

10.2 Key Concepts 3 Checking Solutions to Equations Worked Example

Example: Check whether $x = -1$ is a solution for $-3x - 4 = 5 + 6x$.

Solution: Substitute $x = -1$ into both sides of the equation.

$$\begin{array}{ll} \text{L.S.} = -3x - 4 & \text{R.S.} = 5 + 6x \\ = -3(-1) - 4 & = 5 + 6(-1) \\ = 3 - 4 & = 5 - 6 \\ = -1 & = -1 \end{array}$$

Since L.S. = R.S., $x = -1$ is a solution for $-3x - 4 = 5 + 6x$.

Practice:

1. Check whether $y = -2$ is a solution for $11y + 3 = -5 + 7y$.

2. Check whether $w = -3$ is a solution for $5(w + 2) = 2(3w - 1)$.

Answers: 2. yes, 2. no