

Ex:

$$\sqrt{x^2} = (-4)^2$$

$$* x = \underline{16}$$

$$\sqrt{16} = -4$$

$$4 \neq -4$$

NOT TRUE

NO SOLUTION

* $x=16$ is an
* extraneous
solution

If $\sqrt{?} = -n$

* Extraneous
Solution

Ex:

$$\frac{-4\sqrt{2x+5}}{-4} = \frac{-12}{-4}$$

$$* \frac{-4x}{-4} = \frac{-12}{-4}$$

$$-4\sqrt{2(2)+5} = -12$$

$$-4\sqrt{9} = -12$$

$$-4(3) = -12$$

$$-12 = -12 \quad \checkmark$$

$$\sqrt{2x+5} = 3$$

$$2x+5 = 9$$

$$\frac{2x}{2} = \frac{4}{2}$$

$$x = 2$$

Ex:

$$\sqrt[3]{x+1} = 3$$

$$\begin{array}{r} x+1 = 27 \\ -1 \quad -1 \end{array}$$

$$x = 26$$

$$\sqrt[3]{26+1} = 3$$

$$\sqrt[3]{27} = 3 \checkmark$$