Guide to:
Solving linear equations

maths Links

Explanation:

To solve a linear equation, use **inverse operations** on both sides of the equals sign to isolate the unknown letter x. If the equation contains brackets, expand them first. If there is a fraction, multiply both sides by the denominator to clear it.

When the unknown x appears on **both sides** of the equation, start by eliminating the **smaller x term** from both sides so that you keep a positive number of x's, then solve the remaining two-step equation.

Example 1: Solve $7x - 4 = 3x + 18$

Solution:

Subtract $3x$ from both sides: $4x - 4 = 18$
Add 4 to both sides: $4x = 22$
Divide both sides by 4: $x = \frac{22}{4} = 5.5$
Answer: $x = 5.5$

Example 2: Solve $\frac{3(2x - 1)}{5} = 9$

Solution:

Multiply both sides by 5: $3(2x - 1) = 45$
Divide both sides by 3: $2x - 1 = 15$
Add 1 to both sides: $2x = 16$
Divide by 2: **Answer: $x = 8$**

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ken@mathslinks.co.uk