

Name: _____

Date: _____

+ Check Solution: Answers

- (1) 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 $\text{LHS} \neq \text{RHS}$, $x = -8$ is not a solution to the equation.

- (2) Determine whether $x = 2$ is a solution to the equation $x + 7 = 9$:

$$\begin{aligned}\text{LHS} &= x + 7 & \text{RHS} &= 9 \\ &= 2 + 7 \\ &= 9\end{aligned}$$

\therefore Since $\text{LHS} = \text{RHS}$, $x = 2$ is a solution to the equation.

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

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

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = -9$ is not a solution to the equation.

- (4) Determine whether $x = 1$ is a solution to the equation $x + 3 = 4$:

$$\begin{aligned}\text{LHS} &= x + 3 & \text{RHS} &= 4 \\ &= 1 + 3 \\ &= 4\end{aligned}$$

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

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

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

\therefore Since $\text{LHS} = \text{RHS}$, $x = 2$ is a solution to the equation.

- (6) 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 $\text{LHS} = \text{RHS}$, $x = 0$ is a solution to the equation.

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

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

\therefore Since $\text{LHS} = \text{RHS}$, $x = 2$ is a solution to the equation.

- (8) Determine whether $x = 7$ is a solution to the equation $x + 2 = 9$:

$$\begin{aligned}\text{LHS} &= x + 2 & \text{RHS} &= 9 \\ &= 7 + 2 \\ &= 9\end{aligned}$$

\therefore Since $\text{LHS} = \text{RHS}$, $x = 7$ is a solution to the equation.

- (9) Determine whether $x = 3$ is a solution to the equation $x + 4 = 6$:

$$\begin{aligned}\text{LHS} &= x + 4 & \text{RHS} &= 6 \\ &= 3 + 4 \\ &= 7\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 3$ is not a solution to the equation.

- (10) Determine whether $x = 3$ is a solution to the equation $x + 6 = 9$:

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

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

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

$$\begin{aligned}\text{LHS} &= x + 2 & \text{RHS} &= 7 \\ &= 7 + 2 \\ &= 9\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 7$ is not a solution to the equation.

- (12) 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 $\text{LHS} = \text{RHS}$, $x = -5$ is a solution to the equation.

- (13) Determine whether $x = 7$ is a solution to the equation $x + 3 = 8$:

$$\begin{aligned}\text{LHS} &= x + 3 & \text{RHS} &= 8 \\ &= 7 + 3 \\ &= 10\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 7$ is not a solution to the equation.

- (14) 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 $\text{LHS} = \text{RHS}$, $x = -5$ is a solution to the equation.

- (15) Determine whether $x = -6$ is a solution to the equation $x + 8 = 2$:

$$\begin{aligned}\text{LHS} &= x + 8 & \text{RHS} &= 2 \\ &= -6 + 8 \\ &= 2\end{aligned}$$

\therefore Since $\text{LHS} = \text{RHS}$, $x = -6$ is a solution to the equation.

- (16) Determine whether $x = -3$ is a solution to the equation $x + 6 = 4$:

$$\begin{aligned}\text{LHS} &= x + 6 & \text{RHS} &= 4 \\ &= -3 + 6 \\ &= 3\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = -3$ is not a solution to the equation.

- (17) Determine whether $x = 6$ is a solution to the equation $x + 2 = 9$:

$$\begin{aligned}\text{LHS} &= x + 2 & \text{RHS} &= 9 \\ &= 6 + 2 \\ &= 8\end{aligned}$$

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

- (18) Determine whether $x = -7$ is a solution to the equation $x + 8 = 3$:

$$\begin{aligned}\text{LHS} &= x + 8 & \text{RHS} &= 3 \\ &= -7 + 8 \\ &= 1\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = -7$ is not a solution to the equation.

- (19) Determine whether $x = -7$ is a solution to the equation $x + 8 = 1$:

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

\therefore Since $\text{LHS} = \text{RHS}$, $x = -7$ is a solution to the equation.

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

$$\begin{aligned}\text{LHS} &= x + 1 & \text{RHS} &= 9 \\ &= 5 + 1 \\ &= 6\end{aligned}$$

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