Excel's Insert Function Tool

By Nate Moore, CPA, MBA, CMPE

A great way to learn how to use a function in Excel is to use the Insert Function (IF) tool. This tool is like a wizard that guides you through the syntax of functions. In this article we will examine the Insert Function tool to show how it can help you with your next spreadsheet.

Launching the Insert Function Window

There are two ways to launch the Insert Function window. The one I typically use is on the formula bar, as shown in Figure 1. You can access the same functionality from the Insert Function button on the Formulas tab, as shown in Figure 2. Either way, the Insert Function window launches, as shown in Figure 3.

Once you have launched the Insert Function window, there are three options. You can search for a function using the search box at the top of the window, select a category of functions from the list, such as "Financial" or "Date & Time," or you can choose from the list of recently used functions. The list of recently used functions is especially helpful if you know you have used a function recently but can't remember its name. To follow along with this example, type "if" in the search box and select "IF" from the list of functions that appears. After selecting "IF," your screen should look like Figure 4.

The Function Arguments Window

The Function Arguments window shows the name of the function at the upper left corner and lists the arguments used by the function. In our case, the IF function has three arguments, or components of the function. Below the arguments is a short description of the IF function: "Checks whether a condition is met and returns one value if TRUE and another value if FALSE."

Notice that Excel has placed my cursor so that it is ready to enter the first argument, logical test. Also notice that since my cursor is in the logical test area, there is a brief definition below of what the argument is: "Logical test is any value or expression that can be evaluated to TRUE or FALSE." As you move from argument to argument in the window, Excel updates the definition to help clarify what needs to go in each box to complete the formula.

Excel also includes a red arrow at the end of each argument. You can either type the information for the argument in each box or you can click the red arrow to have Excel minimize the Function Arguments window to select cells directly from the spreadsheet.

Putting It All Together

To follow along with this example, create a spreadsheet like that shown in Figure 5. Make sure the salary amount will be entered in cell A2. Assume for the purpose of the example that this year the FICA rate is 6.2 percent on the first $120,000 of wages, and we need a formula to determine the amount of annual FICA tax to withhold.

The IF function's logical test is an expression that can evaluate to be true or false. In our example, the logical test is whether cell A2 is greater than 120,000. If cell A2 is greater than 120,000, Excel will return the value "if true" section of the formula. In our example, if A2 is greater than 120,000, the employee will pay 120,000 times 6.2 percent, or $7,440. If A2 is not greater than 120,000, Excel will return the value "if false" section of the formula.

In our example, the employee will pay 6.2 percent of the salary shown in cell A2. Notice in Figure 6 how each section of the Function Arguments window is filled out and how Excel shows the result of the formula in two places in the window, circled in red. Excel always shows the answer in both places. In our example, the value "if false" is also $4,650, so the formula result actually appears three places in Figure 6. Test the IF function by putting other values in cell A2. Note that if you put $121,000 or $1,200,000, cell B2 will be limited to $7,440, the maximum FICA tax in our fictional year.

Note in Figure 7 that when I select cell B2, Excel shows the IF function using Excel's syntax of a comma between each argument. Once you're familiar with a function, you can enter a function directly into a cell in this Formula Bar instead of using the IF window. Also note that you can select any cell in Excel and then start the IF window to get a description of the function used and the detail of each argument in the function. That trick may come
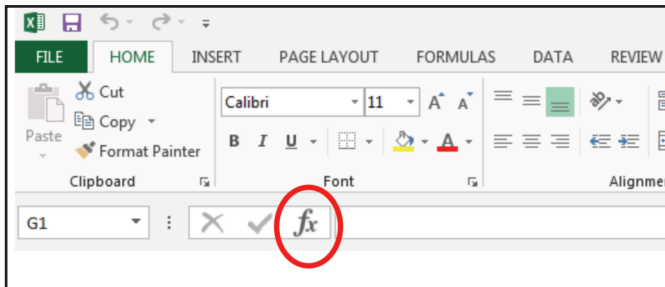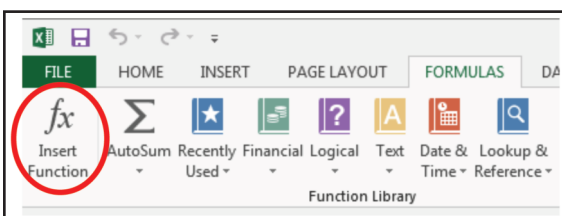
FIGURE 1

FIGURE 2
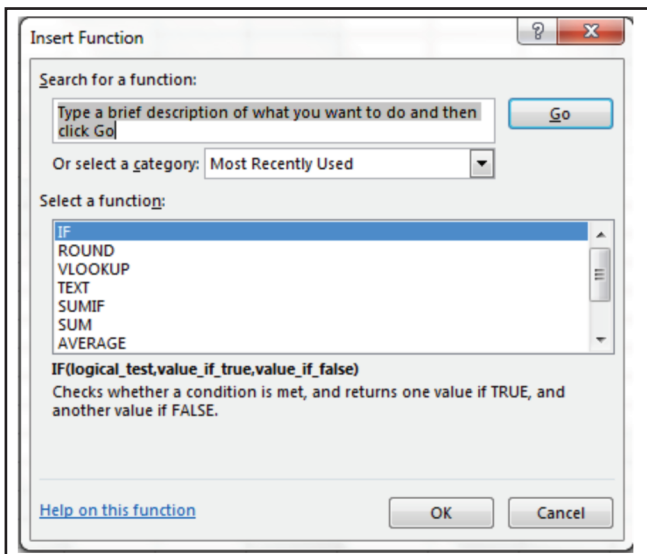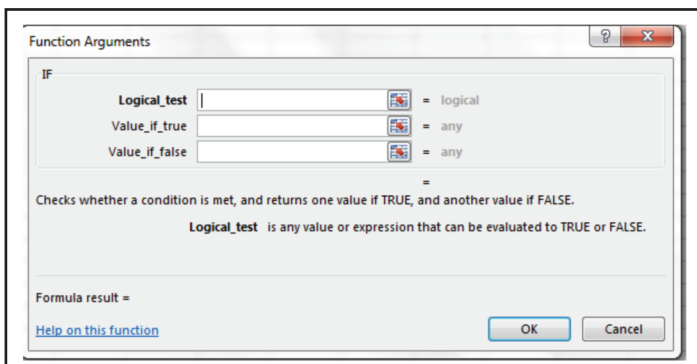

FIGURE 3

FIGURE 4

FIGURE 5
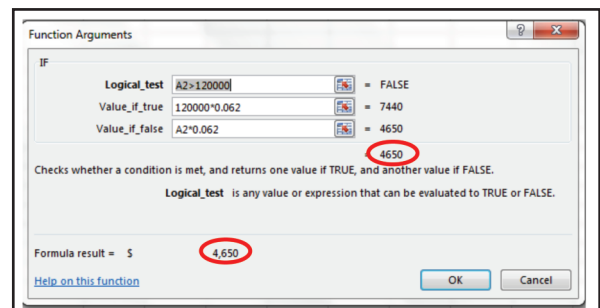
FIGURE 6

FIGURE 7

in handy when you inherit a spreadsheet with functions you are not familiar with.

The IF window is a great way to learn new functions in Excel. The next time you're learning a new function, try using Insert Function to see if it can save you time and trouble. ■

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