Name: _____ **Date:** _____

Check Solution: Answers

(1) Determine whether $x = -8$ is a solution to the equation $x + 9 = 1$:

$$\begin{aligned} \text{LHS} &= x + 9 & \text{RHS} &= 1 \\ &= -8 + 9 \\ &= 1 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = -8$ is a solution to the equation.

(2) Determine whether $x = 5$ is a solution to the equation $x + 4 = 7$:

$$\begin{aligned} \text{LHS} &= x + 4 & \text{RHS} &= 7 \\ &= 5 + 4 \\ &= 9 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 5$ is not a solution to the equation.

(3) Determine whether $x = -5$ is a solution to the equation $x + 7 = 4$:

$$\begin{aligned} \text{LHS} &= x + 7 & \text{RHS} &= 4 \\ &= -5 + 7 \\ &= 2 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = -5$ is not a solution to the equation.

(4) Determine whether $x = 0$ is a solution to the equation $x + 9 = 9$:

$$\begin{aligned} \text{LHS} &= x + 9 & \text{RHS} &= 9 \\ &= 0 + 9 \\ &= 9 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 0$ is a solution to the equation.

(5) Determine whether $x = -1$ is a solution to the equation $x + 2 = 3$:

$$\begin{aligned} \text{LHS} &= x + 2 & \text{RHS} &= 3 \\ &= -1 + 2 \\ &= 1 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = -1$ is not a solution to the equation.

(6) Determine whether $x = 8$ is a solution to the equation $x + 3 = 10$:

$$\begin{aligned} \text{LHS} &= x + 3 & \text{RHS} &= 10 \\ &= 8 + 3 \\ &= 11 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 8$ is not a solution to the equation.

(7) Determine whether $x = -1$ is a solution to the equation $x + 1 = 1$:

$$\begin{aligned} \text{LHS} &= x + 1 & \text{RHS} &= 1 \\ &= -1 + 1 \\ &= 0 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = -1$ is not a solution to the equation.

(8) Determine whether $x = -8$ is a solution to the equation $x + 7 = 2$:

$$\begin{aligned} \text{LHS} &= x + 7 & \text{RHS} &= 2 \\ &= -8 + 7 \\ &= -1 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = -8$ is not a solution to the equation.

(9) Determine whether $x = 4$ is a solution to the equation $x + 1 = 5$:

$$\begin{aligned} \text{LHS} &= x + 1 & \text{RHS} &= 5 \\ &= 4 + 1 \\ &= 5 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 4$ is a solution to the equation.

(10) Determine whether $x = -2$ is a solution to the equation $x + 4 = 5$:

$$\begin{aligned} \text{LHS} &= x + 4 & \text{RHS} &= 5 \\ &= -2 + 4 \\ &= 2 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = -2$ is not a solution to the equation.

(11) Determine whether $x = 0$ is a solution to the equation $x + 6 = 6$:

$$\begin{aligned} \text{LHS} &= x + 6 & \text{RHS} &= 6 \\ &= 0 + 6 \\ &= 6 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 0$ is a solution to the equation.

(12) Determine whether $x = 0$ is a solution to the equation $x + 2 = 2$:

$$\begin{aligned} \text{LHS} &= x + 2 & \text{RHS} &= 2 \\ &= 0 + 2 \\ &= 2 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 0$ is a solution to the equation.

(13) Determine whether $x = 0$ is a solution to the equation $x + 4 = 4$:

$$\begin{aligned} \text{LHS} &= x + 4 & \text{RHS} &= 4 \\ &= 0 + 4 \\ &= 4 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 0$ is a solution to the equation.

(14) Determine whether $x = 3$ is a solution to the equation $x + 4 = 7$:

$$\begin{aligned} \text{LHS} &= x + 4 & \text{RHS} &= 7 \\ &= 3 + 4 \\ &= 7 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 3$ is a solution to the equation.

(15) Determine whether $x = 5$ is a solution to the equation $x + 4 = 9$:

$$\begin{aligned} \text{LHS} &= x + 4 & \text{RHS} &= 9 \\ &= 5 + 4 \\ &= 9 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 5$ is a solution to the equation.

(16) Determine whether $x = -3$ is a solution to the equation $x + 7 = 4$:

$$\begin{aligned} \text{LHS} &= x + 7 & \text{RHS} &= 4 \\ &= -3 + 7 \\ &= 4 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = -3$ is a solution to the equation.

(17) Determine whether $x = -1$ is a solution to the equation $x + 6 = 5$:

$$\begin{aligned} \text{LHS} &= x + 6 & \text{RHS} &= 5 \\ &= -1 + 6 \\ &= 5 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = -1$ is a solution to the equation.

(18) Determine whether $x = 6$ is a solution to the equation $x + 6 = 9$:

$$\begin{aligned} \text{LHS} &= x + 6 & \text{RHS} &= 9 \\ &= 6 + 6 \\ &= 12 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 6$ is not a solution to the equation.

(19) Determine whether $x = -6$ is a solution to the equation $x + 9 = 1$:

$$\begin{aligned} \text{LHS} &= x + 9 & \text{RHS} &= 1 \\ &= -6 + 9 \\ &= 3 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = -6$ is not a solution to the equation.

(20) Determine whether $x = -5$ is a solution to the equation $x + 7 = 2$:

$$\begin{aligned} \text{LHS} &= x + 7 & \text{RHS} &= 2 \\ &= -5 + 7 \\ &= 2 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = -5$ is a solution to the equation.