Q. Write short notes on following:-

(a) Range in Excel Sheet   (b) Formula in Excel

Ans:-(a) A cell reference, or cell address, is an alphanumeric value used to identify a specific cell in a spreadsheet. Each cell reference contains one or more letters followed by a number. The letter or letters identify the column and the number represents the row. Eg:- =SUM(A1:A5)

Here A represents Column and 1 and 5 represents rows.

Range is represented in a formula by placing : sign such as A1:A8 means continues from A1, A2, A3, A4, A5 …. A8.

(b) Formula in Excel:-

1. Percentage
2. DATE
3. Array
4. SUMIF
5. LEFT, MID, and RIGHT
6. CHOOSE

1. Percentage

To perform the percentage formula in Excel, enter the cells you're finding a percentage for in the format, =A1/B1. To convert the resulting decimal value to a percentage, highlight the cell, click the Home tab, and select "Percentage" from the numbers dropdown.

There isn't an Excel "formula" for percentages per se, but Excel makes it easy to convert the value of any cell into a percentage so you're not stuck calculating and re-entering the numbers yourself.

The basic setting to convert a cell's value into a percentage is under Excel's Home tab. Select this tab, highlight the cell(s) you'd like to convert to a percentage, and click into the dropdown menu next to Conditional Formatting (this menu button might say "General" at first). Then, select "Percentage" from the list of options that appears. This will convert the value of each cell you've highlighted into a percentage. See this feature below.

percentage-formula-in-excel
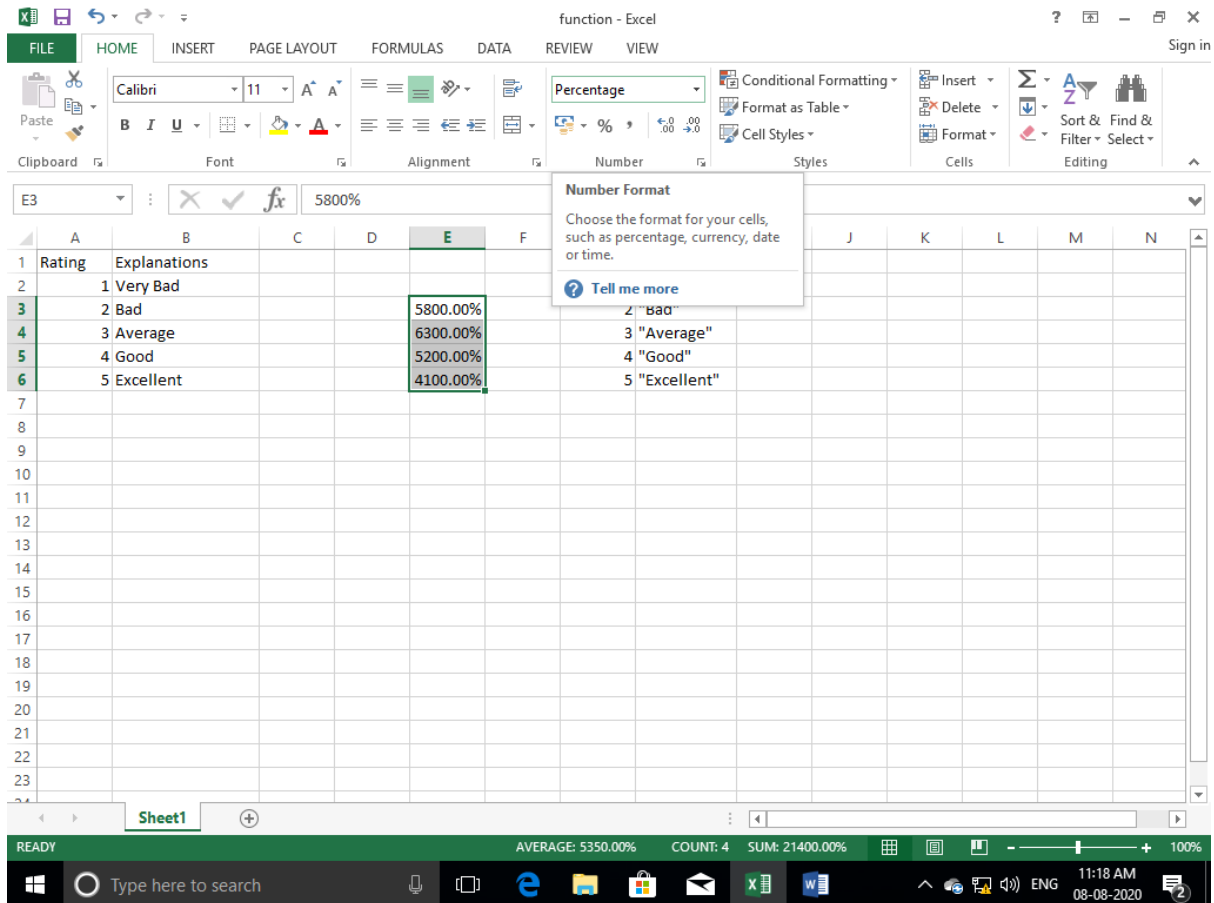
Keep in mind if you're using other formulas, such as the division formula (denoted =A1/B1), to return new values, your values might show up as decimals by default. Simply highlight your cells before or after you perform this formula, and set these cells' format to "Percentage" from the Home tab -- as shown above.

2. DATE

The Excel DATE formula is denoted =DATE(year, month, day). This formula will return a date that corresponds to the values entered in the parentheses -- even values referred from other cells. For example, if A1 was 2018, B1 was 7, and C1 was 11, =DATE(A1,B1,C1) would return 7/11/2018.

Creating dates in the cells of an Excel spreadsheet can be a fickle task every now and then. Luckily, there's a handy formula to make formatting your dates easy. There are two ways to use this formula:

Create dates from a series of cell values. To do this, highlight an empty cell, enter "=DATE," and in parentheses, enter the cells whose values create your desired date -- starting with the year, then the month number, then the day. The final format should look like this: =DATE(year, month, day). See how this looks in the screenshot below.

Collected by Raju Ranjan Sinha

Automatically set today's date. To do this, highlight an empty cell and enter the following string of text: =DATE(YEAR(TODAY()), MONTH(TODAY()), DAY(TODAY())). Pressing enter will return the current date you're working in your Excel spreadsheet.

excel-date-formula

In either usage of Excel's date formula, your returned date should be in the form of "mm/dd/yy" -- unless your Excel program is formatted differently.

3. Array

An array formula in Excel surrounds a simple formula in brace characters using the format, {=(Start Value 1:End Value 1)*(Start Value 2:End Value 2)}. By pressing ctrl+shift+center, this will calculate and return value from multiple ranges, rather than just individual cells added to or multiplied by one another.

Calculating the sum, product, or quotient of individual cells is easy -- just use the =SUM formula and enter the cells, values, or range of cells you want to perform that arithmetic on. But what about multiple ranges? How do you find the combined value of a large group of cells?

Numerical arrays are a useful way to perform more than one formula at the same time in a single cell so you can see one final sum, difference, product, or quotient. If you're looking to find total sales revenue from several sold units, for example, the array formula in Excel is perfect for you. Here's how you'd do it:

To start using the array formula, type "=SUM," and in parentheses, enter the first of two (or three, or four) ranges of cells you'd like to multiply together. Here's what your progress might look like: =SUM(C2:C5

Next, add an asterisk after the last cell of the first range you included in your formula. This stands for multiplication. Following this asterisk, enter your second range of cells. You'll be multiplying this second range of cells by the first. Your progress in this formula should now look like this: =SUM(C2:C5*D2:D5)

Ready to press Enter? Not so fast ... Because this formula is so complicated, Excel reserves a different keyboard command for arrays. Once you've closed the parentheses on your array formula, press Ctrl+Shift+Enter. This will recognize your formula as an array, wrapping your formula in brace characters and successfully returning your product of both ranges combined.

Excel array formula

In revenue calculations, this can cut down on your time and effort significantly. See the final formula in the screenshot above.

4. SUMIF

The SUMIF formula in Excel is denoted =SUMIF(range, criteria, [sum range]). This will return the sum of the values within a desired range of cells that all meet one criterion. For example, =SUMIF(C3:C12,">70,000") would return the sum of values between cells C3 and C12 from only the cells that are greater than 70,000.

Let's say you want to determine the profit you generated from a list of leads who are associated with specific area codes, or calculate the sum of certain employees' salaries -- but only if they fall above a particular amount. Doing that manually sounds a bit time-consuming, to say the least.

With the SUMIF function, it doesn't have to be -- you can easily add up the sum of cells that meet certain criteria, like in the salary example above.

The formula: =SUMIF(range, criteria, [sum_range])

Range: The range that is being tested using your criteria.

Criteria: The criteria that determine which cells in Criteria_range1 will be added together

[Sum_range]: An optional range of cells you're going to add up in addition to the first Range entered. This field may be omitted.

In the example below, we wanted to calculate the sum of the salaries that were greater than $70,000. The SUMIF function added up the dollar amounts that exceeded that number in the cells C3 through C12, with the formula =SUMIF(C3:C12,">70,000").

SUMIF formula in Excel

5. LEFT, MID, and RIGHT

Let's say you have a line of text within a cell that you want to break down into a few different segments. Rather than manually retyping each piece of the code into its respective column, users can leverage a series of string functions to deconstruct the sequence as needed: LEFT, MID, or RIGHT.

LEFT

Purpose: Used to extract the first X numbers or characters in a cell.

The formula: =LEFT(text, number_of_characters)

Text: The string that you wish to extract from.

Number_of_characters: The number of characters that you wish to extract starting from the left-most character.

In the example below, we entered =LEFT(A2,4) into cell B2, and copied it into B3:B6. That allowed us to extract the first 4 characters of the code.

LEFT formula in Excel

MID

Purpose: Used to extract characters or numbers in the middle based on position.

The formula: =MID(text, start_position, number_of_characters)

Text: The string that you wish to extract from.

Start_position: The position in the string that you want to begin extracting from. For example, the first position in the string is 1.

Number_of_characters: The number of characters that you wish to extract.

In this example, we entered =MID(A2,5,2) into cell B2, and copied it into B3:B6. That allowed us to extract the two numbers starting in the fifth position of the code.

MID formula in Excel

RIGHT

Purpose: Used to extract the last X numbers or characters in a cell.

The formula: =RIGHT(text, number_of_characters)

Text: The string that you wish to extract from.

Number_of_characters: The number of characters that you want to extract starting from the right-most character.

For the sake of this example, we entered =RIGHT(A2,2) into cell B2, and copied it into B3:B6. That allowed us to extract the last two numbers of the code.

RIGHT formula in EXCEL

5. CHOOSE

This function is used to specify rating's Explanations as defined by user.

Suppose we need to define some ratings according to following requirements:-

Rating	Explanations
1	"Very Bad"
2	"Bad"
3	"Average"
4	"Good"
5	"Excellent"

Then we need to write the above formula.

The values are indexed starting from 1 onwards.

Collected by Raju Ranjan Sinha