Guide to:
Solving one step equations

maths Links

Explanation:

Solving an equation means finding the value of the unknown letter that makes both sides equal. Think of the equation as a balanced scale: whatever operation you do to one side, you must do the **exact same operation to the other side**.

To isolate the letter in a one-step equation, apply the **inverse (opposite) operation**: undo + a by subtracting a, undo − a by adding a, undo × a by dividing by a, and undo ÷ a (a fraction $\frac{x}{a}$) by multiplying by a.

Example 1: Solve:
(a) $\boldsymbol{x + 9 = 23}$ (b) $\boldsymbol{y - 7 = -3}$

Solution:
(a) Inverse of + 9 is − 9 on both sides:
• $x = 23 - 9 \rightarrow \boldsymbol{x = 14}$
(b) Inverse of − 7 is + 7 on both sides:
• $y = -3 + 7 \rightarrow \boldsymbol{y = 4}$

Example 2: Solve:
(a) $\boldsymbol{6m = 42}$ (b) $\boldsymbol{\frac{w}{5} = 8}$

Solution:
(a) $6m$ means $6 \times m$, so divide both sides by 6:
• $m = 42 \div 6 \rightarrow \boldsymbol{m = 7}$
(b) $\frac{w}{5}$ means $w \div 5$, so multiply both sides by 5:
• $w = 8 \times 5 \rightarrow \boldsymbol{w = 40}$

Worksheets and other links					
Video Lesson on this topic	Video		**Dr Austin Maths**	Qs	Ans
Ken Stafford (Past Paper Qs)	Qs	Ans	**Maths Made Easy**	Qs	Ans
Maths Genie	Qs	Ans	**E Classroom**	Qs	Ans
Corbettmaths (Practice)	Qs	Ans	**PMT (Edexcel)**	Qs	Ans
Corbettmaths (Textbook)	Qs	Ans	**PMT (AQA)**	Qs	Ans
1st Class Maths	Qs	Ans	**PMT (IGCSE)**	Qs	Ans

Questions by topic | **Past Papers** | **Maths worksheets**

Buy workbook | **Quizzes** | **More resources like this**

ken@mathslinks.co.uk