Name: _____ **Date:** _____

div Check Solution: Answers

(1) Determine whether $x = 21$ is a solution to the equation $\frac{x}{7} = 3$:

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

$\therefore$ Since LHS = RHS, $x = 21$ is a solution to the equation.

(2) Determine whether $x = 44$ is a solution to the equation $\frac{x}{4} = 10$:

$$\begin{aligned} \text{LHS} &= \frac{x}{4} \\ &= \frac{44}{4} \\ &= 11 \end{aligned} \qquad \text{RHS} = 10$$

$\therefore$ Since LHS $\neq$ RHS, $x = 44$ is not a solution to the equation.

(3) Determine whether $x = 20$ is a solution to the equation $\frac{x}{2} = 10$:

$$\begin{aligned} \text{LHS} &= \frac{x}{2} \\ &= \frac{20}{2} \\ &= 10 \end{aligned} \qquad \text{RHS} = 10$$

$\therefore$ Since LHS = RHS, $x = 20$ is a solution to the equation.

(4) Determine whether $x = 14$ is a solution to the equation $\frac{x}{2} = 6$:

$$\begin{aligned} \text{LHS} &= \frac{x}{2} \\ &= \frac{14}{2} \\ &= 7 \end{aligned} \qquad \text{RHS} = 6$$

$\therefore$ Since LHS $\neq$ RHS, $x = 14$ is not a solution to the equation.

(5) Determine whether $x = 40$ is a solution to the equation $\frac{x}{5} = 9$:

$$\begin{aligned} \text{LHS} &= \frac{x}{5} \\ &= \frac{40}{5} \\ &= 8 \end{aligned} \qquad \text{RHS} = 9$$

$\therefore$ Since LHS $\neq$ RHS, $x = 40$ is not a solution to the equation.

(6) Determine whether $x = 6$ is a solution to the equation $\frac{x}{2} = 5$:

$$\begin{aligned} \text{LHS} &= \frac{x}{2} \\ &= \frac{6}{2} \\ &= 3 \end{aligned} \qquad \text{RHS} = 5$$

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

(7) Determine whether $x = 40$ is a solution to the equation $\frac{x}{4} = 10$:

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

$\therefore$ Since LHS = RHS, $x = 40$ is a solution to the equation.

(8) Determine whether $x = 0$ is a solution to the equation $\frac{x}{9} = 2$:

$$\begin{aligned} \text{LHS} &= \frac{x}{9} \\ &= \frac{0}{9} \\ &= 0 \end{aligned} \qquad \text{RHS} = 2$$

$\therefore$ Since LHS $\neq$ RHS, $x = 0$ is not a solution to the equation.

(9) Determine whether $x = 21$ is a solution to the equation $\frac{x}{3} = 10$:

$$\begin{aligned} \text{LHS} &= \frac{x}{3} \\ &= \frac{21}{3} \\ &= 7 \end{aligned} \qquad \text{RHS} = 10$$

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

(10) Determine whether $x = 18$ is a solution to the equation $\frac{x}{3} = 9$:

$$\begin{aligned} \text{LHS} &= \frac{x}{3} \\ &= \frac{18}{3} \\ &= 6 \end{aligned} \qquad \text{RHS} = 9$$

$\therefore$ Since LHS $\neq$ RHS, $x = 18$ is not a solution to the equation.

(11) Determine whether $x = 35$ is a solution to the equation $\frac{x}{5} = 7$:

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

$\therefore$ Since LHS = RHS, $x = 35$ is a solution to the equation.

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

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

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

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

$$\begin{aligned} \text{LHS} &= \frac{x}{8} \\ &= \frac{16}{8} \\ &= 2 \end{aligned} \qquad \text{RHS} = 2$$

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

(14) Determine whether $x = 63$ is a solution to the equation $\frac{x}{7} = 8$:

$$\begin{aligned} \text{LHS} &= \frac{x}{7} \\ &= \frac{63}{7} \\ &= 9 \end{aligned} \qquad \text{RHS} = 8$$

$\therefore$ Since LHS $\neq$ RHS, $x = 63$ is not a solution to the equation.

(15) Determine whether $x = 60$ is a solution to the equation $\frac{x}{10} = 6$:

$$\begin{aligned} \text{LHS} &= \frac{x}{10} \\ &= \frac{60}{10} \\ &= 6 \end{aligned} \qquad \text{RHS} = 6$$

$\therefore$ Since LHS = RHS, $x = 60$ is a solution to the equation.

(16) Determine whether $x = 60$ is a solution to the equation $\frac{x}{10} = 8$:

$$\begin{aligned} \text{LHS} &= \frac{x}{10} \\ &= \frac{60}{10} \\ &= 6 \end{aligned} \qquad \text{RHS} = 8$$

$\therefore$ Since LHS $\neq$ RHS, $x = 60$ is not a solution to the equation.

(17) Determine whether $x = 50$ is a solution to the equation $\frac{x}{10} = 5$:

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

$\therefore$ Since LHS = RHS, $x = 50$ is a solution to the equation.

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

$$\begin{aligned} \text{LHS} &= \frac{x}{3} \\ &= \frac{9}{3} \\ &= 3 \end{aligned} \qquad \text{RHS} = 3$$

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

(19) Determine whether $x = 30$ is a solution to the equation $\frac{x}{10} = 4$:

$$\begin{aligned} \text{LHS} &= \frac{x}{10} \\ &= \frac{30}{10} \\ &= 3 \end{aligned} \qquad \text{RHS} = 4$$

$\therefore$ Since LHS $\neq$ RHS, $x = 30$ is not a solution to the equation.

(20) Determine whether $x = 0$ is a solution to the equation $\frac{x}{3} = 3$:

$$\begin{aligned} \text{LHS} &= \frac{x}{3} \\ &= \frac{0}{3} \\ &= 0 \end{aligned} \qquad \text{RHS} = 3$$

$\therefore$ Since LHS $\neq$ RHS, $x = 0$ is not a solution to the equation.