

Linear Relations and Functions

What You'll Learn

Scan the text in the lesson. Write two facts you learned about linear functions and relations as you scanned the text.

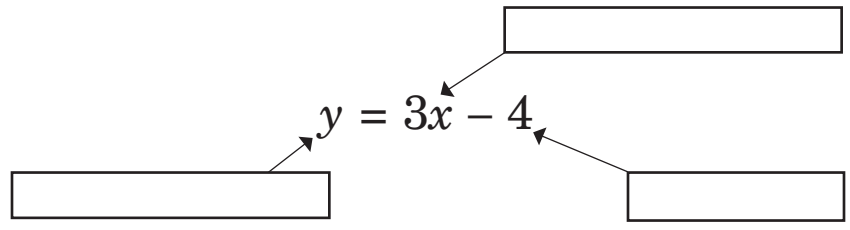
1. _____

2. _____

Active Vocabulary

Review Vocabulary Label the diagram using the words at the left. (*Lesson 2-1*)

independent variable
dependent variable
constant



New Vocabulary Fill in each blank with the correct term or phrase.

- linear relation* ▶ a relation in which the graph of the relation is a _____
- linear equation* ▶ an equation with exponents no greater than _____, and which does not contain the operation of _____ of a constant by a variable
- linear function* ▶ a function whose _____ satisfy a linear function of the form $f(x) = ___ x + ___$
- standard form* ▶ form of a linear equation written as $Ax + By = C$ where A, B, C are _____ and have a greatest common factor of _____
- y-intercept* ▶ the _____ of the point at which a graph crosses the _____
- x-intercept* ▶ the _____ of the point at which a graph crosses the _____

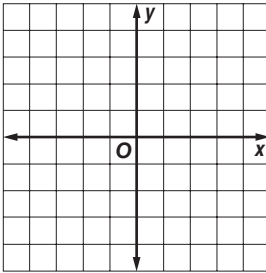
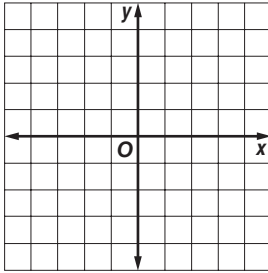
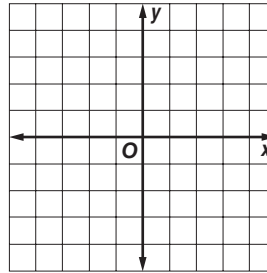
(continued)

Main Idea

Details

Linear Relations and Functions

Circle the characteristic of each function that makes it nonlinear. Sketch the graph of each function to show that it is nonlinear.

$f(x) = 3x^2 - 1$	$f(x) = \frac{1}{x} + 2$	$f(x) = \sqrt{x + 2}$
		

Standard Form

Compare and contrast finding the *x*-intercept and the *y*-intercept for an equation by filling in the chart below.

	Finding <i>x</i> -intercept	Finding <i>y</i> -intercept
What is the same?		
What is different?		

Helping You Remember

Your friend thinks that she should let $x = 0$ to find the *x*-intercept. How would you explain to her how to remember the correct method?
