

SOLVING ABSOLUTE VALUE EQUATIONS *Frequency:* ★

To solve absolute value equations, you need to be able to:

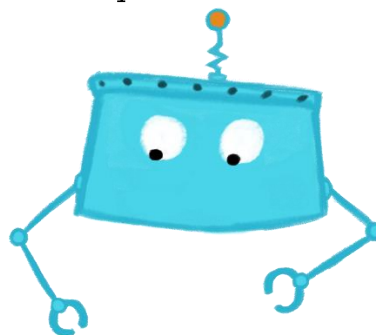
_____ absolute value equations
 into a corresponding pair of equations. AND _____ possible solutions
 to see if they make the equation true.

I. Isolating and Solving

Solve for x . $2|3x + 6| - 4 = 2$

← Isolate absolute value by adding 4 and then dividing by 2.

← Split into 2 equations.



Solve for x . $|x^2 - 11| = 7$

or

II. No Solutions

$$|4x - 1| = -8 \qquad 3|4x - 1| + 12 = 3 \longrightarrow |4x - 1| = -3$$

Absolute value equations that result in an absolute value expression equal to a negative number do not have any _____!

III. Substituting Solutions

If it will save you time, don't hesitate to _____ answers to find a solution.