



Solving Absolute Value Equations

About These Problems

An absolute value is the magnitude of a number regardless of the sign. For example $|-3| = |3| = 3$. Solving for these involves ignoring sign in your algebraic manipulation.

Question. Solve for x .

$$3|x| + 17 = 23$$

1. $x = 12$
2. $x = 5$
3. $x = -1$
4. $x = -2$
5. $x = -5$

Answer. 4: Remember that sign is irrelevant in absolute value scenarios. So solving for x we get $|x| = 2$ which is satisfied by either $x = 2, -2$.