Exercise 69

For the following exercises, solve the absolute value equation.

$$|x + 4| = 18$$

Solution

Remove the absolute value sign by placing $\pm$ on the right side.

$$x + 4 = \pm 18$$

$$x + 4 = 18 \quad \text{or} \quad x + 4 = -18$$

$$x = 14 \quad \text{or} \quad x = -22$$

Therefore, $x = \{-22, 14\}$.