Solving Equations With Parentheses

When solving an equation with parentheses, you can use inverse operations to isolate the variable. Let's try it! Solve $3(x + 5) = 21$ for x.

$$\frac{3(x + 5)}{3} = \frac{21}{3}$$

Here, the expression $x + 5$ is multiplied by 3. To get $x + 5$ alone, undo the multiplication. Divide both sides of the equation by 3.

$x + 5 = 7$

Then, simplify.

$x + 5 - 5 = 7 - 5$

Next, to get x alone, subtract 5 from both sides of the equation.

$x = 2$

Then, simplify to solve.

Solve each equation by first dividing to undo the multiplication.

1 $6(a - 8) = 12$ $a = 10$	**2** $-20 = 4(g + 3)$ $g = -8$	**3** $-7(s - 9) = 56$ $s = 1$
4 $48 = 12(w + 17)$ $w = -13$	**5** $108 = 9(k - 14)$ $k = 26$	**6** $15(d + 16) = 75$ $d = -11$
7 $8.4 = 2(b - 7.8)$ $b = 12$	**8** $\frac{1}{3}(n - 5) = 9$ $n = 32$	**9** $6 = \frac{2}{5}(h + 8)$ $h = 7$
10 $-2.5(e + 17.4) = -50$ $e = 2.6$	**11** $-\frac{1}{2} = \frac{1}{4}(z - 1)$ $z = -1$	**12** $8(m + 11.2) = 37.6$ $m = -6.5$