1. What does the dollar($) sign do?

Answer: In Excel, the dollar sign ($) is used to create absolute references in formulas. An absolute reference means that the reference to a cell or a range of cells in a formula remains constant, even when the formula is copied to other cells.

Absolute Column Reference: To make a column reference absolute, you place a dollar sign ($) before the column letter. For example, in the reference $A1, the column reference A is absolute. When you copy a formula containing $A1 to another column, such as B1, the column reference remains A.

Absolute Row Reference: To make a row reference absolute, you place a dollar sign ($) before the row number. For example, in the reference A$1, the row reference 1 is absolute. When you copy a formula containing A$1 to another row, such as A2, the row reference remains 1.

Absolute Cell Reference: You can also create an absolute reference for both the column and the row by placing dollar signs ($) before both the column letter and the row number. For example, $A$1 is an absolute cell reference. When you copy a formula containing $A$1 to another cell, both the column and the row references remain constant.

1. How to Change the Reference from Relative to Absolute (or Mixed)?

Answer: In Excel, you can change a cell reference from relative to absolute or mixed by adding dollar signs ($) to the appropriate part of the reference.

1. Changing a Relative Reference to Absolute:

Select the cell containing the formula with the relative reference that you want to change to absolute.

Click on the formula bar or press F2 to enter edit mode for the formula.

Navigate to the part of the reference (column letter or row number) that you want to make absolute.

Place a dollar sign ($) before the column letter or row number, or both if you want to make the reference fully absolute.

Press Enter or click outside the formula bar to save the changes.

1. Changing a Relative Reference to Mixed:

Select the cell containing the formula with the relative reference that you want to change to mixed.

Click on the formula bar or press F2 to enter edit mode for the formula.

Navigate to the part of the reference (column letter or row number) that you want to make mixed.

Place a dollar sign ($) before the column letter or row number, depending on which part you want to make absolute or relative.

Press Enter or click outside the formula bar to save the changes.

3. Explain the order of operations in excel?

Answer: In Excel, the order of operations, also known as precedence, determines the sequence in which mathematical operations are performed in a formula. Excel follows a specific order of operations to evaluate formulas accurately. The order of operations in Excel is as follows:

Parentheses: Operations inside parentheses are always performed first. Excel evaluates expressions within parentheses from the innermost to the outermost.

Exponents: Excel calculates exponentiation next. Exponentiation involves raising a number to a power. For example, in the formula =2^3, Excel calculates 2 raised to the power of 3.

Multiplication and Division: After evaluating parentheses and exponents, Excel performs multiplication and division from left to right. These operations have the same precedence level, so they are evaluated in the order they appear in the formula. For example, in the formula =2\*3/4, Excel first multiplies 2 by 3, then divides the result by 4.

Addition and Subtraction: Finally, Excel performs addition and subtraction from left to right. Similar to multiplication and division, these operations have the same precedence level and are evaluated in the order they appear in the formula.

4. What, according to you, are the top 5 functions in excel and write a basic syntax for any of two?

Answer: Identifying the "top 5" functions in Excel can vary depending on the context and the specific needs of the user. However, there are several commonly used functions that are widely considered essential for data analysis and manipulation. Here are five of them:

SUM: Adds together the values in a range of cells.

Syntax: =SUM(number1, [number2], ...)

VLOOKUP: Searches for a value in the first column of a table and returns a value in the same row from a specified column.

Syntax: =VLOOKUP(lookup\_value, table\_array, col\_index\_num, [range\_lookup])

IF: Returns one value if a condition you specify evaluates to TRUE and another value if it evaluates to FALSE.

Syntax: =IF(logical\_test, [value\_if\_true], [value\_if\_false])

AVERAGE: Calculates the average (arithmetic mean) of the values in a range of cells.

Syntax: =AVERAGE(number1, [number2], ...)

COUNTIF: Counts the number of cells within a range that meet the given condition.

Syntax: =COUNTIF(range, criteria)

5. When would you use the subtotal function?

Answer: The SUBTOTAL function in Excel is primarily used when you want to calculate aggregate functions (such as SUM, AVERAGE, COUNT, etc.) on a range of data while ignoring other SUBTOTAL functions within that range. It's particularly useful in scenarios where you have subtotals within your data set, such as in a sorted or filtered table, and you want to avoid double-counting or double-summing.

Creating Subtotals in Filtered Data: When you have a table of data with multiple groups or categories, and you filter the data to view specific groups, you can use the SUBTOTAL function to calculate subtotals for the visible rows only. This ensures that the subtotal calculations adjust dynamically based on the current filter settings.

Subtotal Calculations in PivotTables: In PivotTables, you can use the SUBTOTAL function to perform calculations on the summarized data without including the subtotal values generated by the PivotTable itself. This allows you to create custom calculations that operate on the visible data only.

Avoiding Circular References: If you have formulas that refer to other cells containing similar formulas, it can create circular references. The SUBTOTAL function helps avoid this issue because it excludes other SUBTOTAL functions from its calculations.

Creating Custom Aggregate Functions: SUBTOTAL allows you to perform different aggregate calculations (e.g., SUM, AVERAGE, COUNT) while ignoring other SUBTOTAL functions in the range. This flexibility enables you to create custom aggregate functions tailored to your specific analysis requirements.

Handling Nested Subtotal Functions: When you have multiple layers of subtotal calculations within your data, using SUBTOTAL ensures that each layer of subtotals is calculated correctly without including subtotals from other layers.

6. What is the syntax of the vlookup function? Explain the terms in it?

Answer: The syntax of the VLOOKUP function in Excel is as follows:

=VLOOKUP(lookup\_value, table\_array, col\_index\_num, [range\_lookup])

Now, let's break down each term in the syntax:

lookup\_value: This is the value you want to search for in the first column of the table or range. It could be a value, a reference, or a text string. The VLOOKUP function searches for this value in the first column of the table\_array.

table\_array: This is the table or range of cells where the data is stored. The table\_array must contain the column that contains the value you're searching for (lookup\_value), as well as the column from which you want to return a value. The VLOOKUP function searches for the lookup\_value in the first column of the table\_array.

col\_index\_num: This is the column number in the table\_array from which you want to return a value. For example, if you want to return a value from the third column of the table\_array, you would enter 3 as the col\_index\_num.

range\_lookup: This is an optional argument that specifies whether you want an exact match or an approximate match for the lookup\_value. If set to TRUE or omitted, VLOOKUP will search for an approximate match and use the closest match less than or equal to the lookup\_value. If set to FALSE, VLOOKUP will search for an exact match. It's recommended to set this argument to FALSE when you want to find an exact match.