

Absolute Value Equations

Absolute Value is _____
_____ or _____

| | is the symbol used for absolute value.

Steps to solve equations containing absolute value:

1. _____ the absolute value expression.
2. Set the quantity _____ the absolute value to _____ of the quantity on the other side of the equation. (This is because the distance can be measured from both _____.)
3. _____ for the unknown in both equations.
4. _____ your answers to _____ they are actual solutions.

Examples: Solve for x .

1. $|x - 10| = 6$

2. $|5 - 2x| - 6 = 7$

3. $|4x + 6| + 8 = 3$

4. $|3x + 2| = 4x + 5$

***Remember: Absolute value is always _____. An equation such as

$$|x - 10| =$$

is _____ true. It has _____.

Absolute Value Equations

Absolute Value is the magnitude of a number without regard to its sign or the DISTANCE from zero.

$| \quad |$ is the symbol used for absolute value.

Steps to solve equations containing absolute value:

1. Isolate the absolute value expression.
2. Set the quantity inside the absolute value to + AND - of the quantity on the other side of the equation. (This is because the distance can be measured from both directions.)
3. Solve for the unknown in both equations.
4. Check your answers to verify they are actual solutions.

Examples: Solve for x .

1. $|x - 10| = 6$

2. $|5 - 2x| - 6 = 7$

3. $|4x + 6| + 8 = 3$

4. $|3x + 2| = 4x + 5$

***Remember: Absolute value is always positive (or zero). An equation such as

$$|x - 10| = -5$$

is NEVER true. It has NO SOLUTION.