Solving Equations with Variable on Both Sides

Sometimes equations have variables on both sides of the equal sign.

The goal is to combine the like terms and solve for the variable

STEPS:

1. Distributive Property (if needed)
2. Combine like terms
3. Solve for the variable

SOLUTIONS:

Up until now, all of our equations have had one solution.

There are two other types of solutions:

* _____: where you lose the variable and end up with an answer that is not equal

  Examples:

* _____: where you end up with an answer that will always be equal

  Examples:

REMEMBER: You CAN get 0 as an answer, $x = 0$ does not mean "no solution"

Examples!

$-6x = 2x + 16$

_____ = _____

_____ = _____

$3(4 - x) = x$

_____ = _____

_____ = _____

_____ = _____

$2x - 1 = 2x + 1$

_____ = _____

_____ = _____

_____

$\frac{1}{2}(6x - 4) = 3x - 2$

_____ = _____

_____ = _____

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