Vocabulary: Solving Algebraic Equations 2

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 $\frac{1}{7}$ because $7 \cdot \frac{1}{7} = 1$.
- 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 $3a^2 + 4ab + 5b + –6$ contains four terms: $3a^2$, 4ab, 5b, and –6.