Name: _____ **Date:** _____

ran Check Solution: Answers

(1) Determine whether $x = -11$ is a solution to the equation $x + 10 + 6 = 3$:

$$\begin{aligned} \text{LHS} &= x + 10 + 6 & \text{RHS} &= 3 \\ &= -11 + 10 + 6 \\ &= 5 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = -11$ is not a solution to the equation.

(2) Determine whether $x = 36$ is a solution to the equation $\frac{x}{9} + 2 = 3$:

$$\begin{aligned} \text{LHS} &= \frac{x}{9} + 2 & \text{RHS} &= 3 \\ &= \frac{36}{9} + 2 \\ &= 6 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 36$ is not a solution to the equation.

(3) Determine whether $x = 5$ is a solution to the equation $6(x - 6) = -24$:

$$\begin{aligned} \text{LHS} &= 6(x - 6) & \text{RHS} &= -24 \\ &= 6 \times (5 - 6) \\ &= -6 \end{aligned}$$

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

(4) Determine whether $x = 21$ is a solution to the equation $\frac{x+9}{6} = 6$:

$$\begin{aligned} \text{LHS} &= \frac{x + 9}{6} & \text{RHS} &= 6 \\ &= \frac{21 + 9}{6} \\ &= 5.0 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 21$ is not a solution to the equation.

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

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

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

(6) Determine whether $x = 32$ is a solution to the equation $\frac{x}{4} + 2 = 10$:

$$\begin{aligned} \text{LHS} &= \frac{x}{4} + 2 & \text{RHS} &= 10 \\ &= \frac{32}{4} + 2 \\ &= 10 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 32$ is a solution to the equation.

(7) Determine whether $x = 24$ is a solution to the equation $x - 4 - 10 = 10$:

$$\begin{aligned} \text{LHS} &= x + 4 - 10 & \text{RHS} &= 10 \\ &= 24 - 4 - 10 \\ &= 10 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 24$ is a solution to the equation.

(8) Determine whether $x = 9$ is a solution to the equation $x + 1 - 7 = 3$:

$$\begin{aligned} \text{LHS} &= x + 1 - 7 & \text{RHS} &= 3 \\ &= 9 + 1 - 7 \\ &= 3 \end{aligned}$$

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

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

$$\begin{aligned} \text{LHS} &= x + 7 - 7 & \text{RHS} &= 4 \\ &= 15 - 7 - 7 \\ &= 1 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 15$ is not a solution to the equation.

(10) Determine whether $x = 3$ is a solution to the equation $2x \times 6 = 60$:

$$\begin{aligned} \text{LHS} &= 2x \times 6 & \text{RHS} &= 60 \\ &= 2 \times 3 \times 6 \\ &= 36 \end{aligned}$$

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

(11) Determine whether $x = 6$ is a solution to the equation $4(x - 1) = 32$:

$$\begin{aligned} \text{LHS} &= 4(x-1) & \text{RHS} &= 32 \\ &= 4 \times (6-1) \\ &= 20 \end{aligned}$$

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

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

$$\begin{aligned} \text{LHS} &= x + 6 - 1 & \text{RHS} &= 9 \\ &= 19 - 6 - 1 \\ &= 12 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 19$ is not a solution to the equation.

(13) Determine whether $x = 2$ is a solution to the equation $2(x + 1) = 6$:

$$\begin{aligned} \text{LHS} &= 2(x+1) & \text{RHS} &= 6 \\ &= 2 \times (2+1) \\ &= 6 \end{aligned}$$

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

(14) Determine whether $x = 6$ is a solution to the equation $\frac{5x}{3} = 10$:

$$\begin{aligned} \text{LHS} &= \frac{5x}{3} & \text{RHS} &= 10 \\ &= \frac{5 \times 6}{3} \\ &= 10.0 \end{aligned}$$

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

(15) Determine whether $x = 24$ is a solution to the equation $\frac{x}{3} + 4 = 10$:

$$\begin{aligned} \text{LHS} &= \frac{x}{3} + 4 & \text{RHS} &= 10 \\ &= \frac{24}{3} + 4 \\ &= 12 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 24$ is not a solution to the equation.

(16) Determine whether $x = 80$ is a solution to the equation $\frac{x}{8} - 2 = 6$:

$$\begin{aligned} \text{LHS} &= \frac{x}{8} - 2 & \text{RHS} &= 6 \\ &= \frac{80}{8} - 2 \\ &= 8 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 80$ is not a solution to the equation.

(17) Determine whether $x = 126$ is a solution to the equation $\frac{x}{6} \times \frac{1}{7} = 3$:

$$\begin{aligned} \text{LHS} &= \frac{x}{6} \times \frac{1}{7} & \text{RHS} &= 3 \\ &= \frac{126}{6} \times \frac{1}{7} \\ &= 3 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 126$ is a solution to the equation.

(18) Determine whether $x = 54$ is a solution to the equation $\frac{x}{6} \times \frac{1}{3} = 3$:

$$\begin{aligned} \text{LHS} &= \frac{x}{6} \times \frac{1}{3} & \text{RHS} &= 3 \\ &= \frac{54}{6} \times \frac{1}{3} \\ &= 3 \end{aligned}$$

$\therefore$ Since LHS = RHS, $x = 54$ is a solution to the equation.

(19) Determine whether $x = 7$ is a solution to the equation $8x + 10 = 66$:

$$\begin{aligned} \text{LHS} &= 8x + 10 & \text{RHS} &= 66 \\ &= 8 \times 7 + 10 \\ &= 66 \end{aligned}$$

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

(20) Determine whether $x = 43$ is a solution to the equation $\frac{x+5}{8} = 4$:

$$\begin{aligned} \text{LHS} &= \frac{x+5}{8} & \text{RHS} &= 4 \\ &= \frac{43+5}{8} \\ &= 6.0 \end{aligned}$$

$\therefore$ Since LHS $\neq$ RHS, $x = 43$ is not a solution to the equation.