Equations: flowchart

Planner week 9 · Where are the letters? Follow the arrows

Solve an equation

Where are the letters?
do the opposite, in reverse order, to both sides

One side / Brackets / Both sides

ONE SIDE

Solve 6w + 2 = 20

1. Undo + 2: subtract 2 → 6w = 18
2. Undo × 6: divide by 6
3. **w = 3**

✓ 6 × 3 + 2 = 20

BRACKETS

Solve 4(2x − 3) = 20

1. Expand: 8x − 12 = 20
2. Add 12: 8x = 32
3. Divide by 8: **x = 4**

✓ 4 × (8 − 3) = 20

BOTH SIDES

Solve 5x − 14 = 52 − x

1. Letters to one side: + x → 6x − 14 = 52
2. Add 14: 6x = 66
3. Divide by 6: **x = 11**

✓ 55 − 14 = 41 and 52 − 11 = 41

Was it in words or a diagram?

No → **Check** put your answer back in

Yes

Write the equation first, then answer the question: angles x°, 2x° and 3x° in a triangle
x + 2x + 3x = 180 → 6x = 180 → x = 30 → largest angle 3x = **90°**

The big question

What has been done to the letter? Undo it with the opposite, in reverse order.

Write the opposite operation under both sides every time.

Watch out

- Doing it to one side only.
- Sign errors when moving terms.
- Stopping at 19 = 5x: finish it.
- Giving x when the question asks for an angle.
- Forgetting the "= 180".