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Solving One-Step Equations


$$x + 2 = 7$$

opposite operation

$$\begin{array}{r} -2 \quad -2 \\ x + 2 = 7 \\ \hline x = 5 \end{array}$$

both sides

- 1 Determine the correct steps needed to solve an equation.
- 2 Write an equation that best represents the number of missing baby lions.
- 3 Describe how to solve a one-step equation.
- 4 Find out how many giraffes belong to the giraffe family.
- 5 Find the solution for the following equations.
- 6 Solve the following equations.
- + with lots of tips, answer keys, and detailed answer explanations for all of the problems.

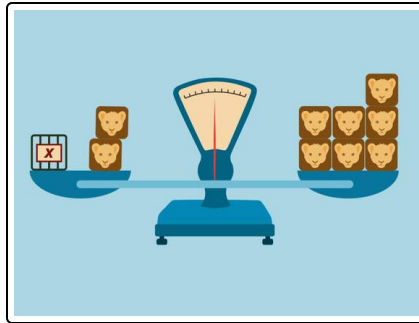


The complete package, including all problems, hints, answers, and detailed answer explanations is available for all [sofatutor.com](https://www.sofatutor.com) subscribers.



Determine the correct steps needed to solve an equation.

Fill in each blank.



imbalance

other side

multiply

anything else

scale

divide

balance

both sides

the middle

the same

An equation is like a¹ that is in².

If you change something on the one side of an equation, you have to do³ to the⁴.

For example, if you multiply one side of an equation by 3, you have to⁵ by the same number on the other side, too.



Hints for solving these problems

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Determine the correct steps needed to solve an equation.

Hint #1

How does a scale work? Both sides of the scale must have equal weights in order to be in balance.

Hint #2

Whatever you do on one side of an equation, think of what you have to do the other side of the equation in order to keep it in balance.



Answers and detailed answer explanations for these problems

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Determine the correct steps needed to solve an equation.

Answer key: 1: scale // 2: balance // 3: the same // 4: other side // 5: multiply

An equation is defined by two expressions joined by an equal sign.

The equal sign is like the middle of a scale. The equation corresponds to a balanced scale. If you take away something on one side of the scale, you have to do the same on the other side as well. Otherwise, the scale isn't in balance any longer.

The same concept applies to equations:

$$\begin{array}{rcl} x + 2 & = & 7 \\ -2 & & -2 \\ \hline x & = & 5 \end{array}$$

The operations we have learned so far are:

- You can add or subtract a term on both sides of an equation.
- You can multiply both sides of an equation by the same, non-zero term.
- You can divide both sides of the equation by the same, non-zero term.