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

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 $f(x) = \frac{1}{4}x + 9$.

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

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

$$-9 \qquad -9$$

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

$$4(x-9) = y$$

$$f^{-1}(x) = 4(x-9)$$

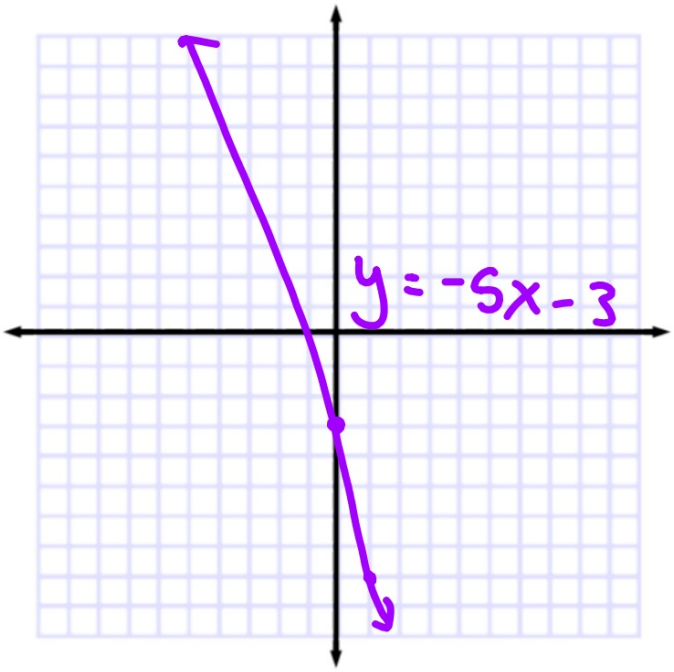
Example 1

$y = mx + B$

$y = -5x - 3$

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

$\frac{-5}{1}$



PT-Slope

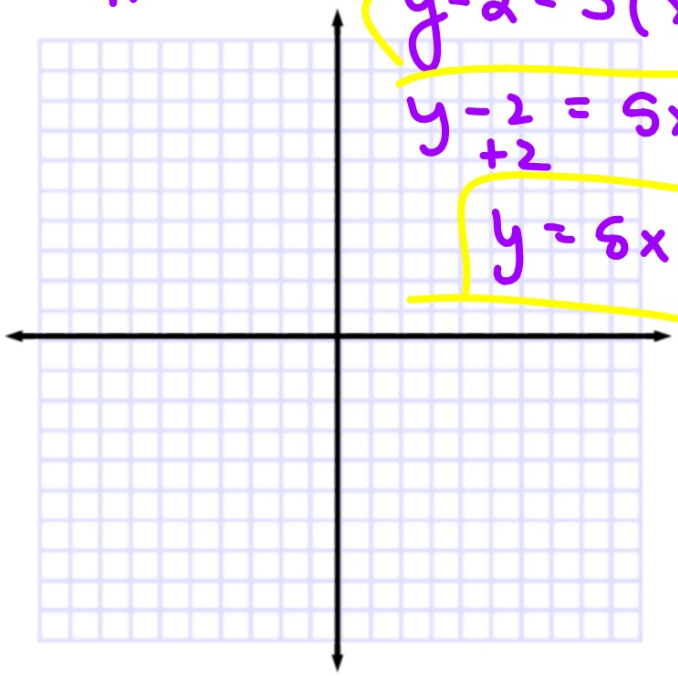
Example 2

Si $y = mx + B$

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

x y

m



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

$y - 2 = 5x - 15$

$+2 \qquad +2$

$y = 5x - 13$

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

23. (2, −1), (5, 2)

24. (−4, 3), (1, 13)

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

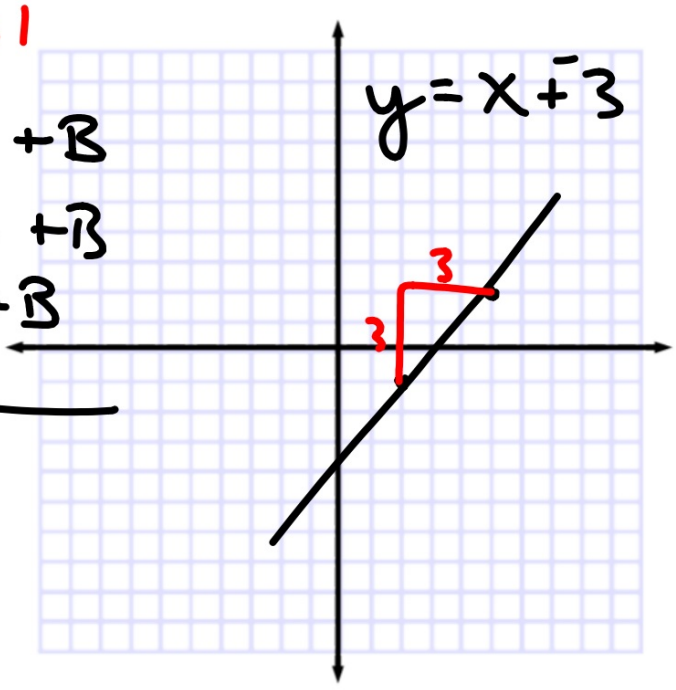
$y = 1x + B$

$2 = 1 \cdot 5 + B$

$2 = 5 + B$

$-5 \quad -5$

$-3 = B$



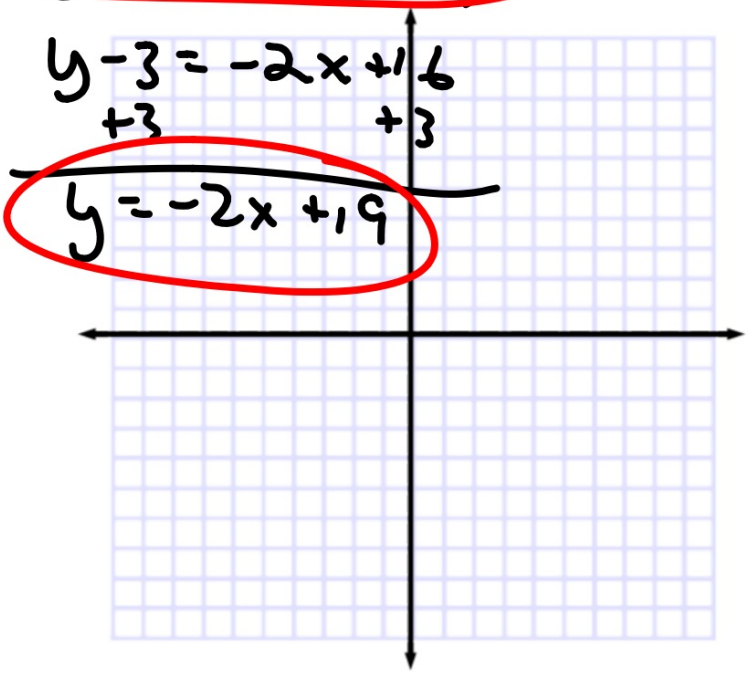
14. Write an equation in point-slope form for the line that passes through the point (8, 3), $m = -2$. (Lesson 4-3)

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

$y - 3 = -2x + 16$

$+3 \quad +3$

$y = -2x + 19$



$y = mx + B$

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

$y + 4 = -7x + 21$
$-4 \qquad -4$
$y = -7x + 17$

$y = mx + B$

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

$m = -2 \quad (0, -3)$

$y + 3 = -2(x - 0)$

$y = -2x - 3$

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

$+4x \quad +4x$

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

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

$m = -\frac{5}{4}$ $(-4, -5)$ $y = mx + B$

$-5 = -\frac{5}{4} \cdot -4 + B$

$-5 = +\frac{20}{4} + B$

$-5 = 5 + B$

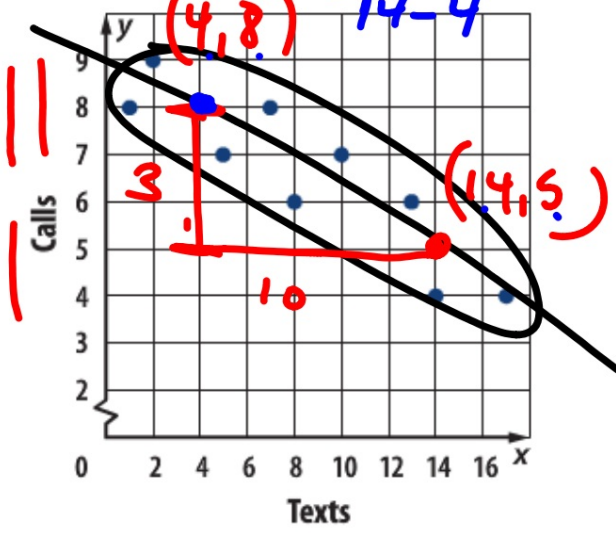
$-5 \quad -5$

$-10 = B$

$y = -\frac{5}{4}x - 10$

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.



$\frac{5-8}{14-4}$

$-\frac{3}{10}$

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

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

$8 = -\frac{12}{10} + b$

$8 = -\frac{6}{5} + b$

$+\frac{6}{5} \quad +\frac{6}{5}$

Old school

$9\frac{1}{5} = b$

$y = -\frac{6}{5}x + 9\frac{1}{5}$

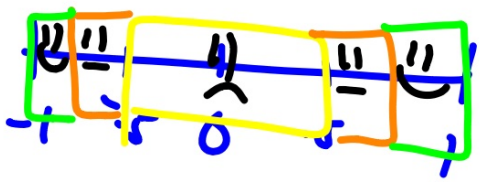
$\text{Calls} = -\frac{6}{5}(\text{text}) + 9\frac{1}{5}$

Example 7 $y = -4.036x + 79.679$ graphing calculator

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

$r = -.950$

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



attendance $= -4.036(\text{yr}) + 79.679$

PT p 277 (1-20)