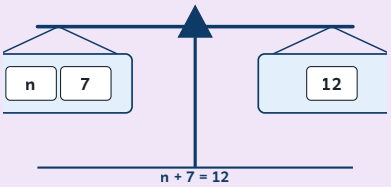
Solving one-step equations

MODULE 10 · ALGEBRA — PATTERNS, EXPRESSIONS AND EQUATIONS ALGEBRA

An **equation** balances. Do the **same thing to both sides** to undo what's been done to the letter and find its value.

→ n + 7 = 12 → subtract 7 → **n = 5**.

→ 3n = 21 → divide by 3 → **n = 7**.



SOLVE N + 7 = 12

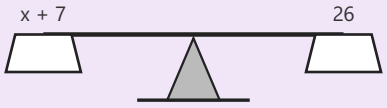
1. Undo the **+ 7** by subtracting 7 from **both sides**.
2. n = 12 − 7 = **5**.
3. Check: 5 + 7 = 12. ✓

HOW TO ANSWER TODAY

- **Solve for x.** Do the OPPOSITE operation to both sides. + becomes −; × becomes ÷.
  x + 7 = 15 → x = 15 − 7 = 8 · 3x = 21 → x = 21 ÷ 3 = 7

WARM-UP

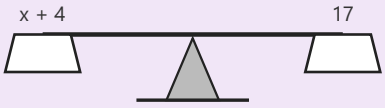
1



Find x so the scale balances.

The school canteen has some milk cartons left on the tray at the start of break. The kitchen staff add **7** more cartons, bringing the total on the tray to **26**. How many cartons were on the tray to start with?

2



Find x so the scale balances.

Saoirse is putting up bunting flags for World Book Day in the 5th class room. She adds **4** more flags to the ones already on the string and now there are **17** flags in total. If x stands for the number of flags that were on the string to begin with, solve x + **4** = **17**.