

6.6 General Form of the Equation for a linear Function

Lesson 8

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Connect NOTES:

Slope - y-intercept Form $y = 2x + 8$
 slope \swarrow \searrow y-intercept

Standard Form $-2x + y = 8$
 The x and y terms are on the left
 The constant term is on the right

General Form $-2x + y - 8 = 0$
 All terms are on the left

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Connect NOTES:

Slope - y-intercept Form
 $y = mx + b$ | $y = 2x + 8$
 slope \swarrow \searrow y-intercept

Standard Form
 $Ax + By = C$ | $-2x + y = 8$

General Form
 $Ax + By + C = 0$ | $-2x + y - 8 = 0$
 A is a whole number, B and C are integers

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Practice EXAMPLE 1

Write each equation in general form:

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

What form is this equation in now?
 slope y-int form

How do we change it to general form?

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

$$3y = -2x + 12$$

$$\rightarrow 2x + 3y - 12 = 0$$

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Practice **EXAMPLE 2**

Write each equation in general form:

$$y - 1 = \frac{3}{5}(x + 4)$$

$$5(y - 1) = \left[\frac{3}{5}(x + 4) \right]$$

*needs to be positive
∴ times by -1*

$$5y - 5 = 3x + 12$$

$$-3x + 5y - 17 = 0$$

$$\boxed{3x - 5y + 17 = 0}$$

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Practice **YOU TRY!**

Write each equation in general form:

$$y = \frac{-1}{4}x + 3$$

$$4y = -x + 12$$

$$\boxed{x + 4y - 12 = 0}$$

$$y + 2 = \frac{3}{2}(x - 4)$$

$$2(y + 2) = 2 \left[\frac{3}{2}(x - 4) \right]$$

$$2y + 4 = 3x - 12$$

$$-3x + 2y - 16 = 0$$

$$\boxed{3x - 2y - 16 = 0}$$

needs to be positive.

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Practice **HOMEWORK!**

Textbook Questions:

Page 384 # 4, 6, 8, 12, 13

Page 385 # 18, 24

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