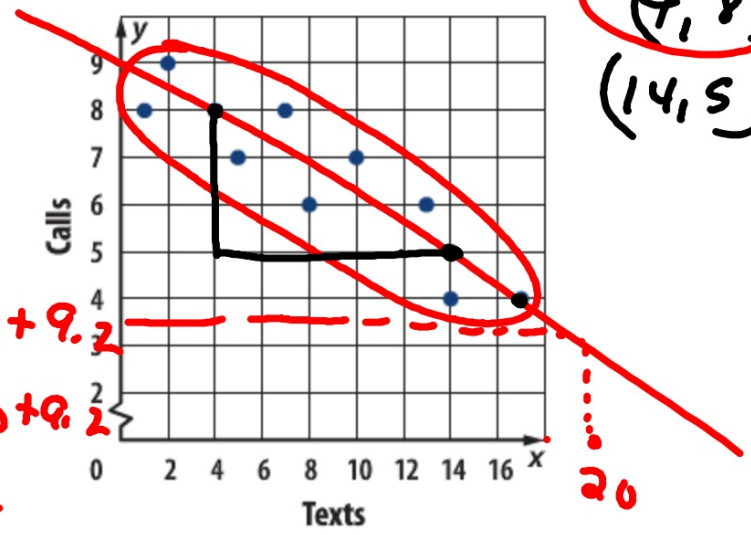
Algebra 1
Practice problems
Quiz 4.7 today
Test Ch. 4 Wed

There will be graphing calculator question(s) on the test.
(Will turn in calcs after test)

whiteboards

## 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.




$m = \frac{-3}{10}$

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

$= \frac{-3}{10} \cdot 20 + 9.2$

$= 3.2$

20

(4, 8)

(14, 5)

$y = mx + B$

$8 = -0.3 \cdot 4 + B$

$8 = -1.2 + B$

$+1.2 \quad +1.2$

$9.2 = B$

Old school

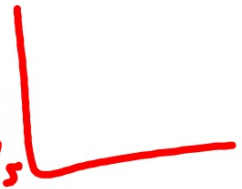
## Example 7

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 (L1) | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| Attendance (thousands) (L2) | 75 | 80 | 72 | 68 | 65 | 60 | 53 |

L2 attend 1000's




$y = -4.04x + 79.67$

$r = -0.95$

2014 → 10 $-4.04(10) + 79.67$

39.27

39,000 people

## Example 8

Find the inverse of the relation.

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

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

D: $-3, 2, 12, -2$

R: $5, 11, -6, 4$

**Example 9**

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

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

$x = \frac{1}{4}y + 9$ $f^{-1}(x) = 4(x - 9)$

$-9 \quad -9$

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

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

**Example 1**

$y = mx + B$

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

$y = -5x + -3$

**Example 2** $y - y_1 = m(x - x_1)$

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

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

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

**23.** (2, −1), (5, 2)

**24.** (−4, 3), (1, 13)

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

$y = 1x + B$

$2 = 1 \cdot 5 + B$

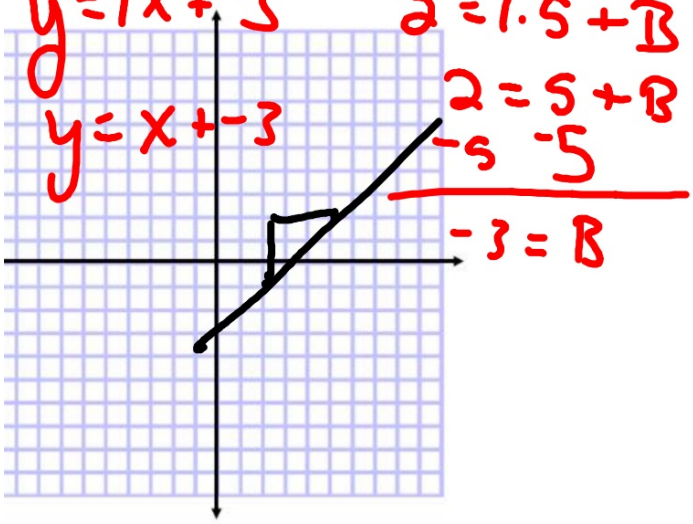
$2 = 5 + B$

$-5 \quad -5$

$-3 = B$

$y = 1x + -3$

$y = x + -3$



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

$$y - y_1 = m(x - x_1)$$
$$y - 3 = -2(x - 8)$$

**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 || Same m

$m = -2$

$y = mx + B$

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

$-3 = 0 + B$

$y = -2x - 3$

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