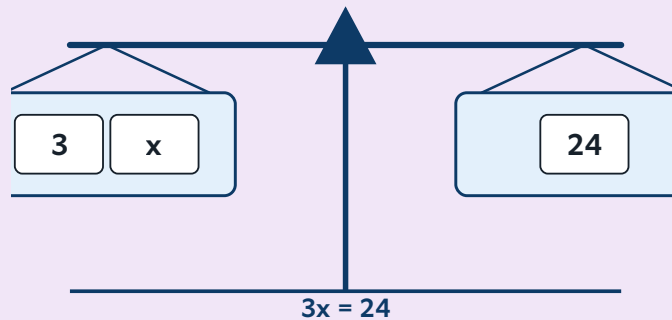


SOLVE $x + 5 = 12$ ON THE BALANCE

- 1 Write the equation $x + 5 = 12$.
- 2 Take 5 off both sides to keep the beam level.
- 3 This leaves $x = 7$.
- 4 Check: $7 + 5$ equals 12, so the beam stays level.

WARM-UP

Use the balance scales to keep both pans equal for each equation.



1. Set the left pan to $x + 5$ and the right pan to 12 then remove 5 from both
2. Set the left pan to $2x$ and the right pan to 10 then halve both sides
3. Set the left pan to $x - 4$ and the right pan to 9 then add 4 to both

PRACTICE

- 1 In a board game Sam has a mystery score x plus 3 bonus points that together equal 7. What is x ?
- 2 A card game shows a mystery number of cards x plus 5 more cards making 12 in total. Find x .
- 3 Two equal teams in a relay each score x points and together they make 10. What is each team's score x ?

ALWAYS, SOMETIMES, NEVER

Always, sometimes or never true? Write A, S or N.

- | | |
|---|---|
| <p>a. Doing the same opposite move to both sides of an equation keeps the two sides equal <input type="text"/></p> <p>b. The equation $x + 5 = 12$ is solved by subtracting 5 from both sides <input type="text"/></p> | <p>c. An equation like $x - 4 = 9$ can be solved by adding 4 to one side only <input type="text"/></p> <p>d. The mystery number in $x + 6 = 10$ is greater than 10 <input type="text"/></p> |
|---|---|