

Name: _____

Date: _____

Check Solution: Answers

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

$$\begin{aligned}\text{LHS} &= x - 6 & \text{RHS} &= 4 \\ &= 9 - 6 \\ &= 3\end{aligned}$$

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

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

$$\begin{aligned}\text{LHS} &= x + 5 & \text{RHS} &= 2 \\ &= -3 + 5 \\ &= 2\end{aligned}$$

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

- (3) Determine whether $x = 13$ is a solution to the equation $x - 5 = 7$:

$$\begin{aligned}\text{LHS} &= x - 5 & \text{RHS} &= 7 \\ &= 13 - 5 \\ &= 8\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 13$ is not a solution to the equation.

- (4) Determine whether $x = 13$ is a solution to the equation $\frac{x}{3} = 4$:

$$\begin{aligned}\text{LHS} &= \frac{x}{3} & \text{RHS} &= 4 \\ &= \frac{13}{3} \\ &= 4.333\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 13$ is not a solution to the equation.

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

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

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

- (6) Determine whether $x = 8$ is a solution to the equation $x + 2 = 10$:

$$\begin{aligned}\text{LHS} &= x + 2 & \text{RHS} &= 10 \\ &= 8 + 2 \\ &= 10\end{aligned}$$

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

- (7) Determine whether $x = 13$ is a solution to the equation $x - 4 = 9$:

$$\begin{aligned}\text{LHS} &= x - 4 & \text{RHS} &= 9 \\ &= 13 - 4 \\ &= 9\end{aligned}$$

\therefore Since $\text{LHS} = \text{RHS}$, $x = 13$ is a solution to the equation.

- (8) Determine whether $x = 7$ is a solution to the equation $10x = 70$:

$$\begin{aligned}\text{LHS} &= 10x & \text{RHS} &= 70 \\ &= 10 \times 7 \\ &= 70\end{aligned}$$

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

- (9) Determine whether $x = 7$ is a solution to the equation $2x = 14$:

$$\begin{aligned}\text{LHS} &= 2x & \text{RHS} &= 14 \\ &= 2 \times 7 \\ &= 14\end{aligned}$$

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

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

$$\begin{aligned}\text{LHS} &= x + 7 & \text{RHS} &= 3 \\ &= -5 + 7 \\ &= 2\end{aligned}$$

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

- (11) Determine whether $x = 9$ is a solution to the equation $10x = 90$:

$$\begin{aligned}\text{LHS} &= 10x & \text{RHS} &= 90 \\ &= 10 \times 9 \\ &= 90\end{aligned}$$

\therefore Since $\text{LHS} = \text{RHS}$, $x = 9$ is a solution to the equation.

- (12) Determine whether $x = 10$ is a solution to the equation $x - 4 = 3$:

$$\begin{aligned}\text{LHS} &= x - 4 & \text{RHS} &= 3 \\ &= 10 - 4 \\ &= 6\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 10$ is not a solution to the equation.

- (13) Determine whether $x = 12$ is a solution to the equation $x - 9 = 3$:

$$\begin{aligned}\text{LHS} &= x - 9 & \text{RHS} &= 3 \\ &= 12 - 9 \\ &= 3\end{aligned}$$

\therefore Since $\text{LHS} = \text{RHS}$, $x = 12$ is a solution to the equation.

- (14) Determine whether $x = 58$ is a solution to the equation $\frac{x}{10} = 6$:

$$\begin{aligned}\text{LHS} &= \frac{x}{10} & \text{RHS} &= 6 \\ &= \frac{58}{10} \\ &= 5.8\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 58$ is not a solution to the equation.

- (15) Determine whether $x = 7$ is a solution to the equation $4x = 24$:

$$\begin{aligned}\text{LHS} &= 4x & \text{RHS} &= 24 \\ &= 4 \times 7 \\ &= 28\end{aligned}$$

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

- (16) Determine whether $x = 5$ is a solution to the equation $9x = 45$:

$$\begin{aligned}\text{LHS} &= 9x & \text{RHS} &= 45 \\ &= 9 \times 5 \\ &= 45\end{aligned}$$

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

- (17) Determine whether $x = 1$ is a solution to the equation $7x = 14$:

$$\begin{aligned}\text{LHS} &= 7x & \text{RHS} &= 14 \\ &= 7 \times 1 \\ &= 7\end{aligned}$$

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

- (18) Determine whether $x = 3$ is a solution to the equation $7x = 21$:

$$\begin{aligned}\text{LHS} &= 7x & \text{RHS} &= 21 \\ &= 7 \times 3 \\ &= 21\end{aligned}$$

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

- (19) Determine whether $x = 7$ is a solution to the equation $5x = 40$:

$$\begin{aligned}\text{LHS} &= 5x & \text{RHS} &= 40 \\ &= 5 \times 7 \\ &= 35\end{aligned}$$

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

- (20) Determine whether $x = 13$ is a solution to the equation $x - 4 = 8$:

$$\begin{aligned}\text{LHS} &= x - 4 & \text{RHS} &= 8 \\ &= 13 - 4 \\ &= 9\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 13$ is not a solution to the equation.