

## Excel

### Cell reference :

generally cell reference is used in creating the formula in the excel. We can enter any cell range in the formula directly. The cell reference or cell address is not case sensitive in excel. The cell address , cell reference or cell range may be represented in excel in three way.

1. Absolute cell address or range : it the cell address or range which do not change when formula is copies in the multiple cell. The absolute cell is created as

\$column letter \$rownumber →

\$A3 → represent column A is absolute and row is not

\$A\$3 → represent both column and Row is absolute

Similarly range is created by giving starting cell and destination cell address with dollar sign separated with ( : ) colon symbol .

As → \$A\$3 : \$C\$6 → All the cell fall between the cell address A3 to C6 are absolute .

2. Relative cell address, cell range or reference:- this type of cell address and cell range is created by writing the cell address without any symbol. In Such case when such address/ range is used in formula then during copying the formula , range automatically changed relatively .

As: A3 → is the relative cell address

A3:C6 → is the relative cell range.

3. Mixed cell range : - It the combined form of absolute and relative cell range where row or column are absolute and relative both i.e if column is absolute then row is relative or if row is absolute then column is relative.

As \$A5 → column is fixed and row is not fixed in formula copy

A\$5 → column is relative and row is fixed .

In the similar case, we can create the cell range and address of the other sheet as

Sheetname !Column letter rownumber

Eq → sheet2!\$A\$5 → represent absolute cell address of A5 cell from sheet2.

Inserting formula :- Formula play important role in spreadsheet preparation . it allow us to perform calculations using values from any cells to have the result appear in the formula.

Followings are important things to keep in mind

1. If the formula uses cell references to refer to other cells and content of one or more of those cells changes the result of the formula changes too.
2. All formula begins with an equal sign. By this excel understand that the content will be formula not the value
3. Formula can contain any combination of values , references , operators and functions.
4. Formula are not case sensitive .

Followings are the operators generally used in the formula in excel

Operator	description
-	Negative value
%	percent value
^	Exponentiation value
*And /	multiplication and division
+and -	addition and subtraction
&	text joining concatenation
=,<>,<=,>= ,>,<	comparison and relation
.And. or Or	logical comparison between
relational expression,	
Mod	calculate the remainder by
dividing the number / value	
$X^y \rightarrow x \wedge y$	-->Exponentiation

Rakesh & Ranjan  $\rightarrow$  Rakesh Ranjan  $\rightarrow$  Concatenation

If(B5=b6)  $\rightarrow$

If(b5>b6)

If(b5<b6)

If(b5>=b6)

If(<> Or >< )  $\rightarrow$  not equal to .  $\rightarrow$  comparison or relation checking

(b5>b6) and (b8< c9)  $\rightarrow$  when both be true then result will be true.

(b5>b6) or (b8< c9)  $\rightarrow$  when any one be true then result will be true other wise false

If(obtainedmarkspercent >= 50) and (mathmarkspercent >=33)

If (obtainedmarks >=60 ) and (marks1 >=33) and (marks2 >= 33)  
and (marks4>=33) and (marks5>=33)

If(obtainedmarks >=70) or ( obtainedmarks>=50 and  
cota="management')

When year is century the must be divide with 400 otherwise if  
not century then must be divide with 4

Year

If ( year mod 400 =0) or (year mod 100 <> 0 and year mod 4 =0)

Copying formula :- once the formula is inserted in to the cell  
with given reference and range in a cell. We need not to  
recreate the same formula in the consecutive cell. In such case  
we just copy the formula in the desired cell . the cell range and  
reference automatically changed as per the given reference  
type.

We can create the formula as :

Step-1 insert the formula in a desired cell

Step-2 cell the formula cell

Step-3 right click to the cell and select copy or ctrl +c

Step-4 right click to the desired cell and select paste or ctrl +v

Or

Step-1 insert the formula in a desired cell

Step-2 move the cursor or mouse to the cross section of the formula cell, the pointer changes to + sign

Step-3 press the mouse button and drag the mouse up to the desired cell in which we want to insert the formula

Step-4 release the mouse button

Step-5 ok

Important excel predefined function :

Excel provides a large number of builtin function that can be used to perform specific calculations or to return information about our spreadsheet data . these functions are organized into categories to help us to locate the function. Followings are important excel function categories

1. Text functions
  2. Logical functions
  3. Data and time functions
  4. Math and trigonometrical function
  5. Statistical functions
  6. Database function
  7. Information function
  8. Financial functions
  9. Engineering functions
  10. Cube functions
  11. User defined own function.
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