LESSON 2-3

Graphing Linear Functions

Lesson Objectives (p. 105):

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_____

Vocabulary

1. Linear function (p. 105): _____

_____

2. Slope (p. 106): _____

_____

3. *y*-intercept (p. 106): _____

_____

4. x-intercept (p. 106): _____

_____

5. slope-intercept form (p. 107): _____

_____

Algebra 2

LESSON 2-3

Graphing Linear Functions

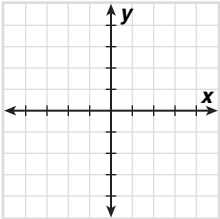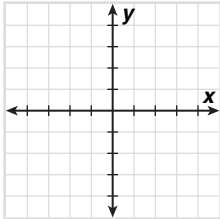## Lesson Objectives (p. 105):

determine whether a function is linear; graph a linear function given two

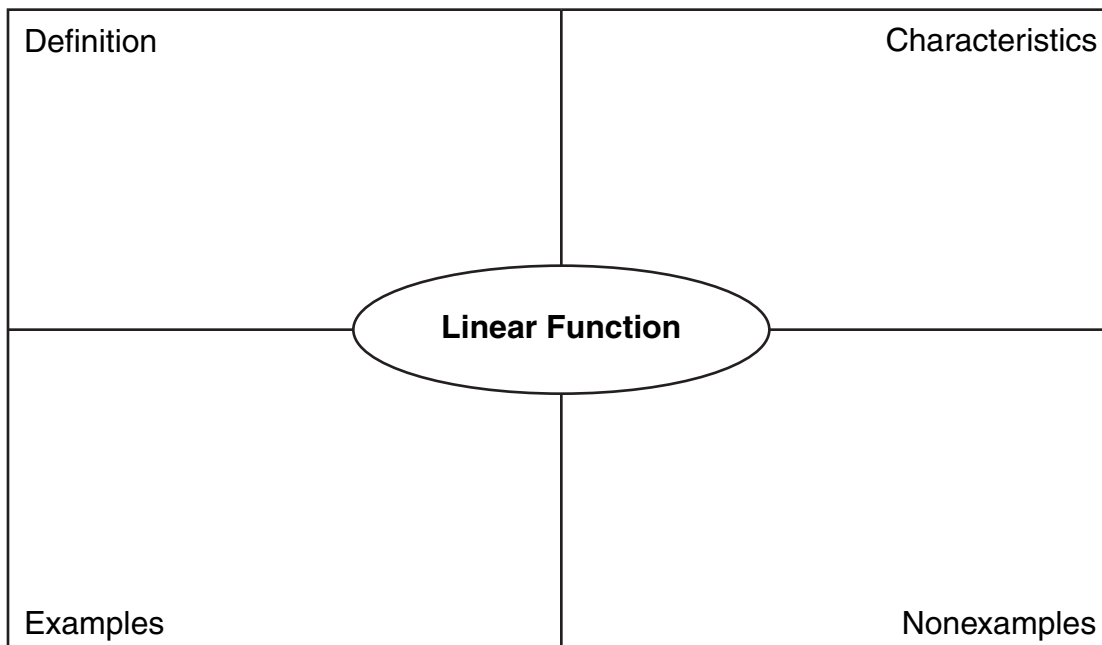points, a table, an equation, or a point and a slope.

Vocabulary

1. Linear function (p. 105): a function with a constant rate of change.

2. Slope (p. 106): the ratio $\dfrac{\text{change in } f(x)}{\text{change in } x}$, or $\dfrac{\text{rise}}{\text{run}}$ of a linear function.

3. y-intercept (p. 106): the y-coordinate of a point where the line crosses the

x-axis.

4. x-intercept (p. 106): the x-coordinate of a point where the line crosses the

y-axis.

5. slope-intercept form (p. 107): a linear function written in the form $y = mx + b$,

where m is the slope of the functions graph, and b is the y-intercept.

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Key Concepts

6. Vertical and Horizontal Lines (p.108):
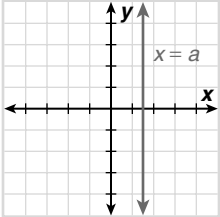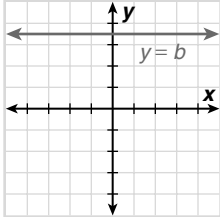
VERTICAL LINES	HORIZONTAL LINES

7. Get Organized Complete the graphic organizer for linear functions. (p. 109).

Definition	Characteristics
Examples	Nonexamples

Linear Function

Algebra 2

Key Concepts

6. Vertical and Horizontal Lines (p.108):

VERTICAL LINES	HORIZONTAL LINES
The line $x = a$ is a vertical line at a.	**The line $y = b$ is a horizontal line at b.**

7. Get Organized Complete the graphic organizer for linear functions. (p. 109).

Definition	Characteristics
A function that can be written in the form $y = mx + b$, where x is the independent variable and m and b are real numbers.	**The graph is a nonvertical line. x and y are to the first power.**

Linear Function

Examples	Nonexamples
$y = 2x + 7$ $y = -3x - 4$ $2x + 56 = 10$ $\frac{x - y}{2} = 1$	$y = 2x^2$ $y = \frac{1}{x} - 4$ $\sqrt{x} = y + 1$ $2^4 = 8$

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