Vocabulary: Solving Algebraic Equations 2

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**Vocabulary**

Additive identity – the number that, when added to a given number, yields the given number, unchanged.

The additive identity is zero because, for example, 5 + 0 = 5.

* Additive inverse – the number that, when added to a given number, yields zero.
  + For example, the additive inverse of 5 is –5 because 5 + –5 = 0.
* Commutative property (of addition or multiplication) – a property stating that, if two numbers in an expression are reversed, the result is the same.
  + Addition is commutative because, for example, 5 + 3 and 3 + 5 both equal 8.
  + Multiplication is also commutative because, for example, 4 • 8 and 8 • 4 both equal 32.
* Distributive property (of multiplication) – a property stating that multiplication can be distributed across a sum: a(b + c) = ab + ac.
  + For example, 2(3 + 5) is equal to (2 • 3) + (2 • 5).
* Equation – A statement that two mathematical expressions are equal.
* Multiplicative identity – the number that, when multiplied by a given number, yields the given number, unchanged.

The multiplicative identity is one because, for example, 7 • 1 = 7.

* Multiplicative inverse – the number that, when multiplied by a given number, yields one.
  + For example, the multiplicative inverse of 7 is  because 7 •  = 1.

* Multiplication property of negative one – the property stating that the product of any number and –1 is the opposite of that number.
* Multiplication property of zero – the property stating that the product of any number and zero is zero.
* Term – a number, a variable, or a product of numbers and variables in an expression.
  + Terms are separated by addition or subtraction.
  + The expression 3a2 + 4ab + 5b + –6 contains four terms: 3a2, 4ab, 5b, and –6.