Equations of lines

$$y = mx + b$$
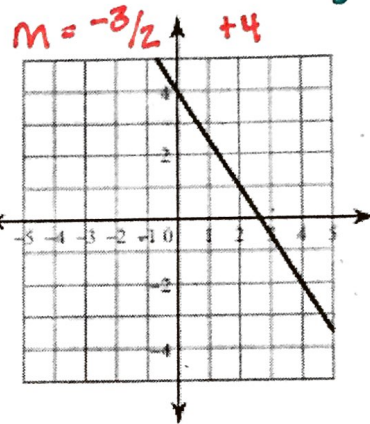
slope   y-intercept

Find the equation of a line whose slope is 5 and y-intercept is (0, -6)

$$y = mx + b$$
$$y = 5x - 6$$

Find the equation of the line in the graph below:

$$y = -\tfrac{3}{2}x + 4$$

$m = -3/2$ $+4$

Horizontal Line: $y = ⑦$
y-intercept

Vertical Line: $x = ②$
x-intercept

Find the slope and y-intercept of the following equation

$$y = 3x - 5$$

$$m = 3$$
$$y\text{-int} = -5$$

Find the slope and y-intercept of the equation:

$$4x + 2y = 6$$
$$-4x \qquad = -4x$$

$$\frac{2y}{2} = \frac{-4x}{2} + \frac{6}{2}$$

$$y = -2x + 3$$

$m = -2$ $b = 3$

Find the equation of a line whose slope is 4 and goes through (-3, 5)

$$y = mx + b$$
$$y = 4x + b \qquad y = 4x + 17$$
$$(5) = 4(-3) + b$$
$$5 = -12 + b$$
$$17 = b$$