INB Page 69: "6.4 – Absolute Value Equations"

Textbook pages: p. 353 – 358

Definition: an absolute value of a number is the distance between that number and 0. Since distance is measured with positive numbers, absolute values are always positive. Other than 0, there are two numbers on the number line that have the same distance from 0. 3 and -3 are both a distance of 3 from 0.

Absolute Value Equations

- Solve:
    - Isolate the absolute value
        - If the absolute value equals a negative number, then there is no solution. No absolute value will **result** in a negative number
        - If the absolute value equals a positive number, then there will be two possible solutions.
    - Solve the equation if the inside expression is positive
    - Solve the equation if the inside expression is negative
- Graph:
    - Graph the solutions on the number line.
        - Two solutions – graph two points on the number line
        - One solution – graph one point on the number line
        - No solution – graph no point on the number line