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

* $A$1: The dollar sign before the column letter and row number ($A$1) creates an absolute reference for both the column and the row. If you copy or fill this reference to other cells, it will always point to cell A1.
* $A1: The dollar sign before the column letter ($A1) creates a mixed reference. The column reference is absolute, so it won't change when copied horizontally, but the row reference is relative and adjusts when copied vertically.
* A$1: The dollar sign before the row number (A$1) creates another type of mixed reference. The column reference is relative and changes when copied horizontally, while the row reference is absolute and remains fixed.

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

To change a reference from relative to absolute or mixed in Excel, you can use the dollar sign ($) to modify the cell reference. Here's how you can do it:

Select the cell containing the formula or the cell reference that you want to modify. In the formula bar, click on the part of the cell reference that you want to change. It could be the column letter, the row number, or both. Insert the dollar sign ($) in front of the part of the reference you want to make absolute or mixed. Here are the different scenarios: To make the entire reference absolute (both column and row), add a dollar sign before the column letter and row number. For example, changing A1 to $A$1. To make the column reference absolute but allow the row reference to change, add a dollar sign before the column letter only. For example, changing A1 to $A1. To make the row reference absolute but allow the column reference to change, add a dollar sign before the row number only. For example, changing A1 to A$1. Press Enter or click outside the formula bar to apply the modified reference.

3. Explain the order of operations in excel?

**Parentheses:** Operations enclosed in parentheses are evaluated first. Within parentheses, Excel follows the same order of operations again.

**Exponents:** Exponentiation or raising a number to a power is performed next. For example, if a formula contains expressions like "^" or "POWER", Excel will calculate those operations.

Multiplication and Division: Multiplication (\*) and division (/) operations are evaluated from left to right. If multiple multiplication or division operations are present in the formula, Excel will calculate them in the order they appear.

**Addition and Subtraction:** Addition (+) and subtraction (-) operations are evaluated from left to right. Like multiplication and division, Excel calculates them in the order they appear in the formula.

**Comparison Operators**: If the formula includes comparison operators like (<, >, <=, >=, =, <>), they are evaluated next.

**Logical Operators:** Logical operations like AND, OR, and NOT are evaluated after comparison operators.

**Concatenation:** If the formula contains the ampersand (&) operator for joining text or concatenating strings, it is evaluated last.

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

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

**IF function**: Syntax: =IF(logical\_test, value\_if\_true, value\_if\_false)

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

**COUNT function:** Syntax: =COUNT(value1, [value2], ...)

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

5. When would you use the subtotal function?

**Creating subtotal rows:** If you have a large dataset with multiple groups or categories, you can use the SUBTOTAL function to calculate subtotals for each group. By inserting subtotal rows and using the SUBTOTAL function, you can easily summarize and analyze data at different levels.

**Filtering data:** When you filter data in Excel, the hidden rows are not included in regular calculations. However, if you need to calculate subtotals or summary statistics with the filtered data, you can use the SUBTOTAL function. It automatically considers only the visible cells and excludes hidden rows from the calculation.

**Ignoring nested subtotals:** If you already have subtotals in your dataset and you want to calculate another subtotal that excludes the nested subtotals, the SUBTOTAL function can help. It provides various calculation options (such as sum, average, count, etc.) and the ability to ignore other nested SUBTOTAL functions within the range.

**Conditional calculations:** The SUBTOTAL function can be used in combination with other functions, such as IF or SUMIF, to perform conditional calculations. You can apply specific conditions or criteria to calculate subtotals based on certain criteria.

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

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

**lookup\_value:** This is the value you want to search for within the first column of the table\_array. It can be a specific value, a cell reference, or a formula that evaluates to a value.

**table\_array:** This refers to the range of cells that contains the data you want to search in. The VLOOKUP function searches for the lookup\_value in the leftmost column of this range. The table\_array can be specified as a range of cells (e.g., A1:D10), or it can be a named range.

**col\_index\_num:** This is the column number within the table\_array from which you want to retrieve the result. For example, if you want to retrieve data from the third column of the table\_array, you would enter 3 as the col\_index\_num.

**range\_lookup (optional):** This parameter determines whether the VLOOKUP function should perform an exact match or an approximate match. If you want an exact match, you should enter FALSE or 0. If you want an approximate match, you should enter TRUE or 1. If this parameter is omitted, Excel assumes an approximate match by default.