Webster County Schools

95 CLARK AVENUE – EUPORA, MS 39744

Office of Curriculum

662-258-5551, Extension 15

packets@webstercountyschools.org

Foundations to Algebra

Packet 2

Webster County Schools

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For Additional Online Resources, please see the Link to the following resources on the Curriculum page on www.webstercountyschools.org:

MDE Learning-at-Home Resources for Districts

The resources contained on this website contain materials and tools that may be used to provide additional resources to parents or students. This information is only intended to be a general summary of information provided to the public. The Mississippi Department of Education does not endorse or promote any commercial products or services. The views and opinion of authors expressed do not necessarily reflect those of the MDE, and they may not be used for advertising or product endorsement purposes. Please make sure that you choose the tool(s), resource(s) or material(s) that are developmentally appropriate and best fit the needs of your students, school, or district.

Resources have been divided into the following categories:

- Internet Services
- Multiple Content Area Resources
- Arts (Dance, Music, Theatre, Visual Arts) Resources
- Career Pathway Experiences (CPE) Alternative Resources
- English Language Arts Resources
- Mathematics Resources
- Science Resources
- Social Studies Resources
- World Language Resources
- Counselor Resources
- English Learner Resources
- Virtual Learning Resources

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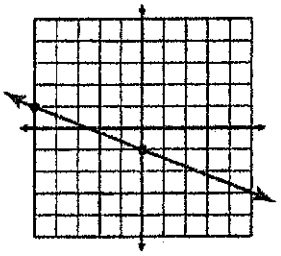
At-Home Learning Packet Schedule:

- Packet 2- April 20, 2020
- Packet 3- May 4, 2020
- Packet 4- May 18, 2020

I can write Linear Equations in SLOPE-INTERCEPT FORM GIVEN:

The Slope and y-Intercept slope = $\frac{1}{3}$; y-intercept = -5	$y = \frac{1}{3}x - 5$
A Graph 	$m = -2/5$; $b = -1$ $y = \frac{-2}{5}x - 1$
An Equation in Standard Form $4x - 2y = 14$	$\frac{-2y}{-2} = \frac{-4x}{-2} + \frac{14}{-2}$ $y = 2x - 7$
A Point and Slope (-1, 3); slope = -3	$y - 3 = -3(x + 1)$ $y - 3 = -3x - 3$ $+3 \quad +3$ $y = -3x$
Two Points (-4, -7) and (8, -13)	$m = \frac{-13+7}{8+4} = \frac{-6}{12} = -\frac{1}{2}$ $y + 7 = -\frac{1}{2}(x + 4)$ $y + 7 = -\frac{1}{2}x - 2$ $-7 \quad -7$ $y = -\frac{1}{2}x - 9$

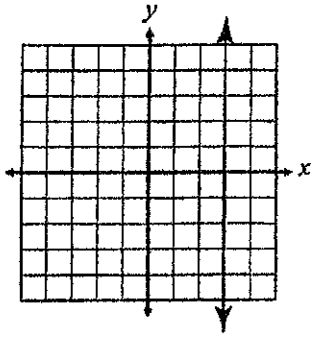
Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples

Vertical & Horizontal Lines

Vertical Lines

A **vertical line** is written in the form $x = a$, where a represents the line's x-intercept.

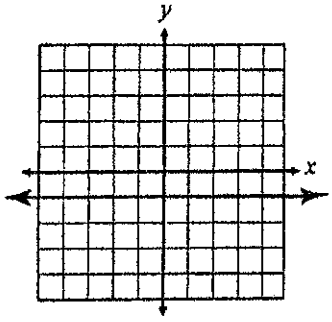


The equation of the vertical line graphed above is

$x = 3$

Horizontal Lines

A **horizontal line** is written in the form $y = a$, where a represents the line's y-intercept.



The equation of the **horizontal** line graphed above is

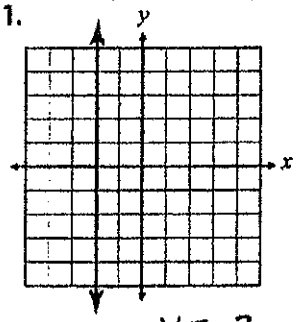
$y = -1$

Remember, if the line intersects the x-axis, it's $x = a$, if a line intersects the y-axis, it's $y = a$.

Examples

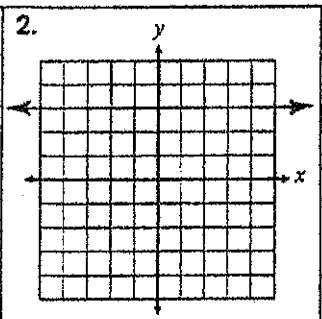
Directions: Write the equation of the line shown on the graph.

1.



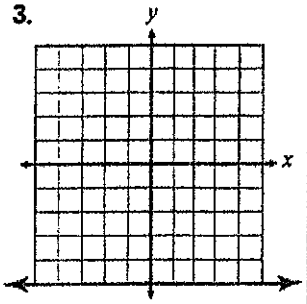
$x = -2$

2.



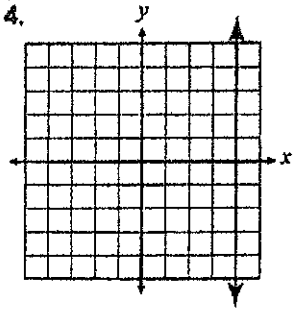
$y = 3$

3.



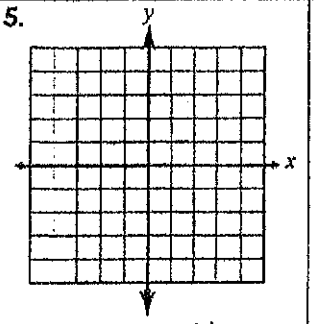
$y = -5$

4.



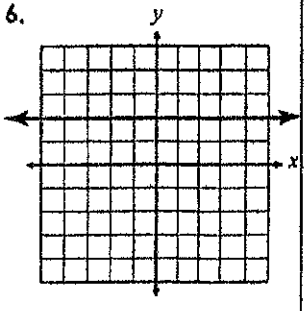
$x = 4$

5.



$x = 0$

6.



$y = 2$

NAME _____ DATE _____ PERIOD ____

4-3 Study Guide and Intervention

Graphing Equations in Slope-Intercept Form

Slope-Intercept Form

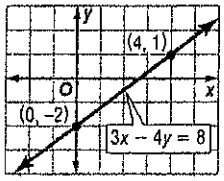
Slope-Intercept Form	$y = mx + b$, where m is the given slope and b is the y-intercept

Example 1 **Write an equation of the line whose slope is −4 and whose y-intercept is 3.**

$y = mx + b$ Slope-intercept form
$y = -4x + 3$ Replace m with -4 and b with 3.

Example 2 **Graph $3x - 4y = 8$.**

$3x - 4y = 8$ Original equation
$-4y = -3x + 8$ Subtract $3x$ from each side.
$\frac{-4y}{-4} = \frac{-3x + 8}{-4}$ Divide each side by -4.
$y = \frac{3}{4}x - 2$ Simplify.



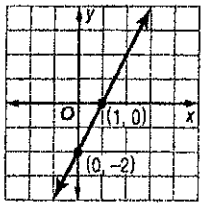
The y-intercept of $y = \frac{3}{4}x - 2$ is -2 and the slope is $\frac{3}{4}$. So graph the point $(0, -2)$. From this point, move up 3 units and right 4 units. Draw a line passing through both points.

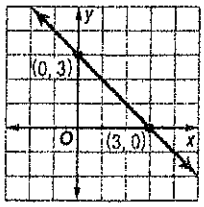
Exercises

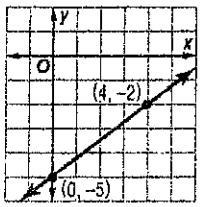
Write an equation of the line with the given slope and y-intercept.

1. slope: 8, y-intercept -3
2. slope: -2, y-intercept -1
3. slope: -1, y-intercept -7

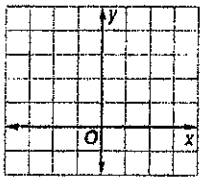
Write an equation of the line shown in each graph.

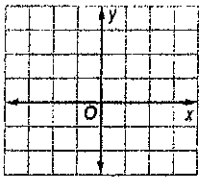
4.


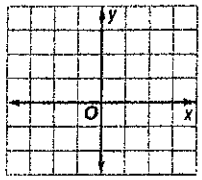
5.


6.


Graph each equation.

7. $y = 2x + 1$


8. $y = -3x + 2$


9. $y = -x - 1$


Name: **Slope and *y*-intercept** **Total Score:**

Monday

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

Slope:

y-intercept:

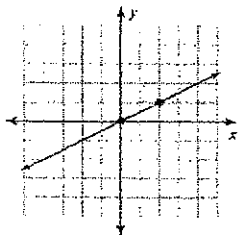
2)

x	y
–2	3
–1	5
0	7
1	9
2	11

Slope:

y-intercept:

3)



Slope:

y-intercept:

Number Correct:

_____

Tuesday

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

Slope:

y-intercept:

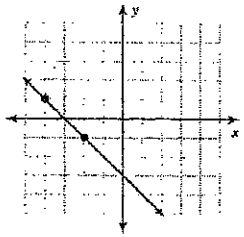
5)

x	y
–3	5
–2	2
–1	–1
0	– 4
1	–7

Slope:

y-intercept:

6)



Slope:

y-intercept:

Number Correct:

_____

Wednesday

7) $y = -x + 3$

Slope:

y-intercept:

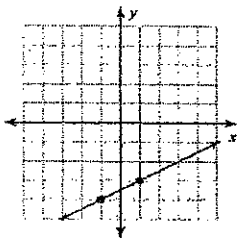
8)

x	y
0	3
1	5.5
2	8
3	10.5
4	13

Slope:

y-intercept:

9)



Slope:

y-intercept:

Number Correct:

_____

Thursday

10) $2x - y = 1$

Slope:

y-intercept:

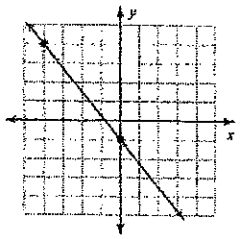
11)

x	y
1	–17
2	–13
3	–9
4	–5
5	–1

Slope:

y-intercept:

12)



Slope:

y-intercept:

Number Correct:

_____

Friday

13) $x + 2y = -8$

Slope:

y-intercept:

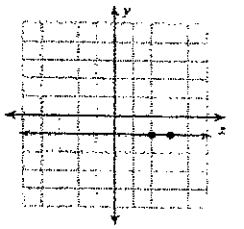
14)

x	y
–6	– 4
–5	–9
– 4	–14
–3	–19
–2	–24

Slope:

y-intercept:

15)



Slope:

y-intercept:

Number Correct:

_____

Kuta Software - Infinite Pre-Algebra

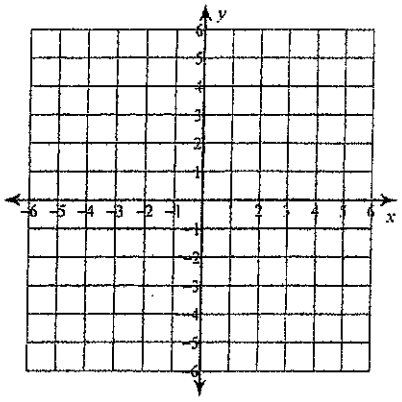
Name_____

Graphing Lines in Slope-Intercept Form

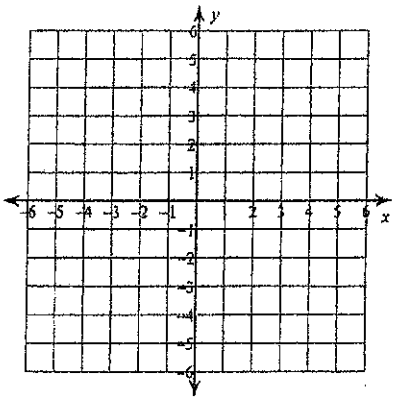
Date_____ Period____

Sketch the graph of each line.

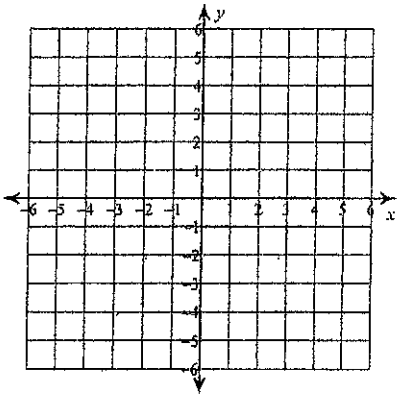
1) $y = \frac{1}{4}x - 1$



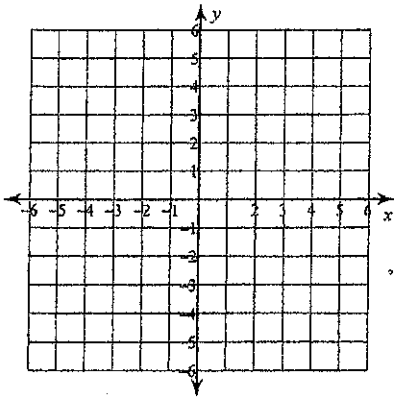
2) $y = -x + 2$



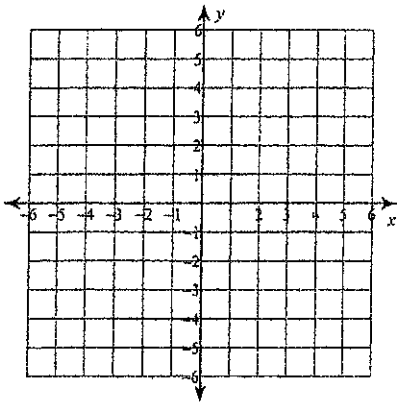
3) $y = x + 1$



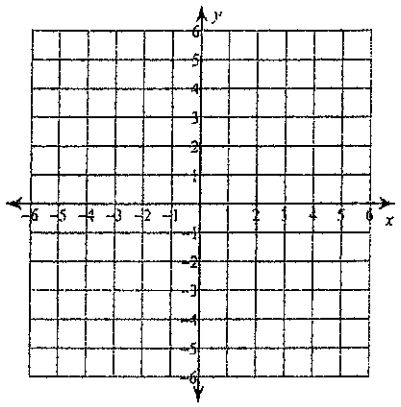
4) $y = \frac{4}{3}x - 4$



5) $y = -3x - 3$



6) $y = 4$



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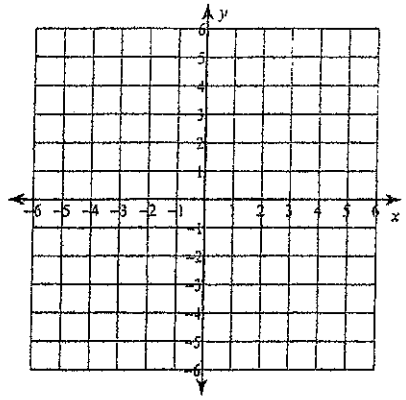
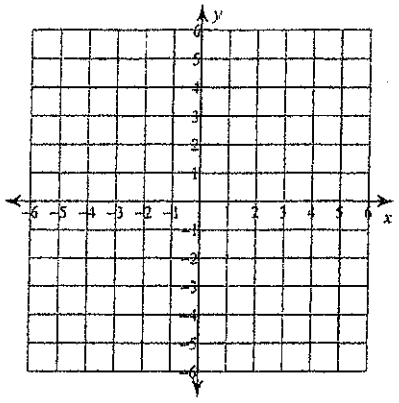
Graphing Lines in Slope-Intercept

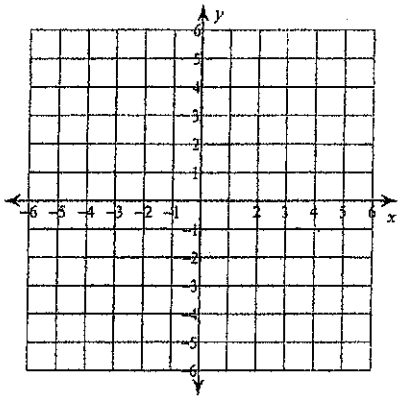
7) $y = \frac{3}{5}x - 1$



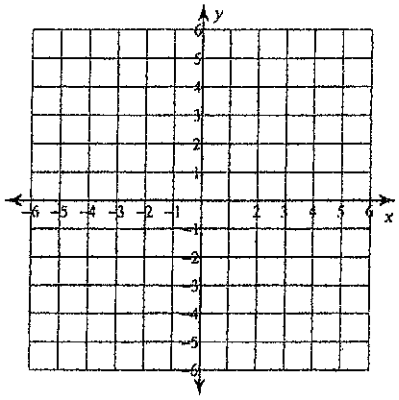
8) $x = 5$



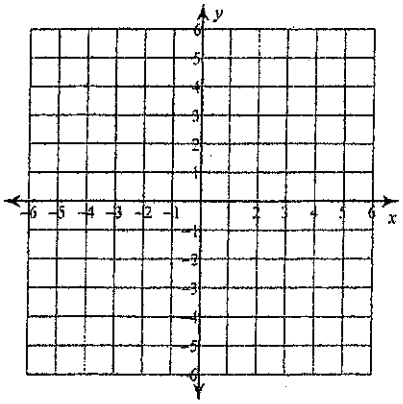
9) $y = 3$



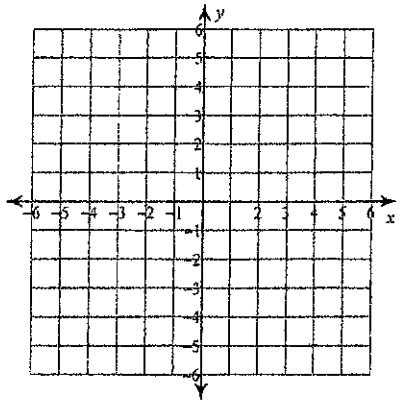
10) $y = 3x - 2$



11) $y = 4x + 3$



12) $y = \frac{6}{5}x + 5$



Kuta Software - Infinite Pre-Algebra

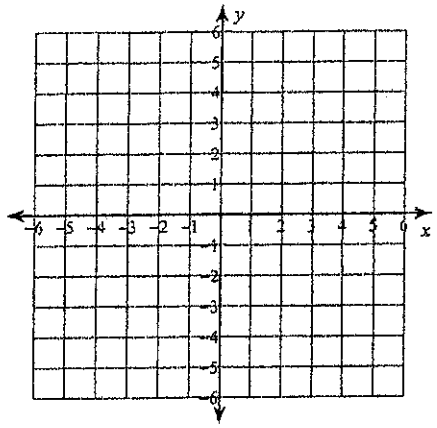
Name_____

Graphing Lines in Standard Form

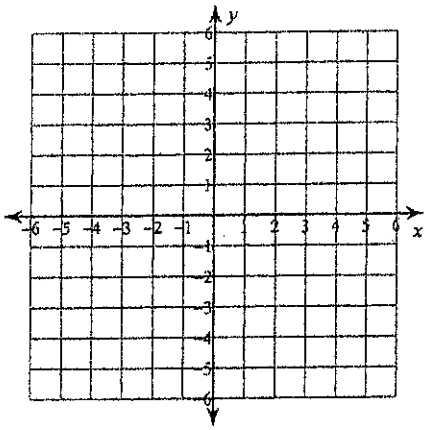
Date_____ Period____

Sketch the graph of each line.

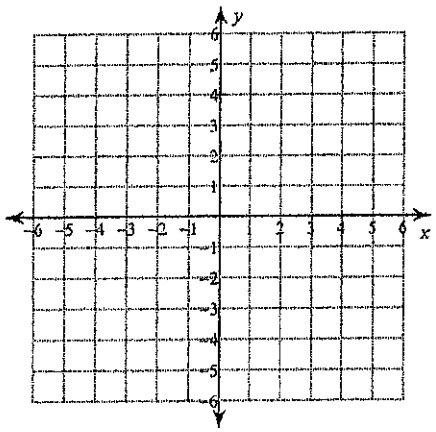
1) $4x + y = 0$



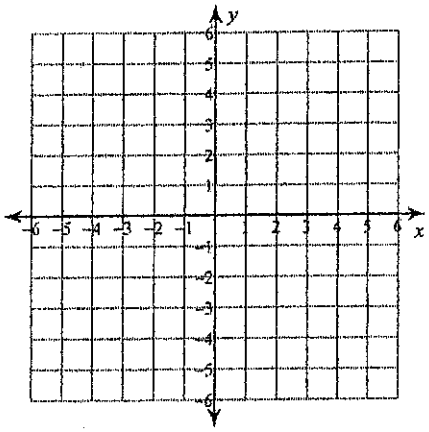
2) $10x - 3y = -15$



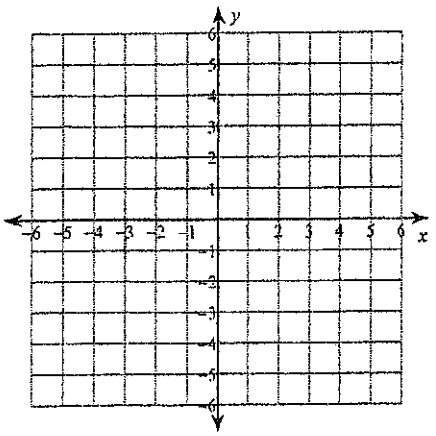
3) $x + y = -3$



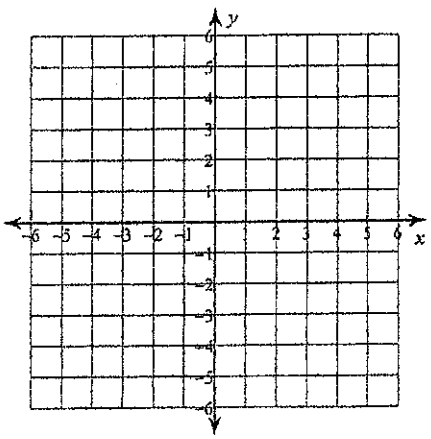
4) $x = 5$



5) $7x + 2y = -10$



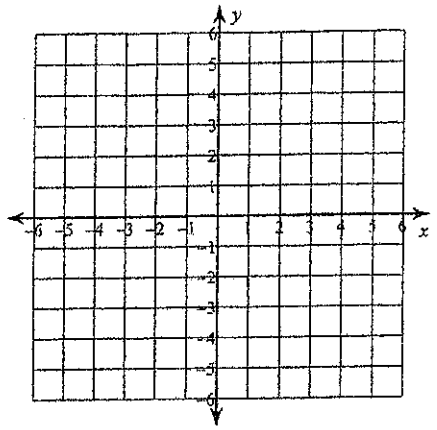
6) $x - 2y = -6$



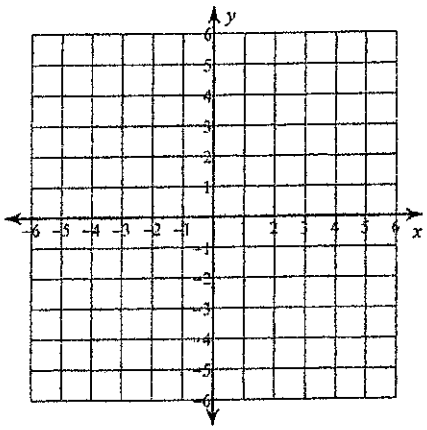
2pgs

Graphing lines in Standard Form

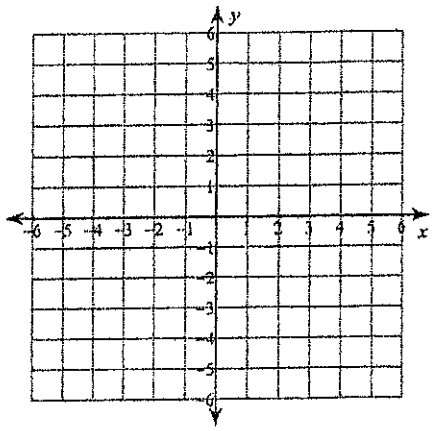
7) $x + y = 0$



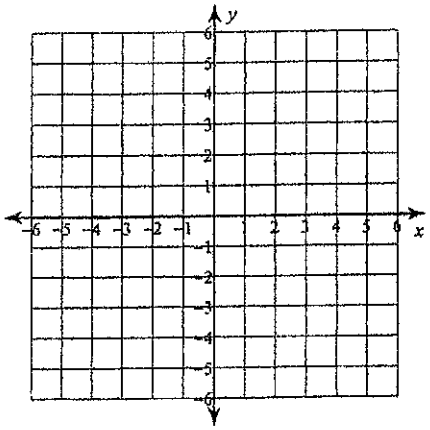
8) $9x + y = 4$



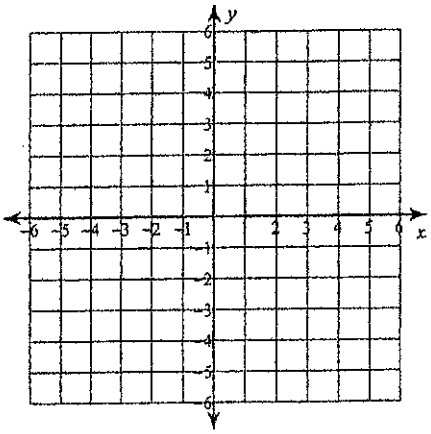
9) $y = 5$



10) $x + 4y = -12$



11) $x - 3y = 3$



12) $x + y = 4$