Objective 3 - Convert between a linear equation and its graph.

Constructing the linear equation based on its graph.

Link to section in online textbook and link to section in Prelude to Active Calculus textbook.

First, watch the video below to learn how to convert from a graph to its linear function. You can use the notes here to follow along with the video and record your thoughts.

YouTube link: `https://www.youtube.com/watch?v=LO8TfJoH3NI`

Question 1 *Write the equation of the line in the graph below in Slope-Intercept form and in Standard form.*

Learning outcomes: Recognize and construct linear functions as well as solve linear equations.

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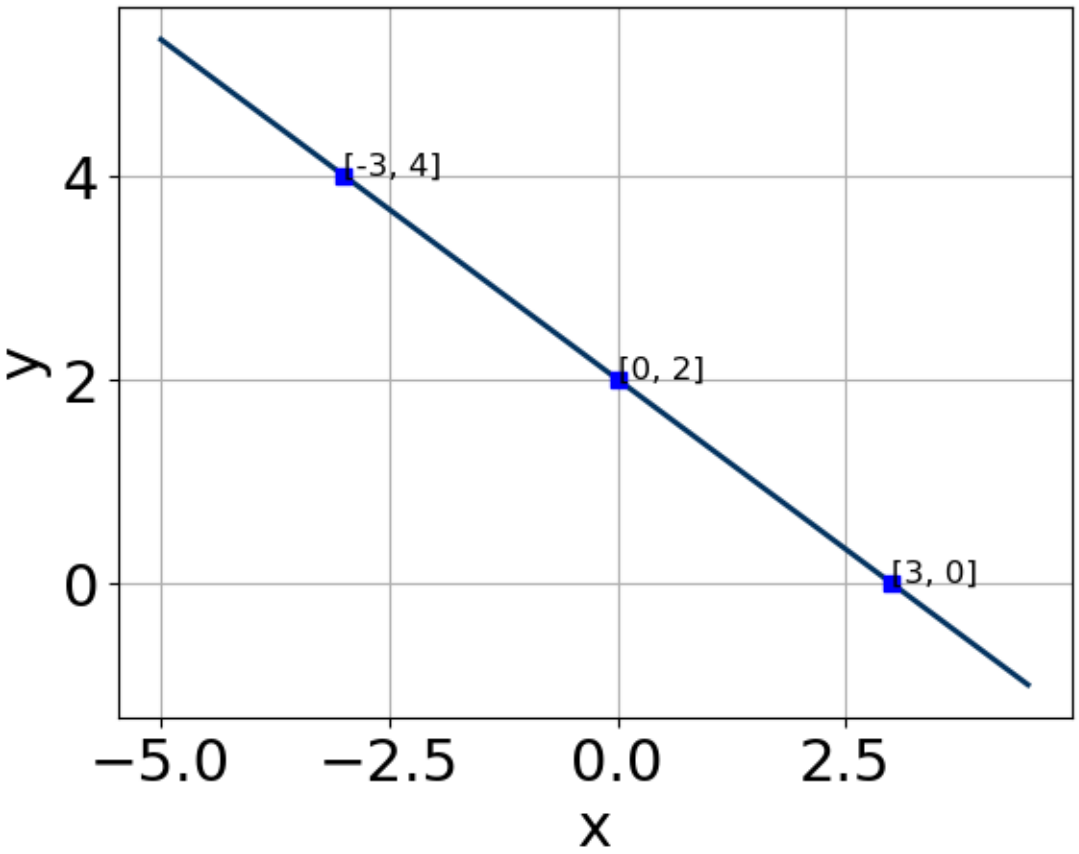

Slope-Intercept form: $y = \boxed{-2/3}\,x + \boxed{2}$

Standard form: $\boxed{2}\,x + \boxed{3}\,y = \boxed{6}$

Hint: *What do we know about the coefficients in Standard Form? Is there anything special about the coefficient for x?*

Question 2 *Write the equation of the line in the graph below in Slope-Intercept form and in Standard form.*

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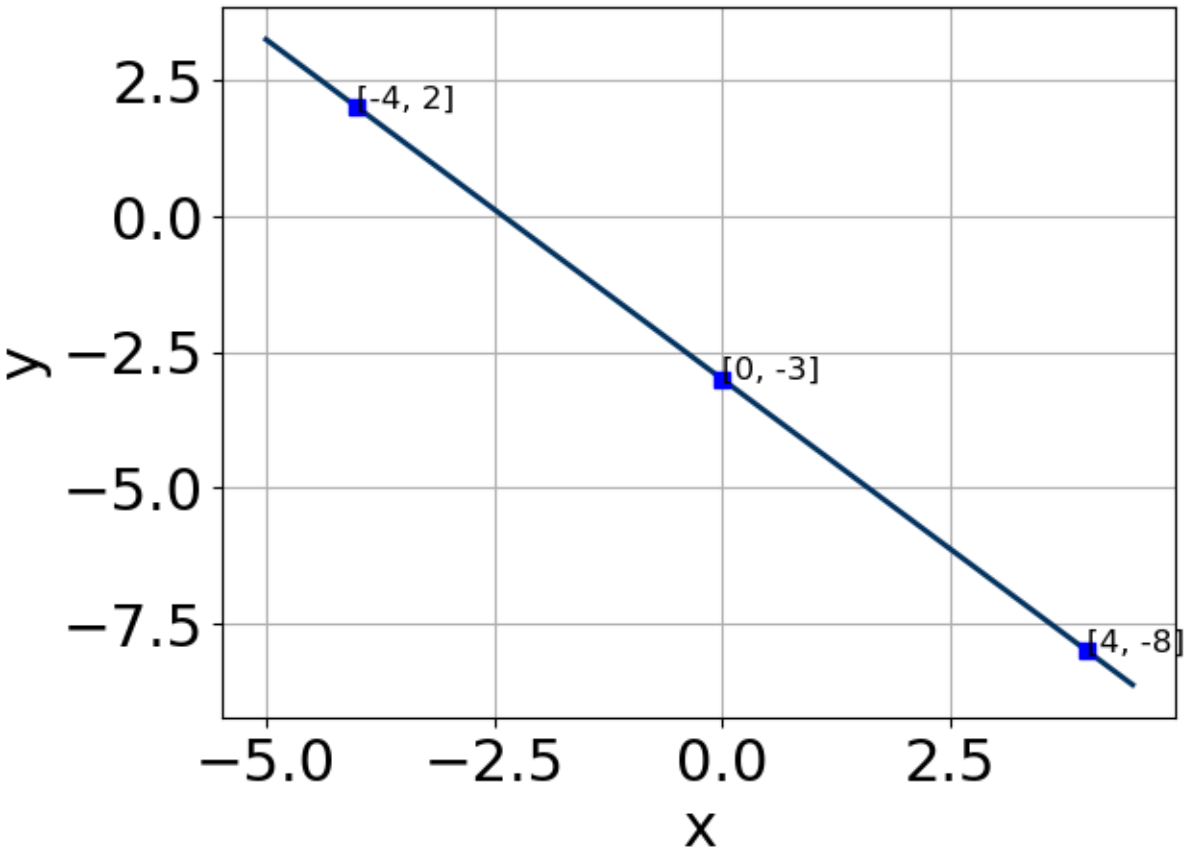

Slope-Intercept form: $y = \boxed{-5/4}\,x + \boxed{-3}$

Standard form: $\boxed{5}\,x + \boxed{4}\,y = \boxed{-12}$

Hint: *What do we know about the coefficients in Standard Form? Is there anything special about the coefficient for x?*

Question 3 *Write the equation of the line in the graph below in Slope-Intercept form and in Standard form.*

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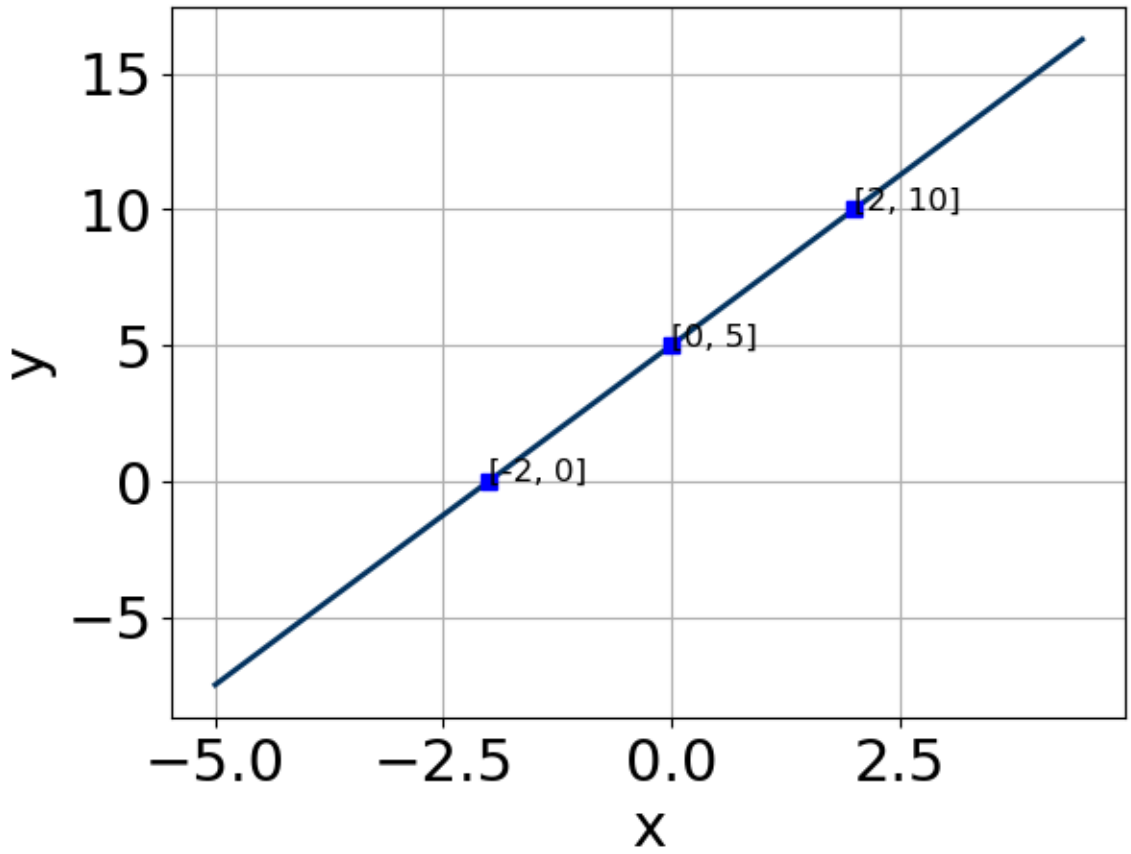

Slope-Intercept form: $y = \boxed{5/2}\,x + \boxed{5}$

Standard form: $\boxed{5}\,x + \boxed{-2}\,y = \boxed{-10}$

Hint: *What do we know about the coefficients in Standard Form? Is there anything special about the coefficient for x?*