

Reteaching Page

2.3 Equations and Their Solutions

Equations are mathematical sentences that have an equals sign. The equals sign shows you that the quantities on either side are equal in value.

$$4 + 3 = 7$$

$$6 - 2 = 7 - 3$$

$$4 * 8 = 35 - 3$$

When working with variables in equations, you can check the answer by **substituting** a given value for the variable. If the result is equal the given value is the correct solution.

$$\begin{aligned} n + 4 &= 8, \text{ when } n \text{ is } 4 \\ 4 + 4 &= 8 \\ 8 &= 8 \\ n \text{ is } 4 &\text{ is a solution to the problem} \end{aligned}$$

$$\begin{aligned} n - 7 &= 12, \text{ when } n \text{ is } 8 \\ 8 - 7 &= 12 \\ 1 &\neq 12 \\ n \text{ is } 8 &\text{ is not a solution to the problem.} \end{aligned}$$

Use substitution to determine if the given value for n is a solution to the following equations.

 No 1) $n - 7 = 12$, when $n = 20$

$$\begin{aligned} \underline{\quad 20 - 7 = 12 \quad} \\ \underline{\quad 13 \neq 12 \quad} \end{aligned}$$

 2) $n + 38 = 52$, when $n = 14$

$$\begin{aligned} \underline{\quad \quad \quad} \\ \underline{\quad \quad \quad} \end{aligned}$$

 3) $6n = 66$, when $n = 11$

$$\begin{aligned} \underline{\quad \quad \quad} \\ \underline{\quad \quad \quad} \end{aligned}$$

 4) $n \div 8 = 24$, when $n = 182$

$$\begin{aligned} \underline{\quad \quad \quad} \\ \underline{\quad \quad \quad} \end{aligned}$$

 5) $n * 4 - 3 + n = 27$, when $n = 6$

$$\begin{aligned} \underline{\quad \quad \quad} \\ \underline{\quad \quad \quad} \\ \underline{\quad \quad \quad} \end{aligned}$$