Algebra 2 (CP) KEY Name _____ ID: 1

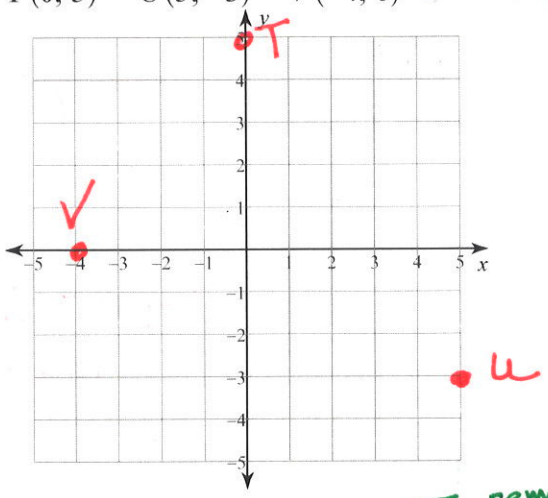
2.1 to 2.5 (Part A) Review for Quiz

Date _____ Period ____

Plot the points and label points T, U, V.
State the quadrant or axis that each point lies in.

T YAXIS ; U Q4 ; V X AXIS ;

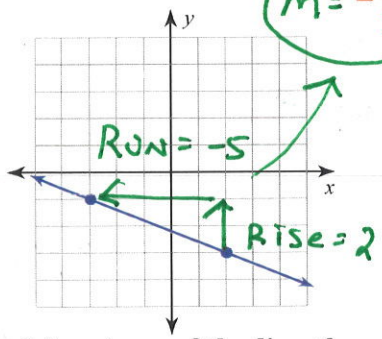
1) $T(0, 5)$ $U(5, -3)$ $V(-4, 0)$ y-axis U: IV V: x-axis



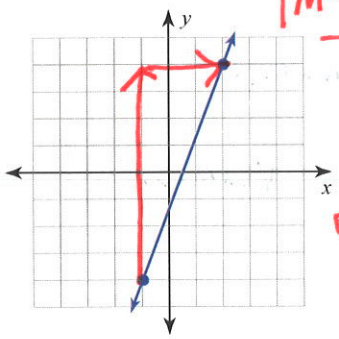
Find the slope of each line.

remember to label all numbers

2) $m = -\frac{2}{5}$



3) $m = \frac{8}{3}$



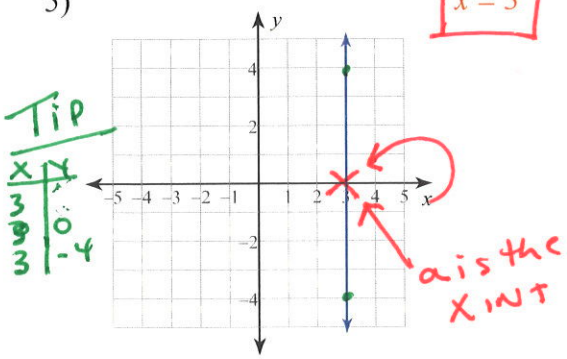
Find the slope of the line through each pair of points.

4) $(-12, -7), (3, -8)$

$$m = \frac{\Delta y}{\Delta x} = \frac{-7-(-8)}{-12-3} = \frac{-7+8}{-15} = \frac{1}{-15} \qquad m = -\frac{1}{15}$$

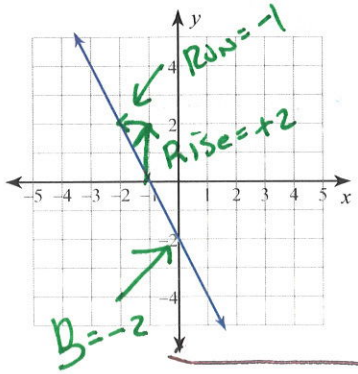
Write the slope-intercept form of the equation of each line. x

5) $x = 3$



VERTICAL LINE
EQ $x = a$

6)

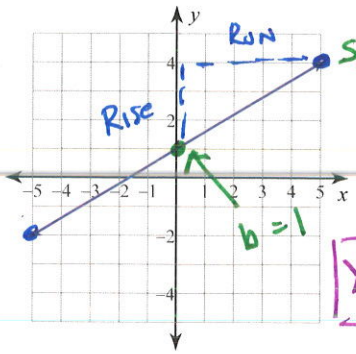


$m = \frac{\text{RISE}}{\text{RUN}} = \frac{2}{-1}$

$m = -2$

$y = -2x - 2$

7)



S/I

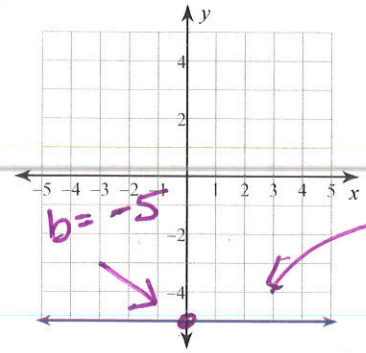
$y = mx + b$

$m = \frac{3}{5}$

$\Downarrow$

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

8)



HLINE is $y = b$

$m = 0$

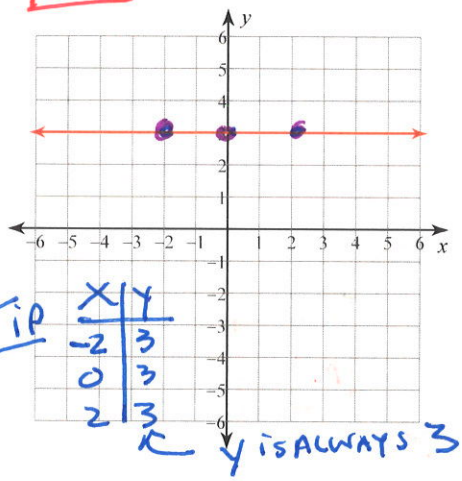
$y = 0x - 5$

$y = -5$

Sketch the graph of each line using slope and intercept. Clearly mark 3 points.

9) $y = 3$

HLINE $y = b$



Tip

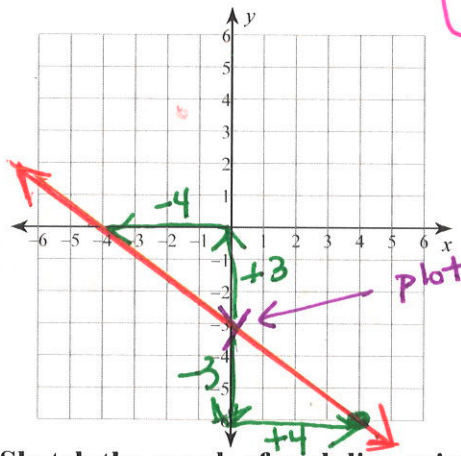
x	y
-2	3
0	3
2	3

y is always 3

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

$m = \frac{-3}{4}$

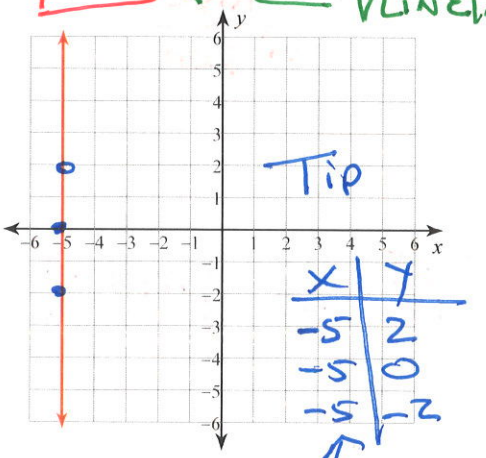
$b = -3$



plot y int (0, -3)

11) $x = -5$

VLINE $x = a$



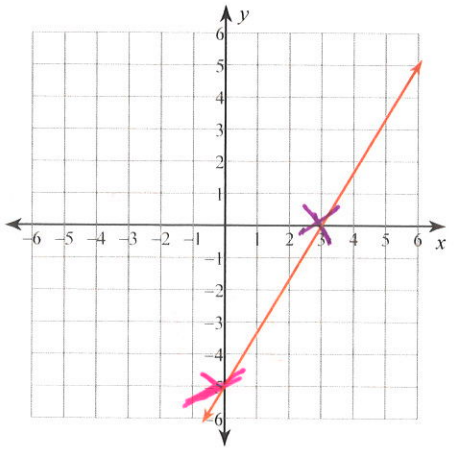
Tip

x	y
-5	2
-5	0
-5	-2

x is always -5

Sketch the graph of each line using intercepts. Label the x-intercept (X) and y-intercept (Y)

12) $5x - 3y = 15$



X: 3

(3, 0)

Y: -5

(0, -5)

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2.1 to 2.5 (Part B) Review for Quiz

Date_____

$y = mx + b$

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

1) Slope $= -\frac{3}{2}$ ← m, y-intercept $= -5$ ← b

$y = -\frac{3}{2}x - 5$

2) Slope $= 0$, y-intercept $= 2$

$y = 0x + 2$

$y = 2$

$y - y_1 = m(x - x_1)$ ← memorize

3) Write the point-slope form of the equation of the line through the given point with the given slope through: $(5, -3)$, slope $= -\frac{2}{3}$ ← m

x_1, y_1

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

4) Write the point-slope form of the equation of the line through the given points. (use 1st point) through: $(-5, 1)$ and $(-3, -4)$

x_1, y_1

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

STEP 1: FIND SLOPE $m = \frac{\Delta y}{\Delta x} = \frac{1-(-4)}{-5-(-3)} = \frac{5}{-2}$

$m = -5/2$

STEP 2:

PUT IN P/S $y - y_1 = m(x - x_1)$

$y - 1 = -5/2\,x + 5$

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

5) through: $(-1, 3)$ and $(-3, 2)$ ← PT PICKED

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

STEP I FIND SLOPE

$m = \frac{3-2}{-1+3} = \frac{1}{2}$ $M = 1/2$

STEP II PUT IN POINT SLOPE. Pick Either point.

$y - 3 = 1/2(x + 1)$

STEP III PUT IN SLOPE INTERCEPT:

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

$+3 \quad +3$

$y = \frac{1}{2}x + 3.5$

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

6) $4x + y = 6$

$-4x \quad -4x$

$y = -4x + 6$

7) $11x + 2y = -10$

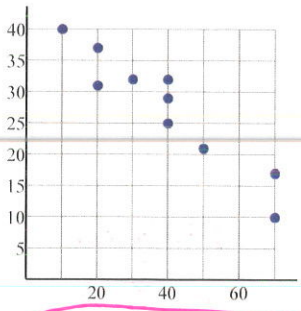
$-11x \quad -11x$

$\frac{2y}{2} = \frac{-11x}{2} - \frac{10}{2}$

$y = -\frac{11}{2}x - 5$

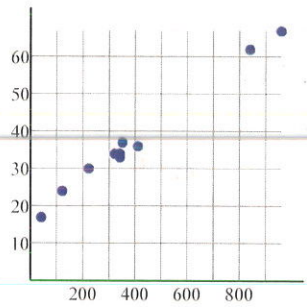
State if there appears to be a positive correlation, negative correlation, or no correlation.

8)



Negative correlation

9)



Positive correlation

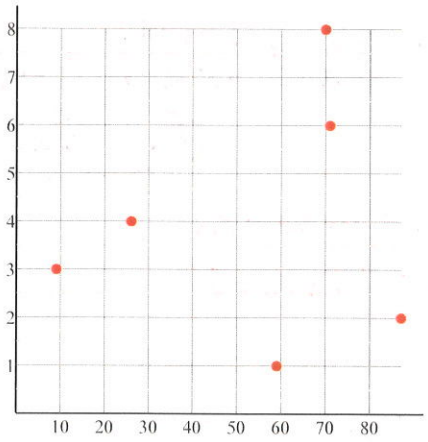
Construct a scatter plot.
State if there appears to be a positive correlation, negative correlation, or no correlation.
When there is a correlation, find the slope-intercept form of the equation of the line that best fits the data.

10)

X	Y
9	3
26	4

X	Y
59	1
70	8

X	Y
71	6
87	2

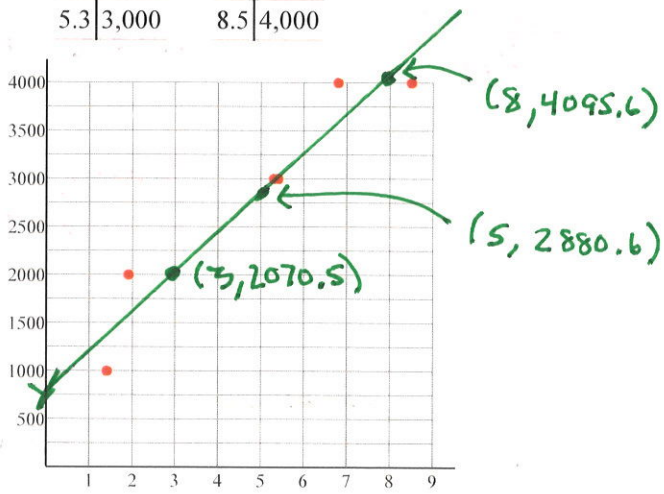


No correlation

11)

X	Y
1.4	1,000
1.9	2,000
5.3	3,000

X	Y
5.4	3,000
6.8	4,000
8.5	4,000



Positive correlation
$y = 405.02x + 855.47$

ALWAYS LABEL 3 POINTS
① THE yintercept and label Y
② 2 other points and label the order pairs

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2.1 to 2.5 (Part C) Review for Quiz

Date_____ Period____

Evaluate each function.

1) $w(n) = 2n - 5$; Find $w(0)$

mental work

$w(0) = 2(0) - 5$

$w(0) = -5$ ← write answer like this!!

2) $f(x) = 3x$; Find $f(-10)$

$f(-10) = -30$

3) $g(x) = 4x - 2$; Find $g(2)$

$g(2) = 4(2) - 2 = 6$

4) $h(n) = n - 2$; Find $h(-9)$

$h(-9) = -9 + -2 = -11$

5) $p(x) = x^2 + x$; Find $p(8)$

$P(8) = (8)^2 + 8 = 72$

6) $h(n) = -3n^3 + 3$; Find $h(0)$

$h(0) = -3(0)^3 + 3 = 3$

7) $g(n) = n^2 - 4n$; Find $g(-10)$

$g(-10) = (-10)^2 - 4(-10)$

$= 100 + 40$

$= 140$

8) $w(x) = x^3 - 3x$; Find $w(2)$

$w(2) = (2)^3 - 3(2)$

$= 8 - 6$

$= 2$