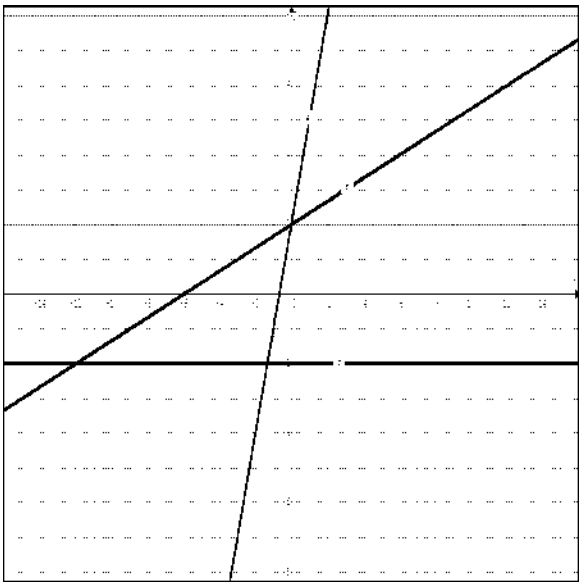
Linear Equations – Writing equations **Name:**_____

Algebra 2

1) Determine the equation of each line shown below.

Write it in slope-intercept form, $y = mx + b$
where m = slope and b = y-intercept.



a) _____

b) _____

c) _____

2) Find the equation of the line that contains the points (3, -2) and (5, 1) and write it in point-slope form.

Things to remember:

$$slope = \frac{change\ in\ y}{change\ in\ x} \quad \text{or} \quad slope = \frac{rise}{run} \quad \text{or} \quad slope = \frac{y_2 - y_1}{x_2 - x_1}$$

point-slope form of a line

$y - y_1 = m(x - x_1)$ where *m* is the slope and (x_1, y_1) is any point on the line

3) Find the equation of each line below and write it in any form you choose.

Then make a graph of the linear function.

a) Line with slope = 2 and y-intercept = -5

b) Line with $slope = \frac{2}{3}$ and containing the point (-6, -2)

c) Line containing (6, 0) and (0, -4)

d) Line containing points (4, 5) and (-2, 8)