Total /25 = 100 %

Name: Key Date: _____

Section 7.1 Extra Practice

1. What are the slope and y-intercept of each line?

a) $y = 5x - 3$ b) $y = 0.1x - 5.7$

/2

$m = 5$ $m = 0.1$ or $\frac{1}{10}$

$b = -3$ $b = -5.7$

2. Sketch the graph of each line using the slope and y-intercept.

a) $y = 2x + 3$ $m = 2$ $(0, 3)$

Put graphs on graph provided below and label as 2a or 2b!

/2

Sketch ✓

label y-intercept ✓

b) $y = -\frac{1}{2}x - 4$ $m = -\frac{1}{2}$ $(0, -4)$

/2

3. Express each equation in slope-intercept form. Determine the slope and y-intercept of each line.

a) $4x + 5y - 20 = 0$ $5y = -4x + 20$

/3 $m = -\frac{4}{5}$ ① $\boxed{y = -\frac{4}{5}x + 4}$ ①

y-intercept = 4 ①

b) $5x - y = 12$ $\boxed{y = 5x - 12}$ ① $m = 5$ ① $b = -12$ ①

/3

4. Write the equation of each line in the form $y = mx + b$.

a) $m = 2$, y-intercept: $(0, -5)$

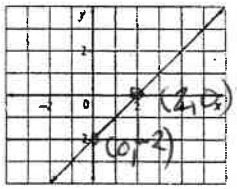
/1 $y = 2x - 5$

b) $m = -6$, y-intercept: $(0, 2)$

/1 $y = -6x + 2$

5. What are the slope and y-intercept of each line? Write the equation of each line in the form slope-intercept form.

a)



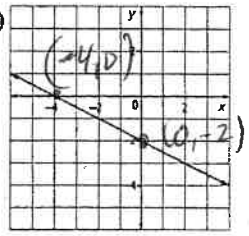
$m = \frac{2}{2} = 1$

/2

$b = -2$

$\boxed{y = x - 2}$

b)



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

/2

$b = -2$

$\boxed{y = -\frac{1}{2}x - 2}$

7. Write the equation of each line in the form $y = mx + b$.

a) The slope is 2. The line passes through the point (1, 4).

/2 $y = 2x + b$ $\boxed{y = 2x + 2}$

$4 = 2(1) + b$

$4 = 2 + b$ $b = 2$

b) The y-intercept is –3. The line passes through the point (–2, 6).

$y = mx - 3$ $\frac{9}{-2} = \frac{-2m}{-2}$

/2 $6 = m(-2) - 3$ $m = -\frac{9}{2}$

$6 = -2m - 3$

$+3 \quad +3$

$9 = -2m$

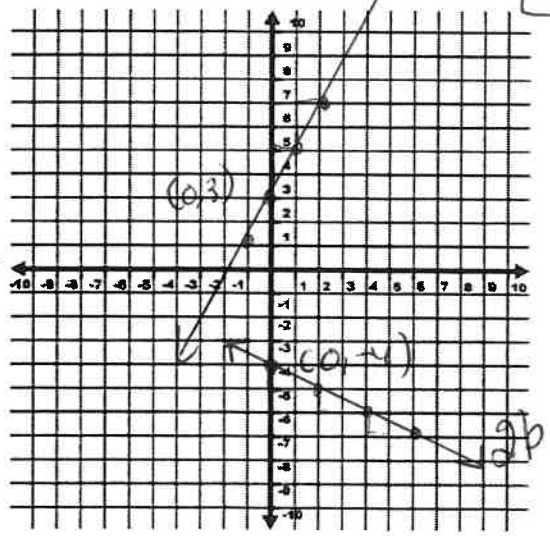
$\boxed{y = -\frac{9}{2}x - 3}$

c) The line passes through the points (0, 4) and (2, 6).

$m = \frac{6-4}{2-0} = \frac{2}{2} = 1$ ①

/3

2a



$y = x + b$ $\boxed{y = x + 4}$

① $4 = 0 + b$ ①

$b = 4$