must be _____**)**

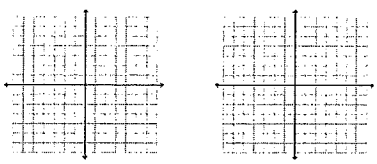


_____ **solution**

You check your answer by:

2 Lines can cross _____

(they are the _____ _____**)**



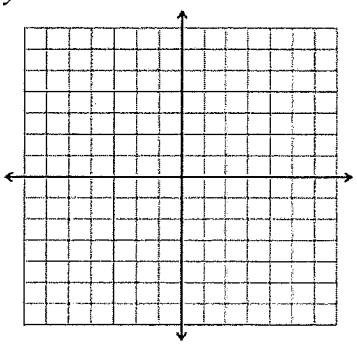
_____ **solution**

You check your answer by:

1. Graph the _____, THEN Graph the _____!
2. See where they _____!
3. You MUST _____ into both equations!

49.

$y = x - 3$
$y = -1$



Solution:

Line 1:

Y-intercept: _____

Slope: _____

Rise: _____Run: _____

Line 2:

Y-intercept: _____

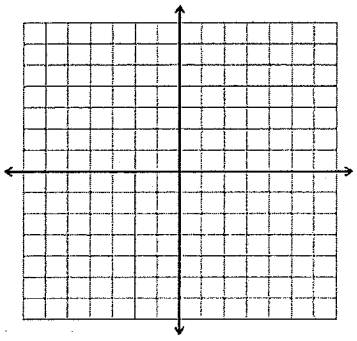
Slope: _____

Rise: _____Run: _____

Check your answer:

50.

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



Solution:

Line 1:

Y-intercept: _____

Slope: _____

Rise: _____Run: _____

Line 2:

Y-intercept: _____

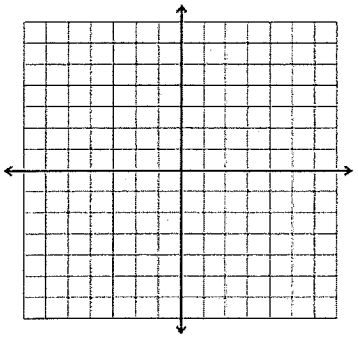
Slope: _____

Rise: _____Run: _____

Check your answer:

51.

$y = -\frac{7}{2}x - 3$
$y = -\frac{7}{2}x + 1$



Solution:

Line 1:

Y-intercept: _____

Slope: _____

Rise: _____Run: _____

Line 2:

Y-intercept: _____

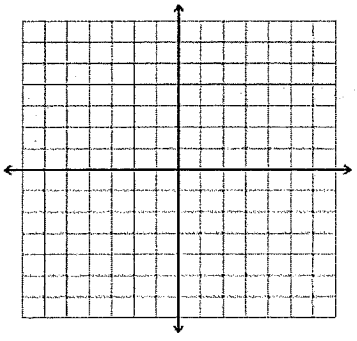
Slope: _____

Rise: _____Run: _____

Check your answer:

52.

$y = \frac{7}{4}x - 4$
$y = 3$



Solution:

Line 1:

Y-intercept: _____

Slope: _____

Rise: _____Run: _____

Line 2:

Y-intercept: _____

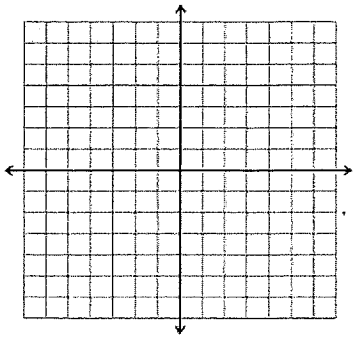
Slope: _____

Rise: _____Run: _____

Check your answer:

53.

$2x - y = -4$
$x - 2y = 4$



Solution:

Line 1:

X-intercept: _____

Y-intercept: _____

Line 2:

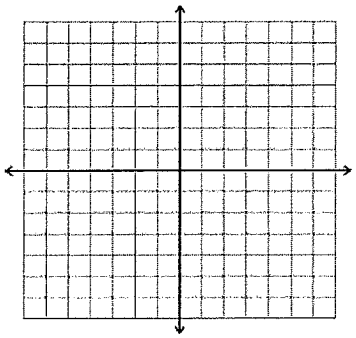
X-intercept: _____

Y-intercept: _____

Check your answer:

54.

$x - 2y = 2$
$x - 2y = -6$



Solution:

Line 1:

X-intercept: _____

Y-intercept: _____

Line 2:

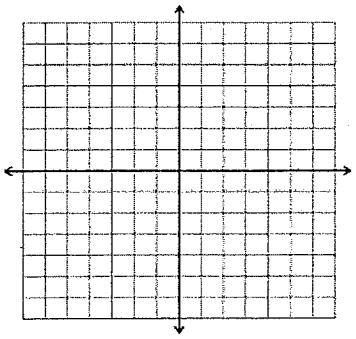
X-intercept: _____

Y-intercept: _____

Check your answer:

55.

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



Solution:

Line 1:

X-intercept: _____

Y-intercept: _____

Line 2:

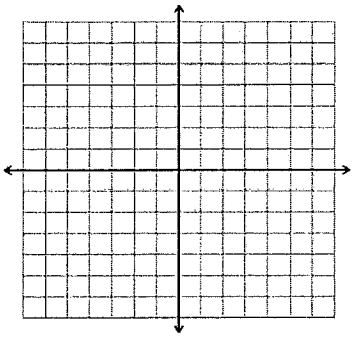
X-intercept: _____

Y-intercept: _____

Check your answer:

56.

$2x + 3y = 12$
$x = 3$



Solution:

Line 1:

X-intercept: _____

Y-intercept: _____

Line 2:

X-intercept: _____

Y-intercept: _____

Check your answer:

#5 Solving systems by substitution.

Types of Solutions to Systems

one solution	no solution	infinitely many solutions
How many times do the graphs cross?	How many times do the graphs cross?	How many times do the graphs cross?
Answer looks like:	Answer looks like:	Answer looks like:
Picture would look like:	Picture would look like:	Picture would look like:
How do we check our solution?	How do we check our solution?	How do we check our solution?

1. **One solution** [You will get an answer like _____, and then _____ to get a _____. Your answer will be an _____ like _____]
2. **No solution** [you will get a _____ statement such as _____ or _____ while you are solving the problem]
3. **Infinitely many solutions** [you will get a _____ statement such as _____ or _____ while you are solving the problem]

57. $y = 3x + 7$
$-4x + 4y = 12$

STEP 1: Substitute & Solve (for "x")	STEP 2: Plug Back In (use "the substitute")	STEP 3: Check (use "the game")
$-4x + 4y = 12$ $-4x + 4(3x + 7) = 12$ $-4x + 12x + 28 = 12$ $8x + 28 = 12$ *(subtract 28 from both sides)* $8x = -16$ *(divide both sides by 8)* $x = -2$	*If* $x = -2$ $y = 3x + 7$ $y = 3(-2) + 7$ $y = -6 + 7$ $y = 1$	*If* $x = -2$ *and* $y = 1$ *ordered pair* $(-2,1)$ $-4x + 4y = 12$ $-4(-2) + 4(1) = 12$ $8 + 4 = 12$ $12 = 12$:) *It checks!* ***The answer is (-2,1)***

58. $4x - 3y = 7$
$y = 3x - 4$

STEP 1: Substitute & Solve (for "x")	STEP 2: Plug Back In (use "the substitute")	STEP 3: Check (use "the game")

59. $3x + 3y = 3$
$y = -2x + 5$

STEP 1: Substitute & Solve (for "x")	STEP 2: Plug Back In (use "the substitute")	STEP 3: Check (use "the game")

60. $\begin{aligned} 6x+2y&=3 \\ y&=-3x-2 \end{aligned}$

STEP 1: Substitute & Solve *(for "x")*	*STEP 2: Plug Back In* *(use "the substitute")*	*STEP 3: Check (use "the game")*

61. $\begin{aligned} y&=x-4 \\ 3x-3y&=12 \end{aligned}$

STEP 1: Substitute & Solve *(for "x")*	*STEP 2: Plug Back In* *(use "the substitute")*	*STEP 3: Check (use "the game")*

62. $\begin{aligned} y&=4x+10 \\ -x-2y&=7 \end{aligned}$

STEP 1: Substitute & Solve *(for "x")*	*STEP 2: Plug Back In* *(use "the substitute")*	*STEP 3: Check (use "the game")*

$y = 4x + 12$

63. $-12x + 3y = 36$

STEP 1: Substitute & Solve *(for "x")*	*STEP 2: Plug Back In* *(use "the substitute")*	*STEP 3: Check* *(use "the game")*

$y = 4x + 3$

64. $-8x + 2y = -3$

STEP 1: Substitute & Solve *(for "x")*	*STEP 2: Plug Back In* *(use "the substitute")*	*STEP 3: Check* *(use "the game")*

#6 Solving systems using elimination/linear combination.

To be successful at elimination, you must be able to find the L_____ C_____ M_____ (LCM) of two numbers.

Let's practice!

If I had 2 and 5, the LCM would be _____

2 * _____ = _____

5 * _____ = _____

If I had 2 and 4, the LCM would be _____

2 * _____ = _____

4 * _____ = _____

Numbers	LCM
2 & 6	
1 & 7	
4 & 6	
4 & 8	
4 & 5	
1 & 2	
2 & 3	
2 & 5	
6 & 15	
3 & 4	
10 & 15	

When we solve using elimination, we want to

1) **Find the LCM** of either the x-coefficients or the y-coefficients (it doesn't matter!)
2) **Distribute a number into each equation** to make the coefficients into that LCM, but one positive and one negative. We call these "opposite LCMs"
3) **Add the equations together** to eliminate that variable.
4) **Continue on with Steps 2 and 3**

Let's try with **#65** $-5x-2y=-18$, $5x+6y=-6$ LCM of the x's: **5** LCM of the y's: **6** → Let's eliminate the x's!

Right now, the top equation has an **x**-coefficient of -5 → -5 * **1** = -5

Right now, the bottom equation has an **x**-coefficient of +5 → +5 * **1** = 5

STEP 1: Eliminate & Solve (for "x" or "y")	*STEP 2: Plug Back In* (use either equation)	*STEP 3: Check* (use the equation you DIDN'T use in step 2!)
$(-5x-2y=-18)1$ $(5x+6y=-6)1$ *I put parentheses around the whole equation and distributed what I needed to get "opposite LCMs"* $5x-2y=-18$ $5x+6y=-6$ *Add these two equations together (straight down)* $0x+4y=-24$ *X's are eliminated!* $4y=-24$ *Divide by 4* $y=-6$	*If* $y=-6$ *and* $-5x-2y=-18$ *(top equation)* *then* $-5x-2(-6)=-18$ $-5x+12=-18$ $-5x=-30$ $x=6$	*If* $y=-6$ *and* $x=6$ *(ordered pair answer* $(6,-6)$ *and* $5x+6y=-6$ *(bottom equation)* *then* $5(6)+6(-6)=-6$ $30-36=-6$ $-6=-6$:) *it checks!*

#66 $-4x+y=5$, $-8x+2y=10$ LCM of the x's: **8** LCM of the y's: **2** → Let's eliminate the y's!

Right now, the top equation has an **y**-coefficient of -4 → -4 * **-2** = 8

Right now, the bottom equation has an **y**-coefficient of -8 → -8 * **1** = -8

STEP 1: Eliminate & Solve (for "x" or "y")	*STEP 2: Plug Back In* (use either equation)	*STEP 3: Check* (use the equation you DIDN'T use in step 2!)
$(-4x+y=5)-2$ $(-8x+2y=10)1$ *I put parentheses around the whole equation and distributed what I needed to get "opposite LCMs"* $8x-2y=-10$ $-8x+2y=10$ *Add these two equations together (straight down)* $0x+0y=0$ *****X's AND Y's are eliminated!***** $0=0$ ***True Statement***	*Because we got a true statement,* *we can skip this step and head right to the check!* *If we are right, and there are* ***INFINITELY MANY SOLUTIONS,*** *then the graphs will be the* ***SAME LINE***	$*$ *Special Case – True Statement!* $-4x+y=5$ *add 4x to both sides* $y=4x+5$ $-8x+2y=10$ *add 8x to both sides* $2y=8x+10$ *divide all parts by 2* $y=4x+5$ ***SAME LINE!***

#67

$3x + 3y = 15$
$4x + 4y = 16$

LCM of the x's: **12** LCM of the y's: **12** → Let's eliminate the x's!

Right now, the top equation has an **x**-coefficient of +3 → +3 * **4** = 12

Right now, the bottom equation has an **x**-coefficient of +4 → +4 * **-3** = -12

STEP 1: Eliminate & Solve
(for "x" or "y")

$(3x + 3y = 15)4$
$(4x + 4y = 16) - 3$

I put parentheses around the whole equation and distributed what I needed to get "opposite LCMs"

$12x + 12y = 60$
$-12x - 12y = -48$

Add these two equations together (straight down)

$0x + 0y = 12$

*****X's AND Y's are eliminated!*****

$0 = 12$

False Statement

STEP 2: Plug Back In
(use either equation)

Because we got a false statement,

we can skip this step and head right to the check!

If we are right, and there is ***NO SOLUTION,***

then the graphs will have the ***SAME SLOPE***

STEP 3: Check
(use the equation you DIDN'T use in step 2!)

** Special Case – False Statement!*

$3x + 3y = 15$

subtract 3x from both sides

$3y = -3x + 15$

divide all parts by 3

$y = -1x + 5; slope\ of\ -1$

$4x + 4y = 16$

subtract 4x from both sides

$4y = -4x + 16$

divide all parts by 4

$y = -1x + 4; slope\ of\ -1$

SAME SLOPE!

#68

$-2x + 3y = -12$
$2x - 6y = 12$

LCM of the x's: _____ LCM of the y's: _____ → Let's eliminate the _____ 's!

Right now, the top equation has an __-coefficient of _____ → ____ * ____ = ____

Right now, the bottom equation has an __-coefficient of _____ → ____ * ____ = ____

STEP 1: Eliminate & Solve
(for "x" or "y")

STEP 2: Plug Back In
(use either equation)

STEP 3: Check
(use the equation you DIDN'T use in step 2!)

#69

$-2x+6y=4$
$-2x+6y=0$

LCM of the x's: _____ LCM of the y's: _____ → Let's eliminate the _____ 's!

Right now, the top equation has an __-coefficient of _____ → ____ * ____ = ____

Right now, the bottom equation has an __-coefficient of _____ → ____ * ____ = ____

STEP 1: Eliminate & Solve *(for "x" or "y")*	*STEP 2: Plug Back In* *(use either equation)*	*STEP 3: Check* *(use the equation you DIDN'T use in step 2!)*

#70

$-x+4y=-7$
$-x+6y=-11$

LCM of the x's: _____ LCM of the y's: _____ → Let's eliminate the _____ 's!

Right now, the top equation has an __-coefficient of _____ → ____ * ____ = ____

Right now, the bottom equation has an __-coefficient of _____ → ____ * ____ = ____

STEP 1: Eliminate & Solve *(for "x" or "y")*	*STEP 2: Plug Back In* *(use either equation)*	*STEP 3: Check* *(use the equation you DIDN'T use in step 2!)*

#71

$4x+4y=12$
$8x-6y=-4$

LCM of the x's: _____ LCM of the y's: _____ → Let's eliminate the _____ 's!

Right now, the top equation has an __-coefficient of _____ → ____ * ____ = ____

Right now, the bottom equation has an __-coefficient of _____ → ____ * ____ = ____

STEP 1: Eliminate & Solve (for "x" or "y")	*STEP 2: Plug Back In* (use either equation)	*STEP 3: Check* (use the equation you DIDN'T use in step 2!)

#72

$6x+2y=-6$
$-3x-y=7$

LCM of the x's: _____ LCM of the y's: _____ → Let's eliminate the _____ 's!

Right now, the top equation has an __-coefficient of _____ → ____ * ____ = ____

Right now, the bottom equation has an __-coefficient of _____ → ____ * ____ = ____

STEP 1: Eliminate & Solve (for "x" or "y")	*STEP 2: Plug Back In* (use either equation)	*STEP 3: Check* (use the equation you DIDN'T use in step 2!)

#73

$4x+6y=-18$
$-5x-2y=-5$

LCM of the x's: _____ LCM of the y's: _____ → Let's eliminate the _____ 's!

Right now, the top equation has an __-coefficient of _____ → ____ * ____ = ____

Right now, the bottom equation has an __-coefficient of _____ → ____ * ____ = ____

STEP 1: Eliminate & Solve (for "x" or "y")	*STEP 2: Plug Back In* (use either equation)	*STEP 3: Check* (use the equation you DIDN'T use in step 2!)

#74

$-2x+5y=13$
$3x-4y=-9$

LCM of the x's: _____ LCM of the y's: _____ → Let's eliminate the _____ 's!

Right now, the top equation has an __-coefficient of _____ → ____ * ____ = ____

Right now, the bottom equation has an __-coefficient of _____ → ____ * ____ = ____

STEP 1: Eliminate & Solve (for "x" or "y")	*STEP 2: Plug Back In* (use either equation)	*STEP 3: Check* (use the equation you DIDN'T use in step 2!)

#75

$15x + 5y = 0$
$6x + 2y = 0$

LCM of the x's: _____ LCM of the y's: _____ → Let's eliminate the _____ 's!

Right now, the top equation has an __-coefficient of _____ → ____ * ____ = ____

Right now, the bottom equation has an __-coefficient of _____ → ____ * ____ = ____

STEP 1: Eliminate & Solve *(for "x" or "y")*	*STEP 2: Plug Back In* *(use either equation)*	*STEP 3: Check* *(use the equation you DIDN'T use in step 2!)*

#76

$2x + 2y = 6$
$3x - 5y = 17$

LCM of the x's: _____ LCM of the y's: _____ → Let's eliminate the _____ 's!

Right now, the top equation has an __-coefficient of _____ → ____ * ____ = ____

Right now, the bottom equation has an __-coefficient of _____ → ____ * ____ = ____

STEP 1: Eliminate & Solve *(for "x" or "y")*	*STEP 2: Plug Back In* *(use either equation)*	*STEP 3: Check* *(use the equation you DIDN'T use in step 2!)*

#7 Graphing linear inequalities on a coordinate plane.

1. Decide if the line will be _____ or _____ **Angry Man:** **Sleepy Man:**
2. Graph the _____ normally!
3. Pick _____ ordered pairs to t_____, ONE ON _____ _____ of the line.
4. Write "_____" on the side that is _____ and "_____" on the side that is _____
5. _____ on the side you wrote "_____"

104. $y > -2x - 3$

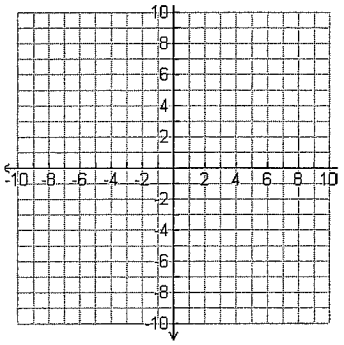
Solid or dashed:

Uphill positive, downhill negative, horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____



Test point #1

Test point #2

105. $y \leq 6x + 3$

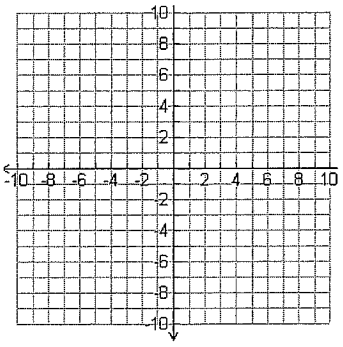
Solid or dashed:

Uphill positive, downhill negative, horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____



Test point #1

Test point #2

106. $y \geq -3$

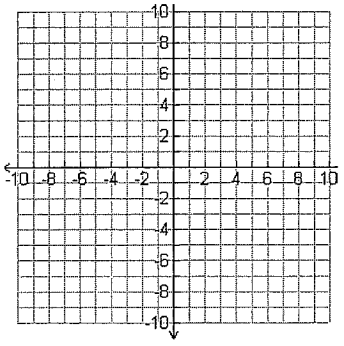
Solid or dashed:

Uphill positive, downhill negative, horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____



Test point #1

Test point #2

107. $y \geq x + 2$

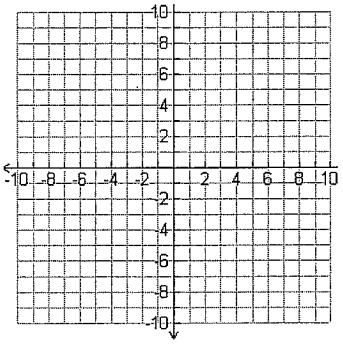
Solid or dashed:

Uphill positive, downhill negative, horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____



Test point #1

Test point #2

108. $x > -2$

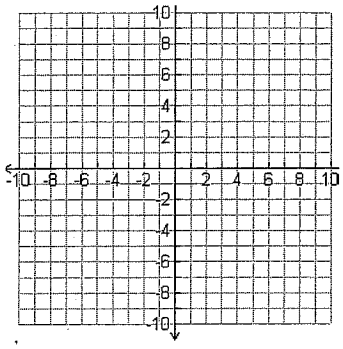
Solid or dashed:

Uphill positive, downhill negative, horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____



Test point #1

Test point #2

109. $x - 5y < 5$

Solid or dashed:

X-intercept: _____

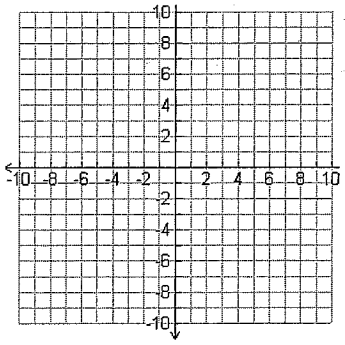
Y-intercept: _____

(for practice)

Slope: _____

Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined



Test point #1

Test point #2

110. $x - y \leq 2$

Solid or dashed:

X-intercept: _____

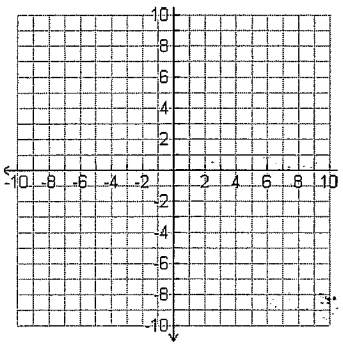
Y-intercept: _____

(for practice)

Slope: _____

Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined



Test point #1

Test point #2

111. $x - 2y \leq 2$

Solid or dashed:

X-intercept: _____

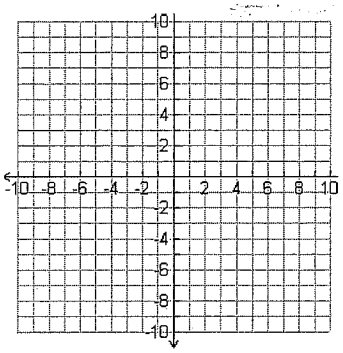
Y-intercept: _____

(for practice)

Slope: _____

Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined



Test point #1

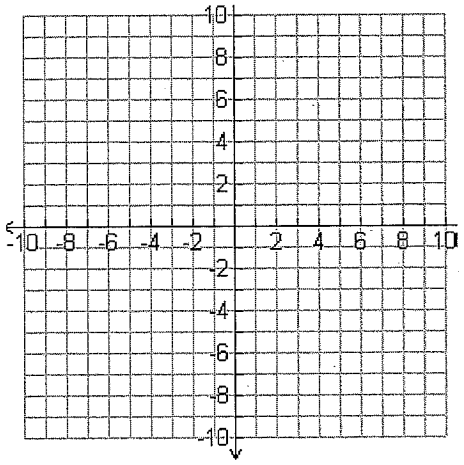
Test point #2

#8 Graphing systems of linear inequalities.

1. Graph the **first** inequality and shade in one color (pick 2 test points)
2. Graph the **second** inequality and shade in ANOTHER color (pick 2 test points)
3. The solution is the part that is shaded by both colors!

112. $y \geq -\frac{2}{3}x - 1$

$y \geq \frac{2}{3}x + 3$



Line 1: Color _____

Solid or dashed

Uphill positive, downhill negative,

horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____

Test point #1

Test point #2

Line 2: Color _____

Solid or dashed

Uphill positive, downhill negative,

horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

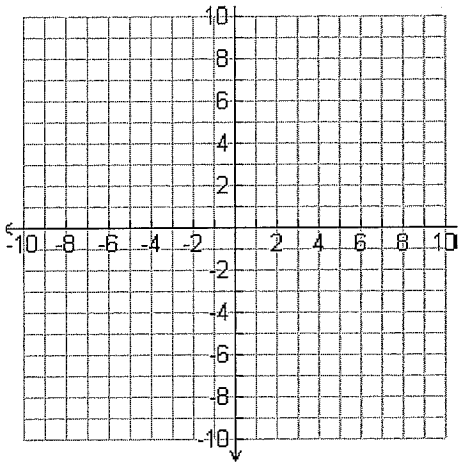
Y-intercept: _____

Test point #1

Test point #2

113. $y \leq x - 2$

$y < 5x + 2$



Line 1: Color _____

Solid or dashed

Uphill positive, downhill negative,

horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____

Test point #1

Test point #2

Line 2: Color _____

Solid or dashed

Uphill positive, downhill negative,

horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____

Test point #1

Test point #2

Line 1: Color _____

Solid or dashed

Uphill positive, downhill negative,

horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

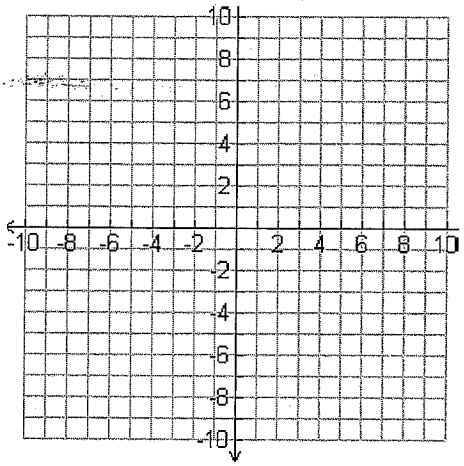
Y-intercept: _____

Test point #1

Test point #2

114. $y \geq -2$

$y \geq \frac{4}{3}x + 2$



Line 2: Color _____

Solid or dashed

Uphill positive, downhill negative,

horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____

Test point #1

Test point #2

Line 1: Color _____

Solid or dashed

Uphill positive, downhill negative,

horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

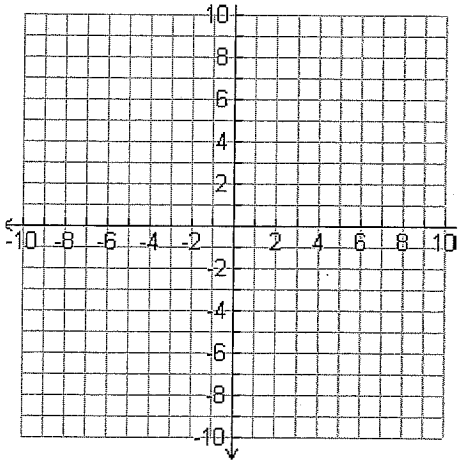
Y-intercept: _____

Test point #1

Test point #2

115. $y \leq \frac{1}{3}x + 2$

$x \geq 3$



Line 2: Color _____

Solid or dashed

Uphill positive, downhill negative,

horizontal zero, vertical undefined

Slope: _____

Rise: _____ Run: _____

Y-intercept: _____

Test point #1

Test point #2

Line 1: Color _____

Solid or dashed:

X-intercept: _____

Y-intercept: _____

Slope: _____

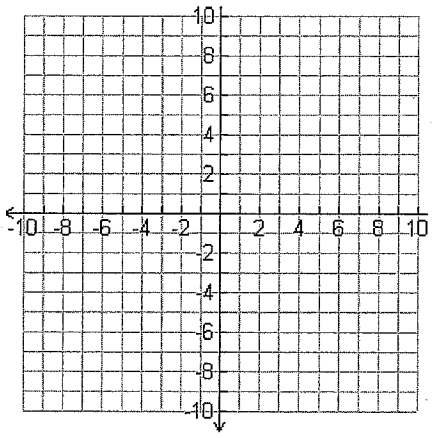
Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined

Test point #1

Test point #2

116. $x + 2y \geq 4$
$x - y \leq 1$



Line 2: Color _____

Solid or dashed:

X-intercept: _____

Y-intercept: _____

Slope: _____

Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined

Test point #1

Test point #2

Line 1: Color _____

Solid or dashed:

X-intercept: _____

Y-intercept: _____

Slope: _____

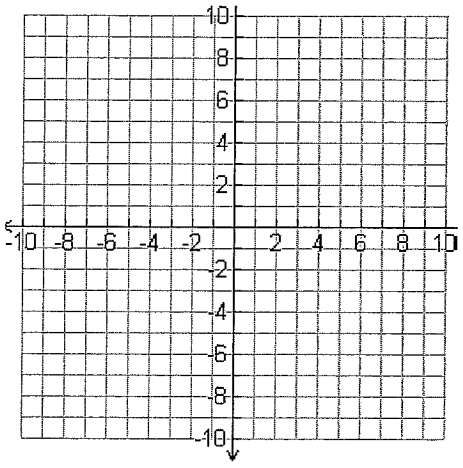
Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined

Test point #1

Test point #2

117. $y < 3$
$x + y > 1$



Line 2: Color _____

Solid or dashed:

X-intercept: _____

Y-intercept: _____

Slope: _____

Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined

Test point #1

Test point #2

Line 1: Color _____

Solid or dashed:

X-intercept: _____

Y-intercept: _____

Slope: _____

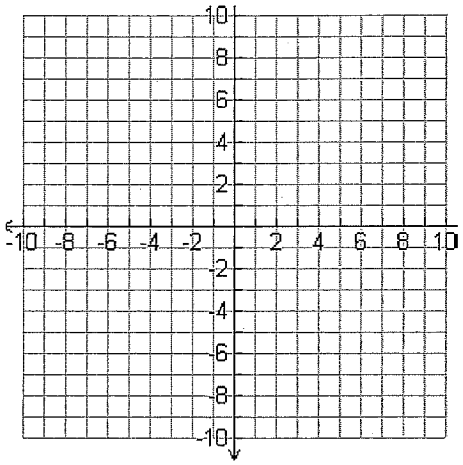
Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined

Test point #1

Test point #2

118. $2x + y > 1$
$x - y < 2$



Line 2: Color _____

Solid or dashed:

X-intercept: _____

Y-intercept: _____

Slope: _____

Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined

Test point #1

Test point #2

Line 1: Color _____

Solid or dashed:

X-intercept: _____

Y-intercept: _____

Slope: _____

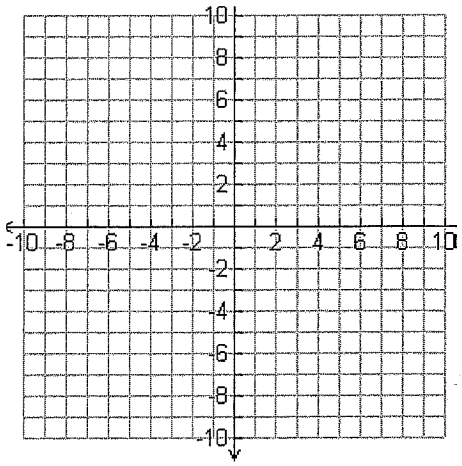
Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined

Test point #1

Test point #2

119. $x + y < -1$
$x - y \geq 3$



Line 2: Color _____

Solid or dashed:

X-intercept: _____

Y-intercept: _____

Slope: _____

Rise: _____ Run: _____

Uphill positive, downhill negative, horizontal zero, vertical undefined

Test point #1

Test point #2