

Name: _____

Date: _____

r5 Check Solution: Answers

- (1) Determine whether $x = 16$ is a solution to the equation $x - 6 = 10$:

$$\begin{aligned}\text{LHS} &= x - 6 & \text{RHS} &= 10 \\ &= 16 - 6 \\ &= 10\end{aligned}$$

\therefore Since $\text{LHS} = \text{RHS}$, $x = 16$ is a solution to the equation.

- (2) Determine whether $x = 7$ is a solution to the equation $5x = 45$:

$$\begin{aligned}\text{LHS} &= 5x & \text{RHS} &= 45 \\ &= 5 \times 7 \\ &= 35\end{aligned}$$

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

- (3) Determine whether $x = 16$ is a solution to the equation $\frac{x}{4} = 2$:

$$\begin{aligned}\text{LHS} &= \frac{x}{4} & \text{RHS} &= 2 \\ &= \frac{16}{4} \\ &= 4\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 16$ is not a solution to the equation.

- (4) Determine whether $x = 5$ is a solution to the equation $4x = 20$:

$$\begin{aligned}\text{LHS} &= 4x & \text{RHS} &= 20 \\ &= 4 \times 5 \\ &= 20\end{aligned}$$

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

- (5) 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.

- (6) Determine whether $x = 5$ is a solution to the equation $x + 3 = 9$:

$$\begin{aligned}\text{LHS} &= x + 3 & \text{RHS} &= 9 \\ &= 5 + 3 \\ &= 8\end{aligned}$$

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

- (7) Determine whether $x = 117$ is a solution to the equation $\frac{x}{9} = 10$:

$$\begin{aligned}\text{LHS} &= \frac{x}{9} & \text{RHS} &= 10 \\ &= \frac{117}{9} \\ &= 13\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 117$ is not a solution to the equation.

- (8) 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 $\text{LHS} = \text{RHS}$, $x = -3$ is a solution to the equation.

- (9) Determine whether $x = 10$ is a solution to the equation $10x = 100$:

$$\begin{aligned}\text{LHS} &= 10x & \text{RHS} &= 100 \\ &= 10 \times 10 \\ &= 100\end{aligned}$$

\therefore Since $\text{LHS} = \text{RHS}$, $x = 10$ is a solution to the equation.

- (10) Determine whether $x = 28$ is a solution to the equation $\frac{x}{4} = 7$:

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

\therefore Since $\text{LHS} = \text{RHS}$, $x = 28$ is a solution to the equation.

- (11) Determine whether $x = 16$ is a solution to the equation $x - 10 = 6$:

$$\begin{aligned}\text{LHS} &= x - 10 & \text{RHS} &= 6 \\ &= 16 - 10 \\ &= 6\end{aligned}$$

\therefore Since $\text{LHS} = \text{RHS}$, $x = 16$ is a solution to the equation.

- (12) Determine whether $x = 0$ is a solution to the equation $x + 5 = 5$:

$$\begin{aligned}\text{LHS} &= x + 5 & \text{RHS} &= 5 \\ &= 0 + 5 \\ &= 5\end{aligned}$$

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

- (13) Determine whether $x = 5$ is a solution to the equation $10x = 50$:

$$\begin{aligned}\text{LHS} &= 10x & \text{RHS} &= 50 \\ &= 10 \times 5 \\ &= 50\end{aligned}$$

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

- (14) Determine whether $x = 45$ is a solution to the equation $\frac{x}{5} = 9$:

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

\therefore Since $\text{LHS} = \text{RHS}$, $x = 45$ is a solution to the equation.

- (15) Determine whether $x = 4$ is a solution to the equation $10x = 40$:

$$\begin{aligned}\text{LHS} &= 10x & \text{RHS} &= 40 \\ &= 10 \times 4 \\ &= 40\end{aligned}$$

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

- (16) Determine whether $x = 13$ is a solution to the equation $x - 1 = 9$:

$$\begin{aligned}\text{LHS} &= x - 1 & \text{RHS} &= 9 \\ &= 13 - 1 \\ &= 12\end{aligned}$$

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

- (17) Determine whether $x = 6$ is a solution to the equation $\frac{x}{3} = 2$:

$$\begin{aligned}\text{LHS} &= \frac{x}{3} & \text{RHS} &= 2 \\ &= \frac{6}{3} \\ &= 2\end{aligned}$$

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

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

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

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

- (19) Determine whether $x = 12$ is a solution to the equation $\frac{x}{6} = 3$:

$$\begin{aligned}\text{LHS} &= \frac{x}{6} & \text{RHS} &= 3 \\ &= \frac{12}{6} \\ &= 2\end{aligned}$$

\therefore Since $\text{LHS} \neq \text{RHS}$, $x = 12$ is not a solution to the equation.

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

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

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