

Excel Functions Instructions

Follow these instructions closely as you work through the excel_functions spreadsheet. You will learn how to use functions to calculate in Excel. This will be extremely helpful in your future math, science and financing endeavors. Take your time and check that the answers are reasonable. It can be very easy to make mistakes when not double-checking your work.

1. Download & open **excel_functions.xls**. Save as **excel_functions_yourname.xls**.
2. Review the Guide. This explains many of the basics relating to functions. Functions are basically calculation tools that you use in Excel (or any spreadsheet application).
3. Work your way through the Function tables from top to bottom.
 - a. Functions – Basic Operations
 - i. In cell **B3**, type **=A3+A3**. Press Return. You should see the answer to this problem... the answer should be 2.
 - ii. Repeat this across the row for each basic operation ($x-x$, $x*x$, x/x , x^2 , 2^x).
 - iii. In cell **B4**, enter **=A4+A4**, only this time rather than typing A4, just click on cell A4 when it is time to type A4. Clicking on the cell is a quick way to enter the cell address.
 - iv. Repeat this across the row for each basic operation ($x-x$, $x*x$, x/x , x^2 , 2^x).
 - v. Do the same for the entire chart. There is a faster way to repeat entering functions. Select the row of functions that you have already created, click the bottom right corner of the area selected, and drag the cells down to fill the empty cells. Amazingly, Excel will change each function to match the row into which you filled.
 - b. Functions – Multiple Variables
 - i. Complete the table in the same manner that you completed the first table.
 - ii. The only difference on this table is the addition of the y-variable.
 - c. Functions – Order of Operations
 - i. Notice this time that Excel follows the Order of Operations when calculating functions.
 - ii. When you write a function, be sure to follow the Order of Operations and check that your answers are coming out right.
 - d. Functions – Using Shortcut Function Names
 - i. In cell **B47**, type **=SUM(B38:B46)**. Press Return. *Or, rather than typing B38:B46, you can click & drag over those cells and Excel will enter the cell range for you. This method is sometimes an easier way to enter the cell range.*
 - ii. Repeat this process in cell C47 to calculate the SUM for C38 through C46.
 - iii. In cells F47 and G47, use the AVERAGE function for columns F and G.

- e. Budget
 - i. Calculate the costs per year based on the monthly expenses.
 - ii. Calculate the Subtotal of the costs.
 - iii. After figuring the income on chart g, enter the annual income (green box) into C60. Using this data, calculate the Cost/mo. Income.
 - iv. Calculate the Net Profit.

- f. Car Cost per Month
 - i. Calculate the Cost per 5 years for each expense. Use the multiplier in your functions.
 - ii. Calculate the Total for 5 years.
 - iii. Calculate the Average per year.
 - iv. Calculate the Average per month.

- g. Income
 - i. Calculate the Total Income (SUM of L51 through L55) (and for column M).
 - ii. Calculate the Federal tax amounts (enter 15% as 0.15).
 - iii. Calculate the Federal tax amounts (enter 4.75% as 0.0475).
 - iv. Calculate the Total tax (SUM function).
 - v. Calculate the Net Income ('Net' means amount after subtracting expenses).