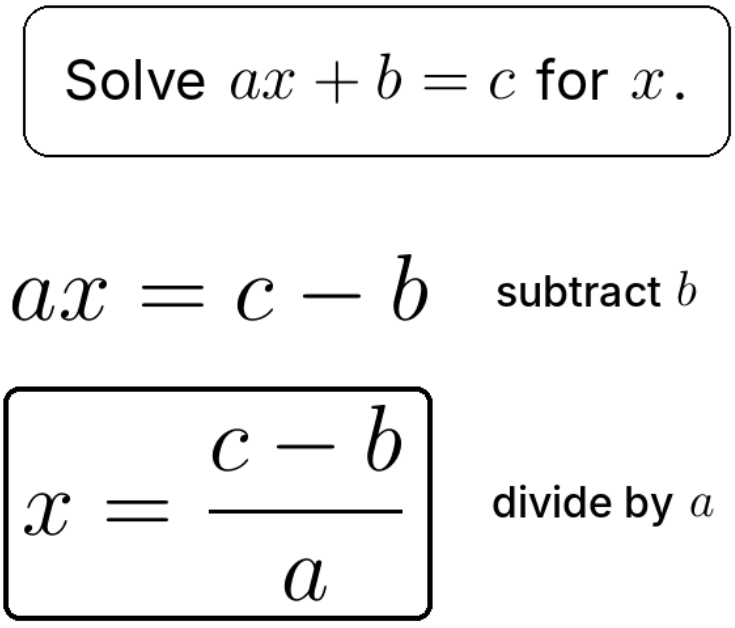
Solve for a Letter

MV10-V1 · storyboard · MV10 Solve for one letter in terms of the others. Read each picture with its sentences.

Picture 1



1. Solve ax + b = c for x.
2. Subtract b from both sides.
3. Divide both sides by a: x equals c − b, all over a.

Picture 2

Trap $ax + b = c$

$$\times \quad x = c - \frac{b}{a}$$

$$\checkmark \quad x = \frac{c - b}{a}$$

4. Watch for the trap: dividing only one term.
5. Divide the whole side by a.

Picture 3

Solve $x + 2y = 3$ for y.

$$2y = 3 - x \quad \text{subtract } x$$

$$\boxed{y = \frac{3 - x}{2}} \quad \text{divide by } 2$$

Check: $x = 1: \quad y = 1, \quad 1 + 2 \cdot 1 = 3$ ✓

6. Now solve x + 2y = 3 for y.
7. Subtract x from both sides.
8. Divide by two: y equals 3 − x, over two.
9. Check with x = 1: then y is one, and one plus two is three.

Picture 4

Trap $x + 2y = 3$

$\times$ $2y = 3 + x$

✓ $2y = 3 - x$

10. Watch for the trap: moving a term without changing its sign.
11. Taking x away from both sides changes its sign.