Vocabulary: Absolute Value Equations and Inequalities

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**Vocabulary**

* Absolute value – the distance a number is from 0 on the number line.
* The expression |*x*| represents the absolute value of *x*.
* The absolute value of a number, regardless of whether the number is negative or positive, is never negative.
* Examples: |–4| = 4, |4| = 4, and |0| = 0.
* Compound inequality – a combination of more than one inequality.
* Compound inequalities contain *and* or *or*.
* Equation – a mathematical sentence that states that two expressions are equal.
  + The two equal expressions in an equation are written with an *equals sign* (=) between them.
    - For example, the equation *x* + 3 = 7 shows that *x* + 3 and 7 are equal.
* Inequality – a statement that compares two quantities or expressions that are not equal.
* A *strict inequality* uses one of the following symbols: < (less than), > (greater than), or ≠ (not equal to).
  + Examples of strict inequalities are *x* > 2, and *x* + 1 < 5.
* Inequalities that are not strict use the symbols ≤ (less than or equal to) or ≥ (greater than or equal to).
  + Examples of inequalities that are not strict are *x* ≤ 6, and 2*x* ≥ 4.
* Solution – a value that makes an equation or inequality true.
  + For example, 3 is a solution of the inequality 2*x* ≤ 8 because 2(3) ≤ 8.