Using the IF Function in Excel

The “IF” Function is considered a logical function in Excel. The function returns a user-specified cell value if a condition is true or a different user-specified cell value if that same condition is not true (or false). For example, your company gives a bonus if a salesperson sells more than $1000 worth of items. Using the logic of the IF Function, if sales are greater than $1000 (true), then a bonus is given, if sales are not greater than $1000 (false), then a bonus is not given. The syntax of the function is as follows: =IF(Condition, value if true, value if false) or in other words, =IF(Sales are greater than 1000, Bonus, no Bonus). Therefore, in the worksheet with sales in Column C, Row 2, you would create a Bonus Column. And in that column, starting in the second row, would be the following function, =IF(C2>1000,“Bonus”,“No Bonus”). Quotes are used when the value is text and spaces can be placed inside quotes, but should not appear elsewhere in the function.

Let’s do another one. Let’s say in the sales worksheet, instead of indicating “Bonus” or “No Bonus”, you have a column that records a standard bonus of $50 if sales are above $1,000. Therefore, in the Bonus column, the function would read =IF(C2>1000,50,0).

Another option, continuing with the bonus idea, is that if sales are over $1000, then the salesperson earns 10% of total sales as a bonus, else no bonus or zero. In this case, the function would read, =IF(C2>1000,C2*0.10,0).

To complete the discussion of IF Functions, it is necessary to mention nested IF Functions. Nested IF Functions are used if there is more than one condition to be tested. For example, in the last function, if sales are greater than $1000, then a bonus of 10% of sales is given, else no bonus or zero. Now, let’s say that a 10% bonus is given if sales are greater than $1000 or a bonus of 5% is given if sales are between $999 and $500 and no bonus is given if sales are less than $500. To determine the correct bonus, Excel will first check to see if sales are > $1000. If yes, then return a value of 10% of sales. If not, then check to see if sales are between $999 and $500. If yes, then return a value of 5% of sales. If not, then sales must be less than $500 and there is no bonus awarded. The function would read as follows: =IF(C2>1000,C2*.10,(IF(C2>500,C2*0.05,0))), where the second condition to be tested is “Nested” within its own set of parentheses. Notice the triple parentheses at the end of the function. You must always have the same number of right parentheses as you do left parentheses. You can nest up to fourteen IF functions.

Let’s do one more with nesting, adding another layer into our bonus calculation. In this case, in the same column that calculates the bonus, you wish the word “Warning” to appear if sales are less than $250, but still calculate the correct numerical bonus if sales are above $250. In this case, the IF Function would be =IF(C2>1000,C2*.10,(IF(C2>500,C2*0.05,(IF(C2>249,0,”Warning”)))))