

IB Math Studies

Linear Equations

Assignment #1

Notes: Forms of Linear Equations:

Slope-Intercept Form: The slope intercept form of an equation of a line is $y = mx + b$. The slope is m and the y intercept is b .

Point-Slope Form: If the point with coordinates (x_1, y_1) lies on a line having slope m , the point slope form of the equation of the line can be written as follows:

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

Standard Form: The standard form of a linear equation is $Ax + By + C = 0$ where A, B, C are real numbers and A and B are not both zero.

Problems:

Write each equation in slope-intercept form.

1) $3x - 2y = 7$

2) $8x = 2y - 1$

3) $4x + 3y = 0$

Write the equation of the line that passes through the given points. Your final equation should be in the form, $y = mx + b$.

4) $(-1, 4), (1, 7)$

5) $(3, -5), (2, -1)$

6) $(5, 2), (7, 9)$

7) $(2, 5), (7, 8)$

8) $(3, 1), (-2, 4)$

9) $(-7, -1), (4, -2)$