Algebra 1
Practice problems
Quiz 4.7 today
Test Ch. 4 Tues.

There will be graphing calculator question(s) on the test

whiteboards

Example 8

Find the inverse of the relation.

$\{(5, -3), (11, 2), (-6, 12), (4, -2)\}$

$(-3,5)\ (2,11)\ (12,-6)\ (-2,4)$

Example 9

Find the inverse of $f(x) = \frac{1}{4}x + 9$.

y

$x = \frac{1}{4}y + 9$

$-9 \qquad -9$

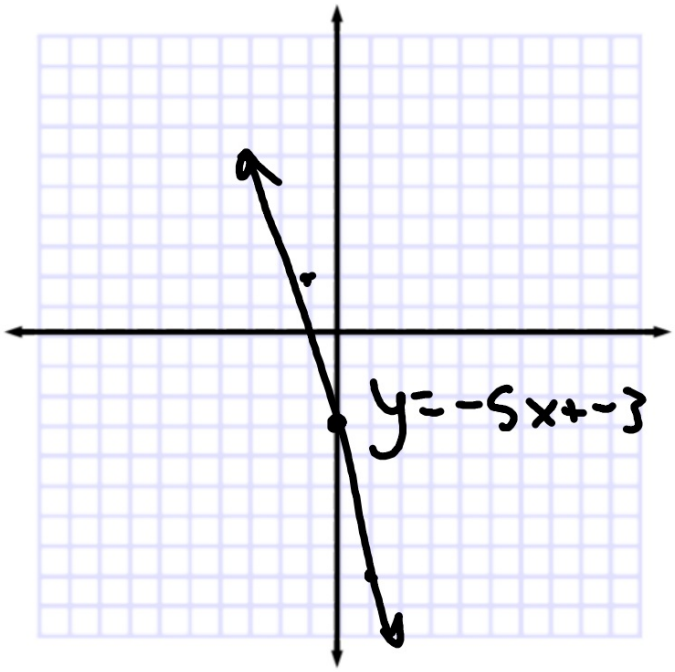
$4(x-9) = \frac{1}{4}y \cdot \frac{4}{1}$

$\frac{1}{4}$

$f^{-1}(x) = 4x - 36$

Example 1

Write an equation of a line in slope-intercept form with slope −5 and *y*-intercept −3. Then graph the equation.



$y = mx + B$

$y = -5x + -3$

$\frac{-5}{1}$

$\frac{5}{-1}$

Example 2

$y = mx + B$ $x\ y$

Write an equation of the line that passes through (3, 2) with a slope of 5.

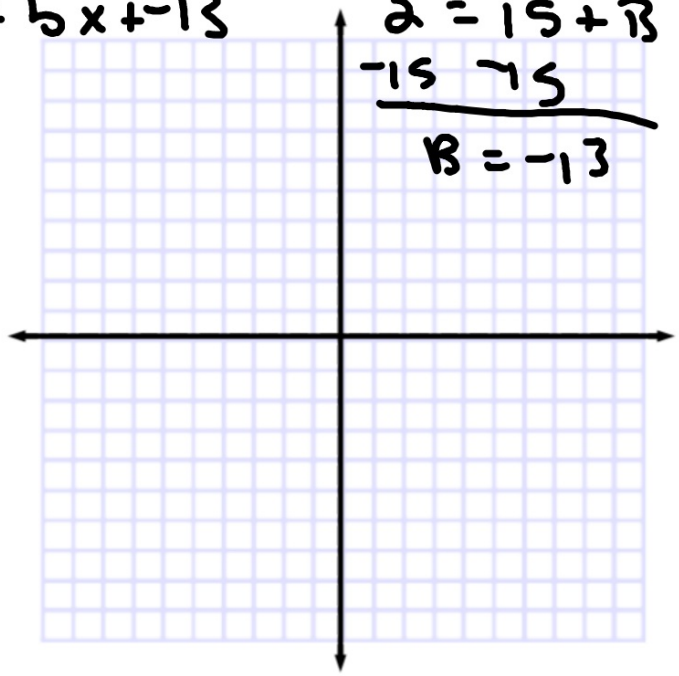
$2 = 5 \cdot 3 + B$

$2 = 15 + B$

$-15 \quad -15$

$B = -13$

$y = 5x + -13$



$y - y_1 = m(x - x_1)$

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

$y - y_1 = m(x - x_1)$

Write an equation of the line that passes through the given points.

23. (2, −1) (5, 2)

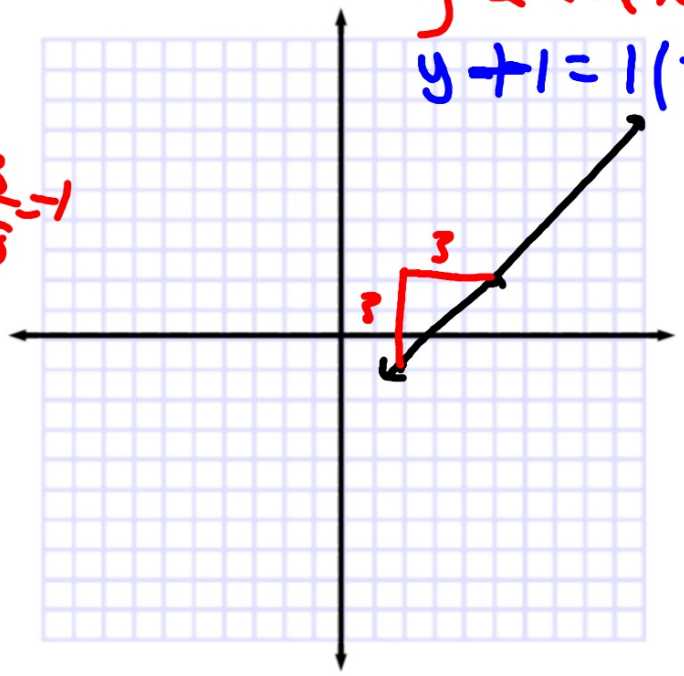
24. (−4, 3), (1, 13)

$\frac{3}{3} = 1$

$\frac{2 - -1}{5 - 2} = \frac{3}{3} = 1$

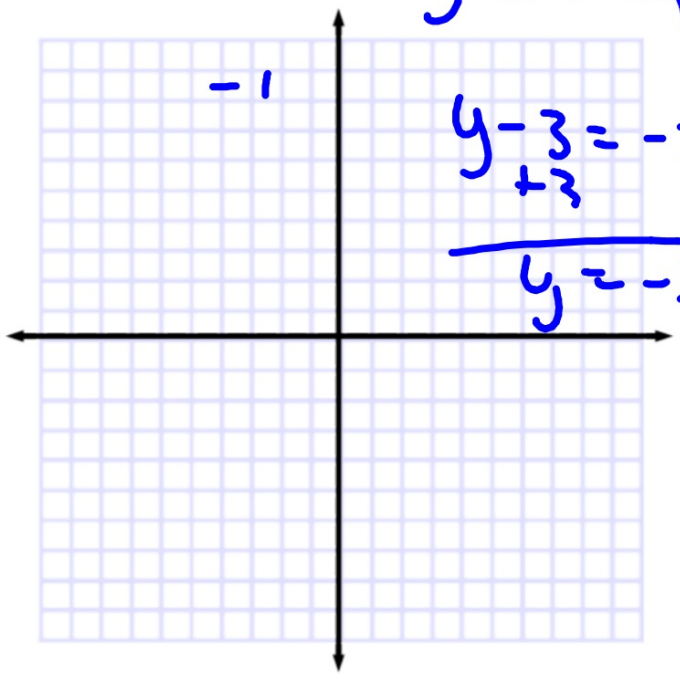
$y - 2 = 1(x - 5)$

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



14. Write an equation in point-slope form for the line that passes through the point (8, 3), $m = -2$. (Lesson 4-3)

$y - 3 = -2(x - 8)$



$y - 3 = -2x + 16$

$+3 \qquad +3$

$y = -2x + 19$

16. Write $y + 4 = -7(x - 3)$ in slope-intercept form.
(Lesson 4-3)

$y = mx + B$

$y + 4 = -7x + 21$

$-4 \qquad -4$

$y = -7x + 17$

23. $(0, -3)$; $y = -2x + 4$

parallel

$m = -2$

$y = -2x + B$

$-3 = -2 \cdot 0 + B$

$-3 = 0 + B$

$y = -2x + -3$

24. $(-4, -5)$; $-4x + 5y = -6$ perpendicular

x y

$+4x$ $4x$

$m = -\frac{5}{4}$

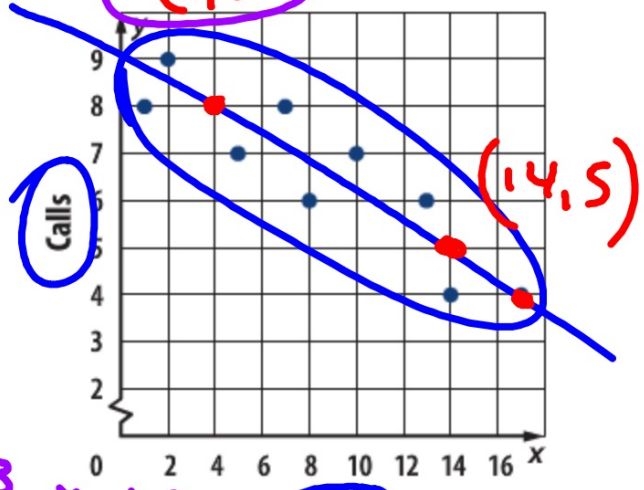
$\frac{5y}{5} = \frac{4x}{5} - \frac{6}{5}$

$y = \frac{4}{5}x - \frac{6}{5}$

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

Example 6

The scatter plot displays the number of texts and the number of calls made daily. Write an equation for the line of fit.



(4, 8)

(14, 5)

$m = \frac{5-8}{14-4} = -\frac{3}{10}$

$y = -\frac{3}{10}x + B$

$8 = -\frac{3}{10} \cdot 4 + B$

$8 = -1.2 + B$

$+1.2 \quad +1.2$

$9.2 = B$

$y = -\frac{3}{10}x + 9.2$

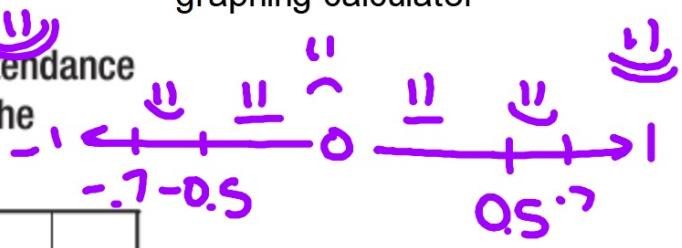
Calls $= -\frac{3}{10} \cdot$ texts $+ 9.2$

Old school

Example 7

graphing calculator

ATTENDANCE The table shows the annual attendance at an amusement park. Write an equation of the regression line for the data.



Years Since 2004	0	1	2	3	4	5	6
Attendance (thousands)	75	80	72	68	65	60	53