

Addition Property of EqualityIf $a = b$, then $a + c = b + c$ **Subtraction Property of Equality**If $a = b$, then $a - c = b - c$

Addition and Subtraction are Inverse Operations

Addition and Subtraction "undo" each other.

Multiplication Property of EqualityIf $a = b$, then $a \cdot c = b \cdot c$ **Division Property of Equality**If $a = b$, then $a \div c = b \div c$

Multiplication and Division are Inverse Operations

Multiplication and Division "undo" each other.

Left Side = Right Side

Any operation done to the left side...

...must be done to the left side

...must be done to the right side

Any operation done to the right side...

Always "undo" addition/subtraction before multiplication/division

Solve the following equations for x

$$2x + 3x - 4 = 26$$

$$5x + 7 - 8x = 19$$

Solve the following equations for x

$$2(x - 3) = 10$$

$$-x + 4(x - 3) = -18$$

Solve the following equations for x

$$9 = 4x - 7x + 15$$

$$8 = -x - x - 6$$

Solve the following equations for x

$$11 = -5(x - 3) + x$$

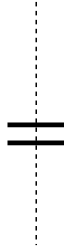
$$7 = 3(x + 2) - 8$$

Addition and Subtraction “undo” each other.

Multiplication and Division “undo” each other.

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Any operation done to the right side...

Always “undo” addition/subtraction before multiplication/division