

# Re: solving an equation multiple directions

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- *From:* William Elliot <[marsh@xxxxxxxxxxxxxxxxxxxx](mailto:marsh@xxxxxxxxxxxxxxxxxxxx)>
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On Fri, 16 Jan 2009, Jason wrote:

I want to write a function in a computer language like C or Java.  
I want the function to solve for one variable then another without  
writing the equation twice.

Example:

$x = y + z$  (given  $y$  and  $z$ )

$y = x - z$  (given  $x$  and  $z$ )

but without writing two equations to prevent duplication in my code.  
Any ideas?

Are you sure you want a function?  
Perhaps you want a subroutine.  
More likely you need clear thinking.

What input are you giving the function or subroutine?  
An equation such as  $z = x + y$  ?

What output are you expecting?  
More equations such as  $x = y - z$  and  $y = x - z$  ?

What do you mean without writing the code twice?  
That's what functions and subroutines are used for,  
to not repeat code at the additional time cost of  
calling and returning from a function or subroutine.

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