

## 7.2 (pg. 302) Solving Equations (+ , -)

**Equations** may be true for some values and false for others. A **solution** of an equation is a value that makes the equation true.

Ex.: If the value of  $x = 3$  for  $x + 3 = 7$  Both sides are **NOT equal**.

$x = 4$  for  $x + 3 = 7$  Both sides are **equal!**

$x = 5$  for  $x + 3 = 7$  Both sides are **NOT equal**.

So, the value  $x = 4$  is a solution of the equation  $x + 3 = 7$

You can use **inverse operations** to solve equations. Inverse operations **“undo”** each other. Addition and subtraction are inverse operations.

## Subtraction Property of Equality:

If you subtract the same number from each side of an equation, the two sides remain equal.

Example:

with numbers

Algebra



$$5 = 5$$

$$-3 = -3$$

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$$2 = 2$$

$$w + 2 = 3$$

$$-2 = -2$$

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$$w = 1$$



## Addition Property of Equality:

If you add the same number to each side of an equation, the two sides remain equal.

Example:

using numbers

Algebra



$$5 = 5$$

$$+3 = +3$$

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$$8 = 8$$

$$w - 2 = 3$$

$$+2 = +2$$

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$$w = 5$$

