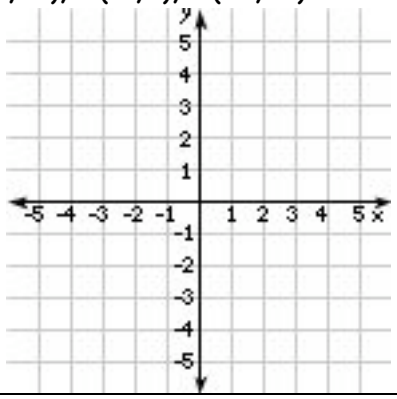
~Spring Semester Final Exam Review~ Name_____

Algebra P2 Spring 2010

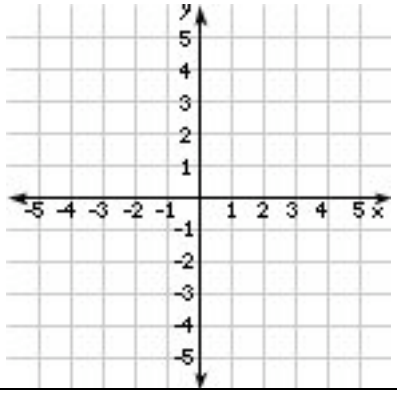
1) Plot and label all the points:
A(2,-3), B(-1,3), C(-4,-5)



2) Verify if (3,-2) is a point on the line:
y = 2x − 7. (Yes or No)
(Show your work.)

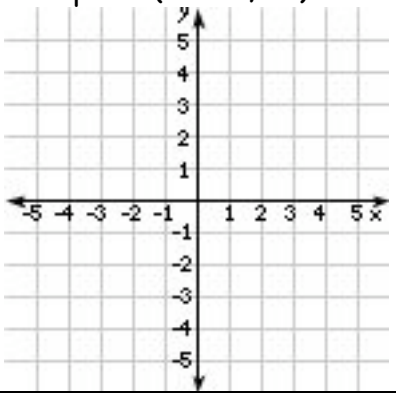
3) Graph y = -2 and identify as:

vertical, horizontal or sloped.
(Circle one)



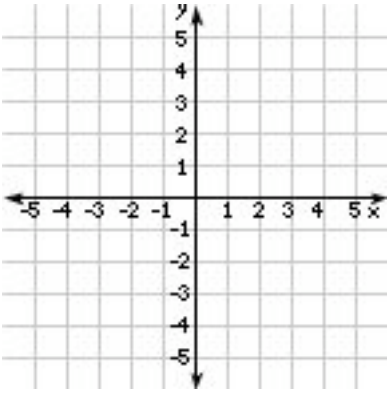
4) Find the x & y-intercepts for:
3x + 2y = 4. Then graph.
y − intercept (0 ,)

x − intercept (, 0)



5) Plot (2,-3) and (3,2) and calculate the slope of the line through them.

slope = _____

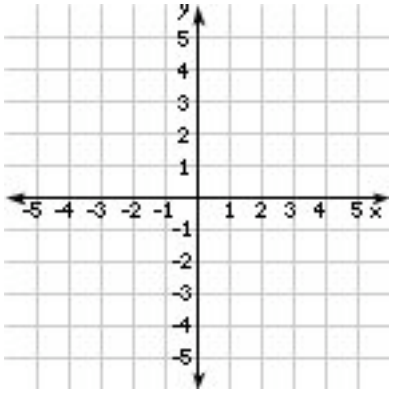


6) Rewrite in slope intercept form:
(y = mx + b)
x = 15 + 3y

y = mx + b --- slope intercept form of a line.

7) Rewrite in slope-intercept form and sketch the line: $2y - 2x = 10$

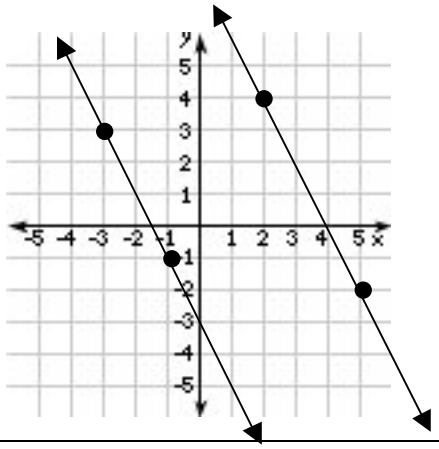
slope-intercept form:_____



8) Use the slope formula $\left(\frac{y_2 - y_1}{x_2 - x_1}\right)$ to find the slope of the line going through: (5,-7) and (9,-2)

m = _____

9) Find the slope of each line graphed below and state if they are parallel.



m_1 = _____

m_2 = _____

Parallel: YES or NO

10) Find the slope of each line and identify as parallel, perpendicular or neither:

$y = 3x + 4$ slope_____

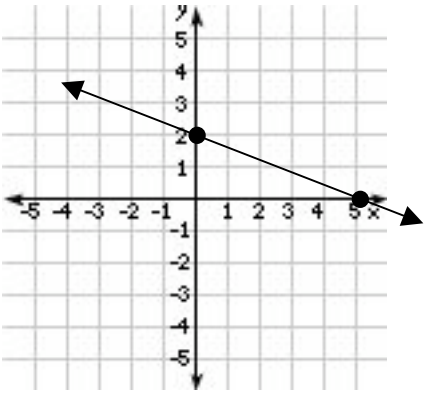
and

$2y = 4x - 3$ slope_____

(Circle One)

parallel perpendicular neither

11) Write the equation of the line shown: (write in slope-intercept form)



Equation:_____

$y - y_1 = m(x - x_1)$ --- point-slope form of a line.

$y = mx + b$ --- slope intercept form of a line.

12) Write the equation of the line that goes through (-2,4) and (-7,-2).
(write it in point-slope form)

Equations:_____

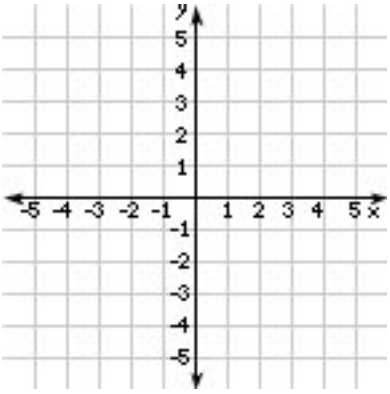
13) Write the equation of the line that goes through (-2,5) and (-4,1).
(write in slope-intercept form)

Equations:_____

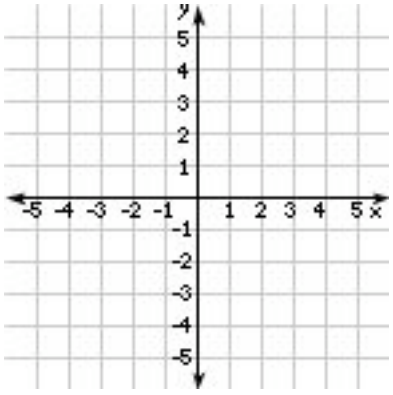
14) Write the equation of the line with $m = {}^1/_3$ and goes through the point (-1,6). **(write in slope-intercept form)**

Equations:_____

15) Graph and shade: $y \geq \frac{3}{5}x - 4$



16) Graph and shade: $3x + 4y < -8$



17) " I have a deal for you." I will pay you $5 right now plus $3 for every hour you study for the final exam.
(Write an equation that represents how much money you can make.)

18) What is better, getting $20 or taking the deal and studying for 8 hours?
(Explain your reasoning)

Graph and shade on a number line:

19) $x \geq -11$	20) $-9 \leq x < -5$
21) $x \geq 19$ or $x < 3$	22) $x \neq -18$

Solve each inequality: **(DO NOT GRAPH)**

23) $3x < -27$	24) $2x - 1 \geq 11$	25) $-5x - 1 \leq 24$

Write an inequality for each shaded number line:

26) 	27) 	28) 

Write an inequality for each scenario:

29) Lewis comes to school with money for lunch but he never has enough to buy a $35 yearbook.	30) If you work all summer you will make anywhere from $800 to $1500.

Name_____

Use a calculator to answer the following questions:

31) If a $180 suit is given a $15 discount, what is the discount rate?	32) If you are given a 25% discount on a $450 item, what is the actual discount and how much would you pay? Discount_____ Sale Price_____
33) If you were charged $2.40 tax on a $29.99 item, what was the tax rate?	34) The sticker price of a new car is $27,999. If tax and licensing is 14%, how much extra are you charged and what is the total cost of the car? Extra Charge_____ Total Cost_____

35) Complete the simple interest table using the listed percentages.(Show your work).

Starting Investment	Annual Rate	# of years	Total Interest	Total Investment
$2,750	5.6%	6 years		

36) Complete the simple interest table using the listed percentages.(Show all your work).

Starting Investment	Annual Rate	# of years	Total Interest	Total Investment
$11,250	3.2%	6 months		