Algebra Solving

Algebra is like balancing scales, whatever happens to one side of the = must happen to the other side.

In order to find your missing letter do the **OPPOSITE** of what is happening to it

$x + 2 = 11$ -2 -2

$x = 9$

x has 2 added to it so -2 from both sides

$3x = 15$ $\div 3$ $\div 3$

$x = 5$

x is being multiplied by 3 so divide by 3 both sides

In the case of when there are 2 operations, do in reverse order

$\rightarrow 2x - 5 = 13$

$\rightarrow$ x is being $\times$ by 2 then 5 is subtracted so start with **+5**

$2x - 5 = 13$ $+5$ $+5$

$2x = 18$ then $\div$ by 2

$\div 2$ $x = 9$ $\div 2$

More Complicated Solving

When x is both sides

$2x + 5 = x + 9$ get rid of this x, remember you have to $-x$ from both sides

$-x$ $-x$

$x + 5 = 9$

-5 -5 now solve as normal

$x = 4$

with brackets

$3(x+2) = 18$ expand the brackets first

$3 \times x$ 3×2

$3x + 6 = 18$

-6 -6

$3x = 12$ now solve as normal

$x = 4$