

SOLVE SIMPLE LINEAR EQUATIONS

— Number

1. What is an Equation?

- An equation has an = sign. Both sides are EQUAL.
- We solve to find the value of the unknown.

2. Solving One-Step Equations

$$\begin{array}{ll} x + 5 = 12 & x - 3 = 7 \\ x = 12 - 5 & x = 7 + 3 \\ x = 7 & x = 10 \end{array}$$

$$\begin{array}{ll} 3x = 15 & x/4 = 6 \\ x = 15/3 & x = 6 \times 4 \\ x = 5 & x = 24 \end{array}$$

3. Solving Two-Step Equations

- Undo operations in REVERSE order.

$$\begin{array}{l} 2x + 3 = 11 \\ 2x = 11 - 3 = 8 \quad (\text{subtract } 3) \\ x = 8 / 2 = 4 \quad (\text{divide by } 2) \end{array}$$

4. Checking Your Answer

- Substitute back into the original equation.
- If $x = 4$: $2(4) + 3 = 8 + 3 = 11$. Correct!

**Golden rule: Whatever you do to one side,
you MUST do to the other side too.**