Advance Excel Assignment 2

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

In Excel, the dollar sign ($) is used to create an absolute cell reference in a formula. When you use a dollar sign in a cell reference, it tells Excel to keep the same reference point regardless of where the formula is copied or moved.

The dollar sign can be placed in front of the column letter, the row number, or both, to create different types of absolute cell references:

1. $A1 - The dollar sign is in front of the column letter, which makes the reference absolute in the column. If you copy or move the formula to a different column, the column reference won't change.
2. A$1 - The dollar sign is in front of the row number, which makes the reference absolute in the row. If you copy or move the formula to a different row, the row reference won't change.
3. $A$1 - The dollar sign is in front of both the column letter and the row number, which makes the reference completely absolute. If you copy or move the formula to a different cell, neither the column nor the row reference will change.

Absolute cell references are useful when you need to refer to a fixed cell or range of cells in a formula, such as a constant or a total.

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

To change the reference from relative to absolute (or mixed) in an Excel formula, you need to add dollar signs ($) to the appropriate part of the reference. Here's how:

1. Select the cell containing the formula you want to modify.
2. Click inside the formula bar to edit the formula.
3. Highlight the part of the reference that you want to change from relative to absolute (or mixed).
4. Press the F4 key on your keyboard. Each time you press F4, Excel will cycle through the available reference types: from relative to absolute, from absolute to column absolute, from column absolute to row absolute, and from row absolute to relative again.
5. Alternatively, you can add the dollar signs manually by placing them in front of the appropriate part of the reference. A dollar sign in front of the column letter will make the column absolute, a dollar sign in front of the row number will make the row absolute, and a dollar sign in front of both will make the reference completely absolute. Once you have modified the reference, press Enter or click out of the formula bar to save the changes.

3. Explain the order of operations in excel?

In Excel, the order of operations is the sequence in which calculations are performed in a formula. The order of operations is important to ensure that formulas are calculated correctly and consistently. The order of operations in Excel is as follows:

1. Parentheses: Excel first calculates any expressions inside parentheses.
2. Exponents: Excel then calculates any exponentiation operations.
3. Multiplication and Division: Excel next calculates any multiplication or division operations, from left to right.
4. Addition and Subtraction: Excel finally calculates any addition or subtraction operations, from left to right.

For example, if you have the following formula: 10 + 5 \* 3 / (2 + 3), Excel will perform the calculations in the following order:

1. Parentheses: (2+3) = 5
2. Multiplication and Division: 5 \* 3 / 5 = 3
3. Addition and Subtraction: 10 + 3 = 13

So the result of the formula is 13.

It's important to be aware of the order of operations when creating complex formulas in Excel, to ensure that the calculations are performed in the correct order and the result is accurate. If you want to change the order of operations in a formula, you can use parentheses to group the expressions and force Excel to perform the calculations in a different order.

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

Some of the top 5 functions in Excel (in no particular order) are:

1. SUM: This function is used to add up a range of cells or values.

Basic syntax: =SUM(number1, [number2], ...)

For example: =SUM(A1:A10) adds up the values in cells A1 to A10.

1. IF: This function is used to perform a logical test and return one value if the test is true, and another value if the test is false.

Basic syntax: =IF(logical\_test, value\_if\_true, value\_if\_false)

For example: =IF(A1>10, "Greater than 10", "Less than or equal to 10") returns "Greater than 10" if the value in cell A1 is greater than 10, and "Less than or equal to 10" if it's less than or equal to 10.

1. VLOOKUP: This function is used to look up a value in a table and return a corresponding value from a specified column.

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

1. CONCATENATE: This function is used to join together two or more text strings into a single string.

Basic syntax: =CONCATENATE(text1, [text2], ...)

For example: =CONCATENATE("Hello", " ", "World") returns "Hello World".

1. AVERAGE: This function is used to calculate the average (arithmetic mean) of a range of cells or values.

Basic syntax: =AVERAGE(number1, [number2], ...)

For example: =AVERAGE(A1:A10) calculates the average of the values in cells A1 to A10.

Note: There are many other functions in Excel, and the "top" functions may vary depending on the specific task or analysis being performed.

5. When would you use the subtotal function?

The SUBTOTAL function in Excel is used to calculate a subtotal (sum, average, count, etc.) for a range of data, while also allowing the exclusion of certain hidden or filtered values. This function is particularly useful when working with large datasets that require grouping and summarizing.

The SUBTOTAL function can be used in situations where you want to calculate a total or summary value for a filtered list or a range of data, without including any values that are hidden or filtered out of the view. This can be especially useful when you have a large dataset and want to see subtotals for a particular category or group, but without including any irrelevant or hidden data.

To use the SUBTOTAL function, you need to specify the type of calculation you want to perform (such as sum, count, average, etc.) and the range of data you want to include in the calculation. You also need to specify whether to include or exclude hidden or filtered values in the calculation, using the optional "function\_num" argument.

For example, the formula =SUBTOTAL(9,A2:A10) will calculate the sum of values in the range A2:A10, but only for the visible cells (i.e., those that are not hidden or filtered out). The "9" in the formula is the function\_num argument for the SUM function.

In summary, the SUBTOTAL function is useful when you want to calculate subtotals for a range of data, while also excluding any hidden or filtered values. It is commonly used in financial analysis, data management, and other applications where summarizing large datasets is necessary.

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

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

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

Where:

* "lookup\_value" is the value you want to look up in the first column of the table\_array.
* "table\_array" is the range of cells that contains the lookup table. The first column of the range must contain the lookup values, and the subsequent columns contain the values to be returned by the function.
* "col\_index\_num" is the column number (starting with 1 for the leftmost column of the table\_array) that contains the value you want to return.
* "range\_lookup" is an optional argument that specifies whether you want an exact or approximate match for the lookup\_value. A value of TRUE or omitted will result in an approximate match, while a value of FALSE will result in an exact match.

Here is an example of how to use the VLOOKUP function:

Suppose you have a table of student grades, with student names in column A, and their corresponding grades in column B. You want to look up the grade for a specific student, given their name. To do this, you can use the VLOOKUP function as follows:

=VLOOKUP("John", A1:B10, 2, FALSE)

In this example, "John" is the lookup\_value, A1:B10 is the range of cells that contains the table of student names and grades, 2 is the column number that contains the grade (i.e., the second column), and FALSE specifies that you want an exact match for the lookup\_value.

The function will then return the grade for the student named "John". If "John" is not found in the first column of the table\_array, then the function will return an error value (i.e., #N/A).

In summary, the VLOOKUP function is used to look up a value in a table and return a corresponding value from a specified column. It is a powerful tool for managing and analyzing large datasets in Excel.