6.6 General Form of the Equation for a linear Function

Lesson 9

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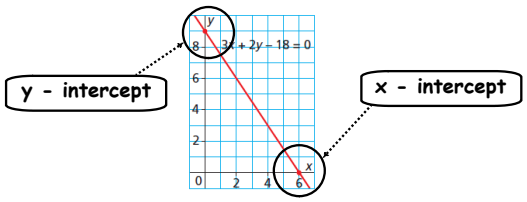
Connect NOTES:

x -intercept - where a line passes through the x-axis.



y -intercept - where a line passes through the y-axis.

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Practice EXAMPLE 1

Determine the x and y intercept of the line whose equation is:

3x + 2y - 18 = 0

To find the x - intercept set y = 0

$3x + 2(0) - 18 = 0$

$3x - 18 = 0$

$\frac{3x}{3} = \frac{18}{3}$

$x = 6$

x-int (6,0)

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Practice EXAMPLE 1

Determine the x and y intercept of the line whose equation is:

3x + 2y - 18 = 0

To find the y - intercept set x = 0

$3(0) + 2y - 18 = 0$

$2y - 18 = 0$

$\frac{2y}{2} = \frac{18}{2}$

$y = 9$

y-int (0,9)

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Practice YOU TRY!

Determine the x and y intercepts of the line whose equation is:

$x + 3y + 9 = 0$

Determine the x - intercept

$x + 3(0) + 9 = 0$

$x + 9 = 0$

$x = -9$

$(-9, 0)$

Determine the y - intercept

$(0) + 3y - 9 = 0$

$\frac{3y}{3} = \frac{9}{3}$

$y = 3$

$(0, 3)$

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Practice EXAMPLE 2

Determine the slope of the line with this equation

$3x - 2y - 16 = 0$

Rewrite the equation into slope y-intercept form

$y = mx + b$

$3x - 2y - 16 = 0$

$\frac{-2y}{-2} = \frac{-3x}{-2} + \frac{16}{-2}$

$y = \frac{3}{2}x - 8$

$m = \frac{3}{2}$

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Practice YOU TRY!

Determine the slope of the line with this equation

$5x - 2y + 12 = 0$

Rewrite the equation into slope y-intercept form

$y = mx + b$

$5x - 2y + 12 = 0$

$\frac{-2y}{-2} = \frac{-5x}{-2} - \frac{12}{-2}$

$y = \frac{5}{2}x + 6$

$m = \frac{5}{2}$

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Practice HOMEWORK!

Textbook Questions:

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