

Name: _____

Date: _____

3.2 Linear Functions

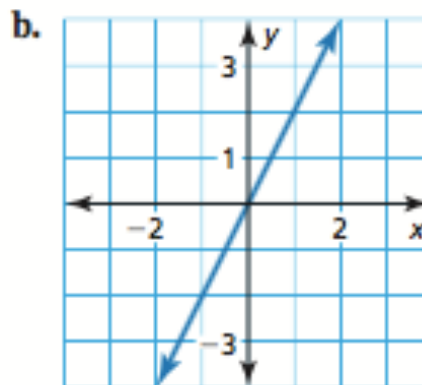
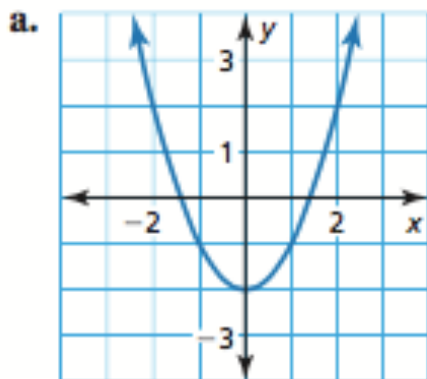
Essential Question: _____

Remember a function is a relation where every _____ is paired with one _____.

A linear equation in two variables, x and y , is an equation that can be written in the form _____ where m and b are _____. The graph of a linear equation is a _____. Likewise, a linear function is a function whose graph is a _____ line. A linear function has a _____ rate of _____ and can be represented by a linear equation in _____ variables. A _____ function does _____ have a constant rate of change so its graph is _____ a line.

EXAMPLE 1 Identifying Linear Functions Using Graphs

Does the graph represent a *linear* or *nonlinear* function? Explain.



EXAMPLE 2 Identifying Linear Functions Using Tables

Does the table represent a *linear* or *nonlinear* function? Explain.

a.

x	3	6	9	12
y	36	30	24	18

b.

x	1	3	5	7
y	2	9	20	35

EXAMPLE 3 Identifying Linear Functions Using Equations

Which of the following equations represent linear functions? Explain.

$$y = 3.8, y = \sqrt{x}, y = 3^x, y = \frac{2}{x}, y = 6(x - 1), \text{ and } x^2 - y = 0$$

Copy down the concept summary in the space below: