

# **ASPIRATION SOLUTIONS**

## MICROSOFT EXCEL

# Topics covered in MS Excel: Calculation Mathematical Function Logical Function Charts Sparkline Sort Sub-Total Freezing Auto Filter Advance Filter Conditional Formatting

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### **Introduction to Microsoft Excel:**

Microsoft Excel is an electronic spreadsheet. You can use it to organize your data into rows and columns. You can also use it to perform mathematical calculations quickly. Excel is a spreadsheet program that allows you to store, organize, and analyze information.

### 1) Calculation:

In Excel, a formula is an expression that operates on values in a range of cells or a cell. For example, =A1+A2+A3, which finds the sum of the range of values from cell A1 to cell A3.

### 2) Mathematical Function:

- ♦ **SUM:** It returns the sum of numeric values in a cell. You can refer to the cells where you have values or simply insert the values into the function.
- ♦ MAX & MIN: The MAX and MIN functions help in finding the maximum number and the minimum number in a range of values.
- ❖ AVERAGE: It returns the average of numeric values in a cell. You can refer to the cells where you have values or simply insert the values into the function.
- ♦ COUNT: It returns the count of numeric values in a cell. You can refer to the
  cells where you have values or simply insert the values into the function
- ♦ **COUNTA:** It is Like the COUNT function, COUNTA counts all cells in a given rage. However, it counts all cells regardless of type. That is, unlike COUNT that only counts numeric, it also counts dates, times, strings, logical values, errors, empty string, or text.
- ♦ COUNTBLANK: This function is a premade function in Excel, which counts blank cells in a range.

### 3) Logical Function:

\* **IF:** This function returns a value when the specific condition is TRUE and returns another value it condition is FALSE. The IF function is often used when you want to sort your data according to a given logic. The best part of the IF formula is that you can embed formulas and function in it.

- \* **SUMIF:** You use the SUMIF function to sum the values in a range that meet criteria that you specify. The SUMIF function syntax has the following arguments:
- \* **COUNTIF:** This function is used for counting cells within a specified range that meet a certain criterion, or condition. there are only 2 arguments, both of which are required:

### 4) Charts:

Charts are visual representations of data used to make it more understandable. Commonly used charts are:

### 5) Sparkline:

Sparklines are tiny charts that reside in a cell in Excel. These charts are used to show a trend over time or the variation in the dataset. You can use these sparklines to make your bland data look better by adding this layer of visual analysis. In Excel, there are three types of sparklines:

### 6) <u>Sort:</u>

The Excel SORT function sorts the contents of a range or array in ascending or descending order. Values can be sorted by one or more columns. SORT returns a dynamic array of results.

### 7) Sub-Total:

Use Excel's built-in Subtotal feature to automatically add subtotals and grand totals to a worksheet list of data, show and hide details. Subtotal pros and cons. Fix problem of duplicate grand totals.

### 8) Freezing:

When working with large datasets in Excel, you may often want to lock certain rows or columns so that you can view their contents while scrolling to another area of the worksheet. This can be easily done by using the Freeze Panes command and a few other features of Excel.

### 9) Auto Filter:

Excel AutoFilter is an easy way to turn the values in Excel columns into specific filters based on the cell content. Excel AutoFilter allows us to slice and dice our data per our requirements. We can filter based on our choices from a list or search for the specific data we want to find. The rows which do not meet the criteria of the filters will be hidden. In simple words, AutoFilter in Excel allows us to view specific rows in Excel while hiding the other rows. When Excel AutoFilter is added to the row's header, it gives us a drop-down menu in the header row.

### 10) Advance Filter:

Excel's Advanced Filter is really helpful when it comes to finding data that meets two or more complex criteria such as extracting matches and differences between two columns, filtering rows that match items in another list, finding exact matches including uppercase and lowercase characters, and more.

### 11) Conditional Formatting

As the name suggests, conditional formatting is a type of formatting that is applied to cells or ranges when certain conditions are met. These conditions are set, but can quite often be customised and edited, in rules that have been programmed into Excel.