Brainfuse Response Form

Thank you for using Brainfuse!

We do not provide answers. We help to provide the necessary information so that you can find the answer on your own. Always include the full question along with any additional information we will need to help you. Also include any attempts you have made at solving the problem. **If you do not see the tutor's comments or a tutor's review appears to be missing, please contact** info@brainfuse.com**. For additional suggestions about your question, please resubmit through the Brainfuse Writing Lab.**

Thank you for choosing Brainfuse and best wishes with your studies!

Your Question:

How do I do this problem? $q + 3.83 = 5.83$

Our Response:

The idea behind solving an equation is to get the variable by itself. Whatever operation is happening to the variable, you need to do the opposite operation to get rid of it. It's like you're using an "undo" command to erase what had happened to the variable.

The important thing to remember is that the equal sign (=) of the equation is a balance point, and that balance must be kept at all times. Anything you do on one side of the equal sign must also be done on the other side: otherwise, the two sides won't stay in balance.

For example, look at this equation:

$$r + 4.37 = 9.16$$

We need to get the *r* by itself, so we have to undo the + 4.37. We do that by performing the opposite operation of addition, which is subtracting. As a result, we subtract 4.37.

$$r + 4.37 - 4.37 = 9.16$$

But remember, we have to do the same thing on the other side of the equal sign so the equation will stay in balance:

$$r + 4.37 - 4.37 = 9.16 - 4.37$$

All that's left now is to simplify. The + 4.37 and - 4.37 cancel each other out (just like we wanted) leaving only an *r* on the left side. Now we just have to subtract 9.16 - 4.37 and we're done.

$$\begin{array}{r} 9.16 \\ -\ 4.37 \\ \hline \end{array}$$

Do you remember how this works? Start from the right side and borrow from the place on the left if necessary.

$$\begin{array}{r} 9.16 \\ -\ 4.37 \\ \hline \end{array} \qquad \begin{array}{r} {\scriptstyle 0\,16} \\ 9.16 \\ -\ 4.37 \\ \hline \end{array} \qquad \begin{array}{r} {\scriptstyle 0\,16} \\ 9.16 \\ -\ 4.37 \\ \hline 9 \end{array}$$

$$\begin{array}{r} {\scriptstyle 0\,16} \\ 9.16 \\ -\ 4.37 \\ \hline 9 \end{array} \qquad \begin{array}{r} {\scriptstyle 10} \\ {\scriptstyle 8\,0\,16} \\ 9.16 \\ -\ 4.37 \\ \hline 9 \end{array} \qquad \begin{array}{r} {\scriptstyle 10} \\ {\scriptstyle 8\,0\,16} \\ 9.16 \\ -\ 4.37 \\ \hline 79 \end{array}$$

$$\begin{array}{r} {\scriptstyle 10} \\ {\scriptstyle 8\,0\,16} \\ 9.16 \\ -\ 4.37 \\ \hline 4.79 \end{array}$$

We now have the solution to the equation:

$$\boldsymbol{r = 4.79.}$$

Now you try with your problem:

$$\boldsymbol{q + 3.83 = 5.83}$$

If you have any further questions, feel free to re-submit or enter a live tutoring session for immediate support.

We hope this feedback helps. Thank you!