

SOLUTION OF AN EQUATION

A **solution to an equation** is a value of a variable that makes a true statement when substituted into the equation.

The process of finding the solution to an equation is called solving the equation.

To find the solution to an equation means to find the value of the variable that makes the equation true. Can you recognize the solution of $x + 2 = 7$? If you said 5, you're right! We say 5 is a solution to the equation $x + 2 = 7$ because when we substitute 5 for x the resulting statement is true.

$$x + 2 = 7$$

$$5 + 2 \stackrel{?}{=} 7$$

$$7 = 7 \checkmark$$

Since $5 + 2 = 7$ is a true statement, we know that 5 is indeed a solution to the equation.

The symbol $\stackrel{?}{=}$ asks whether the left side of the equation is equal to the right side. Once we know, we can change to an equal sign ($=$) or not-equal sign (\neq).

EXAMPLE 5.4

Write each of the following decimal numbers as a fraction or a mixed number:

- Ⓐ 4.09 Ⓑ 3.7 Ⓒ -0.286

[Show/Hide Solution]

TRY IT 5.7

Write as a fraction or mixed number. Simplify the answer if possible.

- Ⓐ 5.3 Ⓑ 6.07 Ⓒ -0.234