Advance Excel Assignment 2

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

The dollar sign fixes the reference to a given cell, so that it remains unchanged no matter where the formula moves. In other words, using $ in cell references allows you to copy the formula in Excel without changing references.

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

To change the reference from relative to absolute, you need to add the dollar sign before the column notation and the row number.

For example, A1 is a relative cell reference, and it would become absolute when you make it A1.

If you only have a couple of references to change, you may find it easy to change these references manually. So you can go to the formula bar and edit the formula (or select the cell, press F2, and then change it).

However, a faster way to do this is by using the keyboard shortcut – F4.

Here is what happens when you select the reference and press the F4 key.

- **Press F4 key once:** The cell reference changes from A1 to A1 (becomes 'absolute' from 'relative').
- **Press F4 key two times:** The cell reference changes from A1 to A$1 (changes to mixed reference where the row is locked).
- **Press F4 key three times:** The cell reference changes from A1 to $A1 (changes to mixed reference where the column is locked).

- **Press F4 key four times:** The cell reference becomes A1 again.

3. Explain the order of operations in excel?

the order in which a calculation is performed can affect the return value of the formula, so it's important to understand how the order is determined and how you can change the order to obtain the results you want.

Operator precedence in Excel formulas

If you combine several operators in a single formula, Excel performs the operations in the order shown in the following table. If a formula contains operators with the same precedence—for example, if a formula contains both a multiplication and division operator—Excel evaluates the operators from left to right.

Operator	Description
: (colon) (single space) , (comma)	Reference operators
–	Negation (as in –1)
%	Percent
^	Exponentiation
* and /	Multiplication and division
+ and –	Addition and subtraction
&	Connects two strings of text (concatenation)
= < > <= >= <>	Comparison

- **Using parentheses in Excel formulas**

- To change the order of evaluation, enclose in parentheses the part of the formula to be calculated first. For example, the following formula produces 11 because Excel performs multiplication before addition. The formula multiplies 2 by 3 and then adds 5 to the result.
- **=5+2*3**
- In contrast, if you use parentheses to change the syntax, Excel adds 5 and 2 together and then multiplies the result by 3 to produce 21.
- **=(5+2)*3**
- In the following example, the parentheses that enclose the first part of the formula force Excel to calculate B4+25 first and then divide the result by the sum of the values in cells D5, E5, and F5.
- **=(B4+25)/SUM(D5:F5)**

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

There are a variety of functions. Here are some of the most common functions you'll use:

- **SUM**: This function **adds** all the values of the cells in the argument.
- **AVERAGE**: This function determines the **average** of the values included in the argument. It calculates the sum of the cells and then divides that value by the number of cells in the argument.
- **COUNT**: This function **counts** the number of cells with numerical data in the argument. This function is useful for quickly counting items in a cell range.
- **MAX**: This function determines the **highest cell value** included in the argument.

- **MIN**: This function determines the **lowest cell value** included in the argument.

Sum function - The SUM function adds values. You can add individual values, cell references or ranges or a mix of all three. For example: =SUM (A2:A10) Adds the values in cells A2:10.

Average function - Returns the average (arithmetic mean) of the arguments. For example, if the range A1:A20 contains numbers, the formula =AVERAGE (A1:A20) returns the average of those.

5. When would you use the subtotal function?

The SUBTOTAL function is designed for columns of data, or vertical ranges. It is not designed for rows of data, or horizontal ranges. For example, when you subtotal a horizontal range using a function Num of 101 or greater, such as SUBTOTAL (109,B2:G2), hiding a column does not affect the subtotal.

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

Use VLOOKUP when you need to find things in a table or a range by row. For example, look up the price of an automotive part by the part number, or find an employee name based on their employee ID.

In its simplest form, the VLOOKUP function says:

=VLOOKUP (What you want to look up, where you want to look for it, the column number in the range containing the value to return, return an Approximate or Exact match – indicated as 1/TRUE, or 0/FALSE).

How to get started

There are four pieces of information that you will need in order to build the VLOOKUP syntax:

1. The value you want to look up, also called the lookup value.
2. The range where the lookup value is located. Remember that the lookup value should always be in the first column in the range for VLOOKUP to work correctly. For example, if your lookup value is in cell C2 then your range should start with C.
3. The column number in the range that contains the return value. For example, if you specify B2:D11 as the range, you should count B as the first column, C as the second, and so on.

4. Optionally, you can specify TRUE if you want an approximate match or FALSE if you want an exact match of the return value. If you don't specify anything, the default value will always be TRUE or approximate match.