Answer key

The method: Equations with parentheses

Distribute first, then solve.

$5(x + 6) = -5$
$5x + 30 = -5$ distribute
$5x = -5 - 30$ subtract 30 from both sides
$5x = -35$
$x = -7$ divide both sides by 5

$2(x + 1) = -x - 4$
$2x + 2 = -x - 4$ distribute
$3x + 2 = -4$ add x on both sides
$3x = -6$ subtract 2 from both sides
$x = -2$ divide both sides by 3

Problems 1 and 2 worked out · Version 0A

$-(x - 5) = 3x + 33$
$-x + 5 = 3x + 33$ distribute
$-4x + 5 = 33$ subtract 3x on both sides
$-4x = 28$ subtract 5 from both sides
$x = -7$ divide both sides by −4

$3(x - 9) = 4x - 30$
$3x - 27 = 4x - 30$ distribute
$-x - 27 = -30$ subtract 4x on both sides
$-x = -3$ add 27 to both sides
$x = 3$ divide both sides by −1

Equations with parentheses · Version 0A

1) x = −7 2) x = 3 3) x = 1 4) x = 1 5) x = 5
6) x = −5 7) x = −8 8) x = 0 9) x = −2
10) x = −6