

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]

Practice Problems

1) Solve: $x + 12 = 20$

2) Solve: $y - 7 = 15$

3) Solve: $3m = 27$

4) Solve: $n / 4 = 6$

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

6) Solve: $5p = -35$

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