

$$\sqrt{x+5} - x = 3$$

$$\sqrt{x+5} = 3+x$$

$$\left(\sqrt{x+5}\right)^2 = \left(3+x\right)^2$$

$$x+5 = (3+x)(3+x)$$

$$x+5 = 9+3x+3x+x^2$$

$$x^2 + 5x + 4 = 0$$

$$x = \frac{-5 \pm \sqrt{5^2 - 4 \cdot 1 \cdot 4}}{2 \cdot 1} = \frac{-5 \pm 3}{2} \begin{matrix} \nearrow -4 \\ \searrow -1 \end{matrix}$$

COMPROBACIÓN: $\sqrt{x+5} - x = 3$

$x = -4$ ✗

$$\sqrt{-4+5} - (-4) = \sqrt{1} + 4 = 1+4 = 5 \neq 3$$

$x = -1$ ✓

$$\sqrt{-1+5} - (-1) = \sqrt{4} + 1 = 2+1 = 3$$

$x = -1$ ES SOLUCIÓN