Algebra 1
Practice problems
Test Ch. 4 Tues.

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

whiteboards

$$y = mx + B$$

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

Example 1

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

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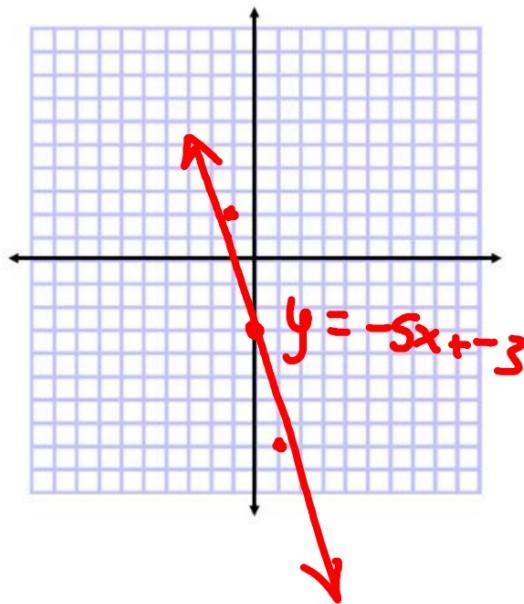
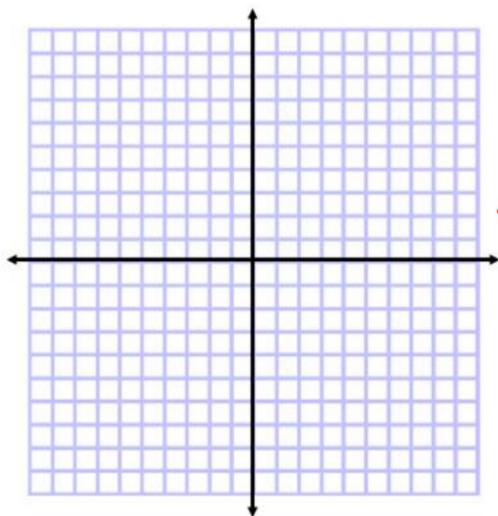$$-\frac{5}{1} \quad \frac{5}{-1} \quad 1$$

$$y = -5x + -3$$

Example 2

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

m

$x \quad y$

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

$$y = mx + B$$
$$2 = 5 \cdot 3 + B$$
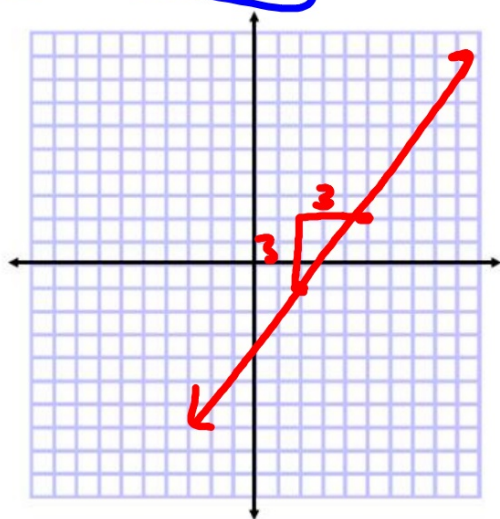$$2 = 15 + B$$
$$-15 \quad -15$$
$$-13 = B$$

$$y = 5x - 13$$

Write an equation of the line that passes through the given points.
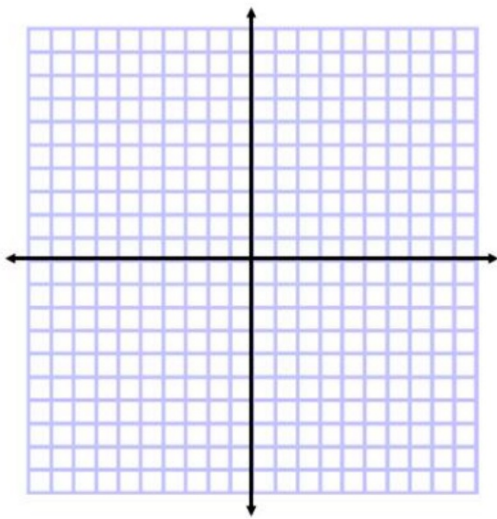
23. (2, −1) (5, 2)

24. (−4, 3), (1, 13)

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

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

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

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

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

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

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

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

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

parallel

$m = -2$

Same Slope

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

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

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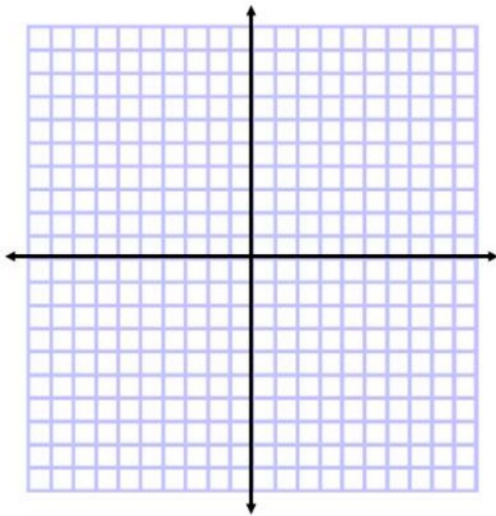
perpendicular

$\frac{2}{3} \rightarrow \frac{-3}{2}$

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

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

opp recip

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

$y = mx + B$

$-5 = \frac{-5}{4} \cdot \frac{-4}{1} + B$

$-5 = 5 + B$

$\begin{array}{c} -5 \quad -5 \\ \hline \end{array} \quad B = -10$
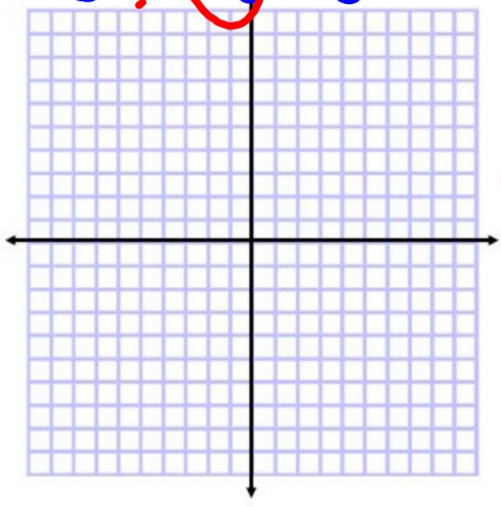
$$a = 2.338$$
$$b = 1.450$$
$$r = 0.996$$

$$y = 2.338x + 1.450$$

SGR p273

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11, 15, 19 ...