Advance Excel Assignment 2

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

the dollar sign ($) is used as a reference operator in cell references to fix a reference to a specific row or column when copying or filling cells. When the dollar sign precedes a column letter or row number in a cell reference, it means that the column letter or row number is an absolute reference, which does not change when the reference is copied or filled to other cells.
For example, if we have a formula that refers to cell A1 and you copy that formula to a cell to the right, the reference will automatically adjust to B1. However, if we want to keep the reference to cell A1 fixed, we can add dollar signs before the column letter and row number in the reference, like this: A1. When we copy the formula to another cell, the reference will still point to cell A1.
We can also use the dollar sign with only the column letter or only the row number to fix only the column or row reference, respectively.

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

To change a cell reference from relative to absolute (or mixed) we can use the dollar sign ($) reference operator.

To make a cell reference absolute (fixed) by adding the dollar sign to both the column and row references, follow these steps:

- Select the cell that contains the reference we want to change.
- Click on the formula bar at the top of the worksheet to edit the formula.
- Locate the cell reference we want to change, and add dollar signs ($) before the column letter and row number of the reference. For example, change A1 to A1.
- Press Enter or click on another cell to complete the edit.
- Now, when we copy the formula containing the absolute reference to another cell, the reference will remain fixed and won't change.

To make a cell reference mixed by adding the dollar sign to either the column or row reference, follow these steps:

- Select the cell that contains the reference we want to change.
- Click on the formula bar at the top of the worksheet to edit the formula.
- Locate the cell reference we want to change, and add a dollar sign ($) before either the column letter or row number of the reference. For example, change A1 to $A1 or A$1.
- Press Enter or click on another cell to complete the edit.
- Now, when we copy the formula containing the mixed reference to another cell, the fixed part of the reference will remain the same, while the variable part will adjust accordingly.

3. Explain the order of operations in excel?

The order of operations in Excel refers to the sequence in which mathematical calculations are performed in a formula.
The order of operations in Excel is as follows:

- Parentheses: Excel evaluates expressions inside parentheses first, starting from the innermost pair of parentheses and working outward.
- Exponents: Excel calculates exponents or powers, such as raising a number to a certain power or finding the square root.
- Multiplication and Division: Excel performs multiplication and division operations from left to right, in the order they appear in the formula.
- Addition and Subtraction: Excel performs addition and subtraction operations from left to right, in the order they appear in the formula.

If there are multiple operations of the same precedence level, Excel will perform them from left to right. Also, if there are no parentheses in the formula, Excel will perform the operations in the order of Exponents, Multiplication and Division, Addition and Subtraction.

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

SUM: Adds up a range of numbers.
Syntax: =SUM(number1, [number2], ...)

Example: =SUM(A1:A5)

AVERAGE: Calculates the average of a range of numbers.
Syntax: =AVERAGE(number1, [number2], ...)

Example: =AVERAGE(A1:A5)

COUNT: Counts the number of cells in a range that contain numbers.
Syntax: =COUNT(value1, [value2], ...)

Example: =COUNT(A1:A5)

IF: Returns one value if a condition is true and another value if it is false.
Syntax: =IF(condition, [value_if_true], [value_if_false])

Example: =IF(A1>10, "Yes", "No")

VLOOKUP: Searches for a value in the first column of a table and returns a corresponding value in the same row from a specified column.
Syntax: =VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

Example: =VLOOKUP(A1, B1:C5, 2, FALSE)

The basic syntax for two of these functions:

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

Example: =SUM(A1:A5)

Explanation: This formula adds up the values in cells A1 to A5.

IF:
Syntax: =IF(condition, [value_if_true], [value_if_false])

Example: =IF(A1>10, "Yes", "No")

Explanation: This formula checks if the value in cell A1 is greater than 10. If it is, the formula returns "Yes". If it is not, the formula returns "No".

5. When would you use the subtotal function?

The SUBTOTAL function in Excel is a powerful tool that allows you to calculate subtotals within a range of data, based on various functions, such as SUM, AVERAGE, COUNT, MAX, MIN, etc. We would use the SUBTOTAL function when we have a large set of data that needs to be grouped and summarized.

Here are some scenarios where we might use the SUBTOTAL function:

Analyzing Sales Data: If we have a large set of sales data that includes multiple products and regions, we could use the SUBTOTAL function to calculate the total sales for each product or region. This can help us to identify which products or regions are the most profitable.

Grouping Data: If we have a large set of data that needs to be grouped by a specific column, such as a date or a category, we could use the SUBTOTAL function to calculate subtotals for each group. This can help us to analyze trends and patterns within our data.

Filtering Data: If we have a large set of data that needs to be filtered based on certain criteria, we could use the SUBTOTAL function to calculate subtotals for the filtered data. This can help us to analyze the data more efficiently and draw meaningful insights.

Creating Dashboards: If we are creating a dashboard that needs to summarize a large set of data, we could use the SUBTOTAL function to calculate the key metrics and display them in a user-friendly format.

In summary, the SUBTOTAL function is a useful tool for summarizing and analyzing large sets of data in Excel and can be used in a wide range of scenarios where we need to group, filter or summarize data.

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

The VLOOKUP function in Excel is a powerful tool that allows us to look up a value in a table and return a corresponding value from a specified column. The syntax of the VLOOKUP function is as follows:

VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

- lookup_value: This is the value that we want to look up in the leftmost column of the table. It can be a reference to a cell, a text string, or a number.

- table_array: This is the range of cells that contains the table of data. The first column of the table must contain the lookup value, and the data we want to retrieve must be in columns to the right.

- col_index_num: This is the number of column within the table that contains the data we want to retrieve. The first column in the table is column 1, the second column is column 2, and so on.

- range_lookup: This is an optional argument that specifies whether we want an exact match or an approximate match. If this argument is omitted or set to TRUE, Excel will search for an approximate match. If it is set to FALSE, Excel will search for an exact match.