

## Lesson 3

### Solving One-Step Equations

#### Lesson

An equation is a statement that two expressions are equal. To solve an equation, we find the value of the variable that makes it true.

The key idea: whatever you do to one side, you must do to the other side.

- If a number is added, subtract it from both sides.
- If a number is subtracted, add it to both sides.
- If multiplied, divide both sides.
- If divided, multiply both sides.

#### Example: Solve $x + 8 = 15$

We need to isolate  $x$ . Since 8 is added to  $x$ , subtract 8 from both sides:

$$\begin{aligned}x + 8 - 8 &= 15 - 8 \\x &= 7\end{aligned}$$

Check:  $7 + 8 = 15$  [correct]

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#### Practice Problems

1) Solve:  $x + 12 = 20$

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2) Solve:  $y - 7 = 15$

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3) Solve:  $3m = 27$

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4) Solve:  $n / 4 = 6$

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5) Solve:  $x - 15 = -3$

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6) Solve:  $5p = -35$

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7) Solve:  $w / 3 = -8$

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