

To Solve for x (One-Step Equations)

Solving for x is quite simple.

On opposite day, it's the best!

For each thing that's done, just undo it,

Then substitute back in to test.

If a number is added, subtract it.

$$\begin{array}{r} \text{a)} \quad x+3=10 \\ \quad \quad \underline{-3 \quad -3} \\ x \quad \quad = 7 \end{array}$$

If subtracted, then add to both sides.

$$\begin{array}{r} \text{b)} \quad x - 4=12 \\ \quad \quad \underline{+ 4 \quad +4} \\ x \quad \quad = 16 \end{array}$$

If divided, then multiply by it.

$$\begin{array}{r} \text{c)} \quad \frac{x}{5} = 15 \\ \left(\frac{5}{1}\right)\left(\frac{x}{5}\right) = \left(\frac{15}{1}\right)\left(\frac{5}{1}\right) \\ x = 75 \end{array}$$

But if multiplied, then divide.

$$\begin{array}{r} \text{d)} \quad 12x = 48 \\ \left(\frac{12x}{12}\right) = \left(\frac{48}{12}\right) \\ x = 4 \end{array}$$

Once you've got x alone, there's your answer.

It's not hard once you get the steps straight.

Then to be really sure, do a plug-n-chug.

If both sides are the same, you've done great!

<u>Problem</u>	<u>Answer</u>	<u>Substitution</u>	<u>Equal?</u>	
a) $x + 3 = 10$	$x = 7$	$7 + 3 = 10$	$10 = 10$	Correct!
b) $x - 4 = 12$	$x = 16$	$16 - 4 = 12$	$12 = 12$	Correct
c) $\frac{x}{5} = 15$	$x = 75$	$\frac{75}{5} = 15$	$15 = 15$	Correct!
d) $12x = 48$	$x = 4$	$12(4) = 48$	$48 = 48$	Correct!