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Absolute Value Equations

SOLVE ABSOLUTE VALUE EQUATIONS

Phrase	Definition
Absolute value equations	• Absolut value equations where the _____ are _____ the absolute values. • Can have _____, _____, or _____ solutions.

How to solve :

Step 1 : _____ the absolute value equation.

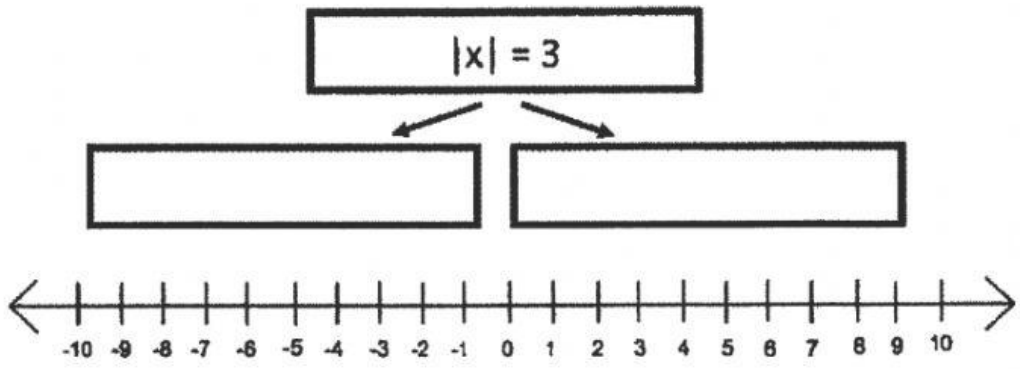
Step 2 : Get rid of the absloute value signs and rewrite the equations.

- Set the expression inside the absloute value equals to _____ c.
- Set the expression inside the absloute value equals to _____ c.

Step 3 : Solve for the variables in both _____.

Step 4 : Both _____ values are solutions to the absolute value equation.

Example 1: Solve .



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DO NOW!

Solve for x in absolute value equations.

(1) $|x| = 3$

solution:

(2) $|4x| = 12$

solution:

(3) $|-3x| = 9$

solution:

(4) $\left|\frac{x}{5}\right| = 1$

solution:

(5) $|x - 3| = 3$

solution:

(6) $|-1 + x| = 12$

solution:

(7) $|9x - 4| = 86$

solution:

(8) $|x - 2| + 7 = 9$

solution:

(9) $3|-8x| + 8 = 41$

solution:

(10) $5|3x - 5| + 2 = -23$

solution:

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