Name: Key Date: _____ Class: _____

Slope Intercept Form Practice

Convert each of the following equations in standard form to slope intercept form. (Solve for y)

1. $3x + 4y = 12$
$-3x \quad -3x$
$\frac{4y}{4} = \frac{12}{4} - \frac{3x}{4}$
$y = 3 - \frac{3}{4}x$
or
$y = -\frac{3}{4}x + 3$

2. $3x - y = 4$
$-3x \quad -3x$
$\frac{-1y}{-1} = \frac{4}{-1} - \frac{3x}{-1}$
$y = -4 + 3x$
or
$y = 3x - 4$

3. $5x - 3y = 15$
$-5x \quad -5x$
$\frac{-3y}{-3} = \frac{15}{-3} - \frac{5x}{-3}$
$y = -5 + \frac{5}{3}x$
or
$y = \frac{5}{3}x - 5$

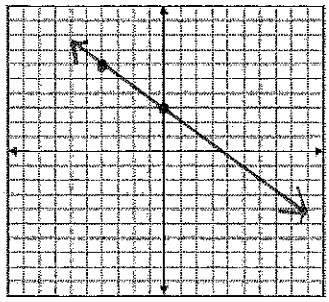
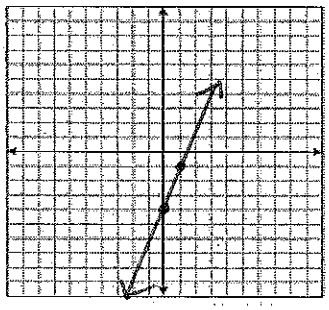
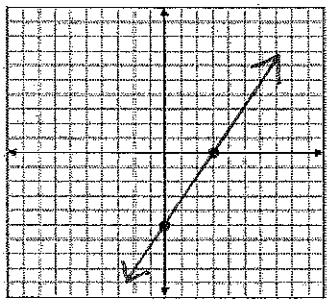
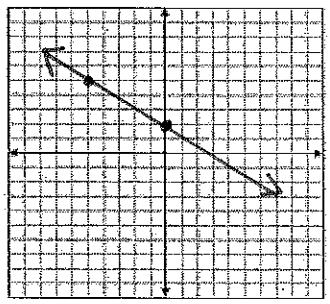
4. $5y + 3x = 10$
$-3x \quad -3x$
$\frac{5y}{5} = \frac{10}{5} - \frac{3x}{5}$
$y = 2 - \frac{3}{5}x$
or
$y = -\frac{3}{5}x + 2$

For each slope intercept form above, determine the slope (m) and y intercept (b).

1. m = $-\frac{3}{4}$ b = 3
2. m = 3 or $\frac{3}{1}$ b = -4
3. m = $\frac{5}{3}$ b = -5
4. m = $-\frac{3}{5}$ b = 2

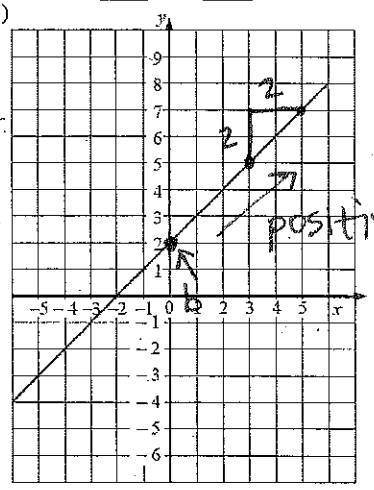
Graph each of the equations using this information.

1. $y = \boxed{-\frac{3}{4}}x + \boxed{3}$
2. $y = \boxed{3}x + \boxed{-4}$
3. $y = \boxed{\frac{5}{3}}x + \boxed{-5}$
4. $y = \boxed{-\frac{3}{5}}x + \boxed{2}$

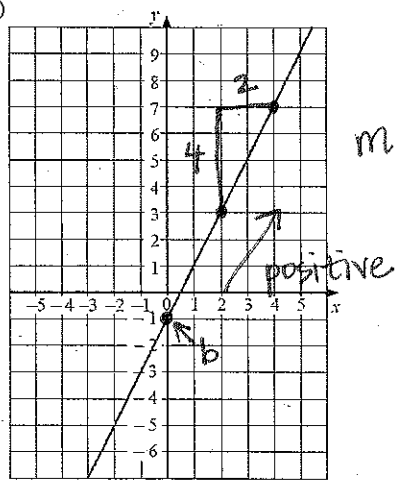
For each line graphed below, write an equation in slope intercept form.

(a) $y = \boxed{1}x + \boxed{2}$



$m = \frac{2}{2} \div \frac{2}{2} = \frac{1}{1} = 1$

(b) $y = \boxed{2}x + \boxed{-1}$



$m = \frac{4}{2} \div \frac{2}{2} = \frac{2}{1} = 2$

Fill in the table below with the missing information.

$y = mx + b$ (m: slope, b: y-intercept)

Equation	Slope	Y - intercept
y = -2x + 6	-2	6
4x-2y = 20	2	-10
$y = \frac{1}{4}x - 3$	¼ ↖ m	-3 ↖ b
y = -1/2 x + 0	$-\frac{1}{2}$	0
y = -3x+12	-3	12
$y = -2x$	-2	0
$y = -\frac{1}{3}x + 1$	-1/3	1

$4x - 2y = 20$

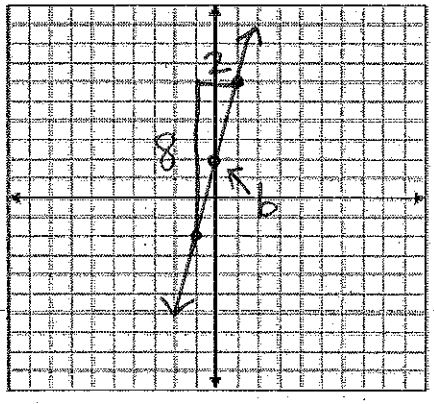
$-4x \quad -4x$

$\frac{-2y}{-2} = \frac{20 - 4x}{-2} \quad \frac{}{-2}$

$y = -10 + 2x$

What is the equation in slope-intercept form of the line that passes through the points (1,6) and (-1,-2)?

a. Y = 2x +4 b. y = -3x + 6 c. y = 4x – 2 d. y = 4x +2



$b = 2$

$m = \frac{8}{2} \div \frac{2}{2} = \frac{4}{1} = 4$

$y = mx + b$

$y = 4x + 2$