

Q1:-

Office 365 allows your organisation to store all the files in the cloud. This means they can be accessed on any device, from any location with an internet connection. For organisations where mobile working is essential, being able to access all the apps and files you need when out of the office is invaluable.

Q2:-

How to merge two tables in Excel with formulas

Whatever task you need to perform in your worksheets, where do you look for a solution in the first place? Like many users, I usually go to the *Formulas* tab and open a list of functions. Merging tables is

no exception :)

How to join tables with VLOOKUP

If you are to merge two tables based on **one column**, VLOOKUP is the right function to use.

Supposing you have two tables in two different sheets: the main table contains the seller names and products, and the lookup table contains the names and amounts. You want to combine these two tables by matching data in the *Seller* column:

The diagram illustrates the joining of two tables using the VLOOKUP function. A blue arrow labeled "Common column" points from the "Seller" column of the "Main table" to the "Seller" column of the "Lookup table". The "Main table" contains data for sellers Adam, Harry, Luis, Nick, Pete, Rob, Ron, Steve, and Tom, with their respective products (Bananas, Oranges, Apples, Lemons) and amounts. The "Lookup table" contains data for sellers Ron, Luis, Nick, Steve, Harry, Rob, Adam, Pete, and Tom, with their respective amounts (\$510, \$520, \$550, \$600, \$605, \$605, \$705, \$735, \$920). The "Seller" column is identified as the common column for the join.

	A	B	C
1	Seller	Product	Amount
2	Adam	Bananas	
3	Harry	Oranges	
4	Luis	Apples	
5	Nick	Lemons	
6	Pete	Bananas	
7	Rob	Lemons	
8	Ron	Apples	
9	Steve	Bananas	
10	Tom	Lemons	

Main table

	A	B
1	Seller	Amount
2	Ron	\$510
3	Luis	\$520
4	Nick	\$550
5	Steve	\$600
6	Harry	\$605
7	Rob	\$605
8	Adam	\$705
9	Pete	\$735
10	Tom	\$920

Lookup table

As you see, the order of the names in the main table does not correspond with that in the lookup table, therefore a simple copy/pasting technique won't work.

To combine two tables by a **matching column** (*Seller*), you enter this formula in C2 in the main table:

```
=VLOOKUP($A2,'Lookup table'  
$A$2:$B$10,2, FALSE)
```

Where:

- \$A2 is the value you are looking for.
- '*Lookup table*'!\$A\$2:\$B\$10 is the table to search (please pay attention that we lock the range with absolute cell references).

- 2 is the number of the column from which to retrieve the value.

Copy the formula down the column, and you will get a **merged table** consisting of the main table, plus the matched data pulled from the lookup table:

	A	B	C	D	E
1	Seller	Product	Amount		
2	Adam	Bananas	\$705		
3	Harry	Oranges	\$605		
4	Luis	Apples	\$520		
5	Nick	Lemons	\$550		
6	Pete	Bananas	\$735		
7	Rob	Lemons	\$605		
8	Ron	Apples	\$510		
9	Steve	Bananas	\$600		
10	Tom	Lemons	\$920		

Please be aware that Excel VLOOKUP has several limitations, the most critical of which are 1) inability to pull data from a column to the left of the lookup column and 2) a hardcoded column number breaks a formula when you add or remove columns in the lookup table. On the bright side, you can easily reorder the returned columns simply by changing the number in

the *col_index_num* argument.

Tip. If you have an Excel 365 subscription, then you can use a more powerful successor of VLOOKUP - Excel XLOOKUP function.

How to merge tables in Excel with INDEX MATCH

If you are looking for a more powerful and versatile alternative to the VLOOKUP function, embrace this INDEX MATCH combination:

INDEX (*return_range*, **MATCH** (*lookup_value*, *lookup_range*, 0))

The syntax is explained in detail in this tutorial: INDEX / MATCH in Excel. And here

I will show you how to use this formula to look up from right to left, something that VLOOKUP is unable to do.

Let's say you have another lookup table with order IDs in the first column and you wish to copy those IDs to the main table by matching the seller names. For better visualization, both tables are put on the same sheet:

	A	B	C	D	E	F
1	Seller	ID	Product		ID	Seller
2	Adam		Bananas		101	Ron
3	Harry		Oranges		102	Steve
4	Luis		Apples		103	Tom
5	Nick		Lemons		104	Luis
6	Pete		Bananas		105	Nick
7	Rob		Lemons		106	Rob
8	Ron		Apples		107	Adam
9	Steve		Bananas		108	Harry
10	Tom		Lemons		109	Pete

To accomplish the task, you supply the following arguments to the Index Match formula:

- *Return_range* - \$E\$2:\$E\$10

- *Lookup_value* - \$A2
- *Lookup_range* - \$F\$2:\$F\$10

Please notice the \$ sign that locks the ranges to prevent them from changing as you copy the formula down the table:

The completed formula looks as follows:

```
=INDEX($E$2:$E$10, MATCH($A2,
$F$2:$F$10, 0))
```

...and combines data from two tables perfectly:

●

A	B	C	D	E	F
Seller	ID	Product		ID	Seller
Adam	107	Bananas		101	Ron
Harry	108	Oranges		102	Steve
Luis	104	Apples		103	Tom
Nick	105	Lemons		104	Luis
Pete	109	Bananas		105	Nick
Rob	106	Lemons		106	Rob
Ron	101	Apples		107	Adam
Steve	102	Bananas		108	Harry
Tom	103	Lemons		109	Pete

In Excel 365, you can use the new XLOOKUP function for the same purpose:

```
=XLOOKUP(A2, $F$2:$F$10, $E$2:$E$10,  
"Not found")
```

How to combine tables by matching multiple columns

If the two tables you wish to join do not have a unique identifier, such as an order id or SKU, you can match values in two or more columns by using this formula:

```
INDEX(lookup_table, MATCH(1,  
(lookup_value1=lookup_range1) *  
(lookup_value2=lookup_range2),  
0), return_column_number)
```

Note. It is an array formula, so please remember to press Ctrl + Shift + Enter to enter it correctly.

The formula's breakdown can be found here: Look up with multiple criteria. For now, let's focus on the practical usage.

Assuming you have the following two tables to be combined into one. Because the *Order ID* column is missing in the lookup table, the only way to match the orders is by *Seller* and *Product*.

	A	B	C	D	E	F	G	H
1	Order ID	Seller	Product	Amount		Seller	Product	Amount
2	101	Adam	Bananas			Adam	Bananas	\$510
3	102	Harry	Oranges			Harry	Apples	\$520
4	103	Harry	Apples			Harry	Oranges	\$550
5	104	Adam	Lemons			Adam	Apples	\$600
6	105	Harry	Bananas			Harry	Lemons	\$605
7	106	Adam	Apples			Harry	Bananas	\$605
8	107	Adam	Oranges			Adam	Lemons	\$705
9	108	Harry	Lemons			Adam	Oranges	\$735

Based on the above screenshot, let's define the arguments for our formula:

- *Lookup_table* - \$F\$2:\$H\$9
- *Lookup_value1* - \$B2
- *Lookup_range1* - \$F\$2:\$F\$9
- *Lookup_value2* - \$C2
- *Lookup_range2* - \$G\$2:\$G\$9
- *Return_column_number* - 3

Again, be sure to fix all the **ranges** with **absolute cell references** so that they won't change when you copy the formula down:

```
=INDEX($F$2:$H$9, MATCH(1,
($B2=$F$2:$F$9) * ($C2=$G$2:$G$9), 0),
3)
```

Enter the formula in D3, press Ctrl + Shift + Enter, copy it to the below rows and check the result:

	A	B	C	D	E	F	G	H
1	Order ID	Seller	Product	Amount		Seller	Product	Amount
2	101	Adam	Bananas	\$510		Adam	Bananas	\$510
3	102	Harry	Oranges	\$550		Harry	Apples	\$520
4	103	Harry	Apples	\$520		Harry	Oranges	\$550
5	104	Adam	Lemons	\$705		Adam	Apples	\$600
6	105	Harry	Bananas	\$605		Harry	Lemons	\$605
7	106	Adam	Apples	\$600		Harry	Bananas	\$605
8	107	Adam	Oranges	\$735		Adam	Lemons	\$705
9	108	Harry	Lemons	\$605		Adam	Oranges	\$735

To have a closer look at the above examples and probably reverse-engineer the formulas, you are welcome to download our sample workbook to Merge Two Tables in Excel.

Join multiple tables into one with Excel Power Query

In situations when you need to combine

two or more tables with different numbers of rows and columns, Excel Power Query may come in handy. However, please be aware that joining tables with Power Query cannot be done with a mere couple of clicks. Explaining all the nuances would take far more space than we have here, so I will just briefly outline the main features:

- Power Query can merge two tables by matching one or several columns.
- The source tables can be on the same sheet or in different worksheets.
- The original tables are not changed. The data is combined into a new table that can be imported in an existing or a new worksheet.
- In Excel 2016 and Excel 2019, Power

Query is an inbuilt feature. In Excel 2010 and Excel 2013, it can be downloaded as an add-in.

The detailed guidance can be found in this tutorial: How to join tables with Excel Power Query.

Q4:-

- **=TEXT(Value you want to format, "Format code you want to apply")**

Here are some popular examples, which you can copy directly into Excel to experiment with on your own.

Notice the format codes within quotation marks.

Formula

Description

=TEXT(1234.567,"\$#,##0.00")

Currency with a thousands separator and 2 decimals, like \$1,234.57. Note that Excel rounds the value to 2 decimal places.

=TEXT(TODAY(),"MM/DD/YY")

Today's date in MM/DD/YY
format, like 03/14/12

=TEXT(TODAY(),"DDDD")

Today's day of the week, like
Monday

=TEXT(NOW(),"H:MM AM/PM")

Current time, like 1:29 PM

=TEXT(0.285,"0.0%")

Percentage, like 28.5%

=TEXT(4.34 , "# ?/?")

Fraction, like 4 1/3

=TRIM(TEXT(0.34,"# ?/?"))

Fraction, like 1/3. Note this uses the TRIM function to remove the leading space with a decimal value.

=TEXT(12200000,"0.00E+00")

Scientific notation, like

1.22E+07

=TEXT(1234567898,"[<=999999
9]###-#####;(###) ###-#####")

Special (Phone number), like
(123) 456-7898

=TEXT(1234,"0000000")

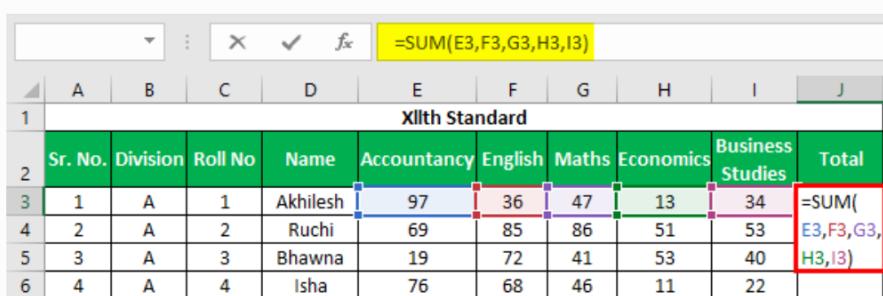
Add leading zeros (0), like
0001234

=TEXT(123456,"##0° 00' 00'")

Custom - Latitude/Longitude

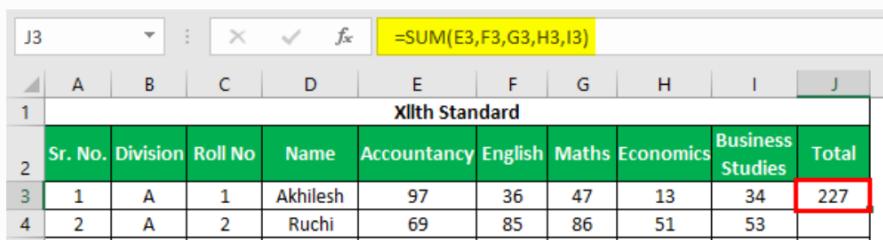
Q5:-

#1 – Comma Method



	A	B	C	D	E	F	G	H	I	J
1	XIth Standard									
2	Sr. No.	Division	Roll No.	Name	Accountancy	English	Maths	Economics	Business Studies	Total
3	1	A	1	Akhilesh	97	36	47	13	34	=SUM(
4	2	A	2	Ruchi	69	85	86	51	53	E3,F3,G3,
5	3	A	3	Bhawna	19	72	41	53	40	H3,I3)
6	4	A	4	Isha	76	68	46	11	22	

Total will be –



	A	B	C	D	E	F	G	H	I	J
1	XIth Standard									
2	Sr. No.	Division	Roll No.	Name	Accountancy	English	Maths	Economics	Business Studies	Total
3	1	A	1	Akhilesh	97	36	47	13	34	227
4	2	A	2	Ruchi	69	85	86	51	53	

In this method, we use commas for specifying and separating the arguments. We have specified or selected various cells with commas.

#2 – Colon Method (Shift Method)

In this method, we have used the ‘Shift’ key after selecting the first cell (E3) and then used the Right Arrow key to select cells until I3. We can select continuous cells or specify the

range with the colon manually.

A screenshot of Microsoft Excel showing a spreadsheet titled "XIith Standard". The columns are labeled: Sr. No., Division, Roll No., Name, Accountancy, English, Maths, Economics, Business Studies, and Total. Row 3 contains data for student Akhilesh (Sr. No. 1, Division A, Roll No. 1) with marks 97, 36, 47, 13, 34. The formula `=SUM(E3:I3)` is entered into cell J3, and the range E3:I3 is highlighted with a blue selection bar. A red box highlights the formula in the formula bar.

	A	B	C	D	E	F	G	H	I	J
1	XIith Standard									
2	Sr. No.	Division	Roll No.	Name	Accountancy	English	Maths	Economics	Business Studies	Total
3	1	A	1	Akhilesh	97	36	47	13	34	=SUM(E3:I3)
4	2	A	2	Ruchi	69	85	86	51	53	
5	3	A	3	Bhawna	19	72	41	53	40	

Total will be –

A screenshot of Microsoft Excel showing the same spreadsheet after the formula was entered. Cell J3 now displays the value 227, which is the sum of the marks in cells E3:I3. The formula bar still shows `=SUM(E3:I3)`.

	A	B	C	D	E	F	G	H	I	J
1	XIith Standard									
2	Sr. No.	Division	Roll No.	Name	Accountancy	English	Maths	Economics	Business Studies	Total
3	1	A	1	Akhilesh	97	36	47	13	34	227
4	2	A	2	Ruchi	69	85	86	51	53	

After entering the formula for the first student, we can copy down the formula using **Ctrl+D** as a shortcut key after selecting the range with

the first cell at the top so that this formula can be copied down.

Apply the above formula to all the remaining cells. We get the following result.

J3	A	B	C	D	E	F	G	H	I	J
1	XIth Standard									
2	Sr. No.	Division	Roll No.	Name	Accountancy	English	Maths	Economics	Business Studies	Total
3	1	A	1	Akhilesh	97	36	47	13	34	227
4	2	A	2	Ruchi	69	85	86	51	53	344
5	3	A	3	Bhawna	19	72	41	53	40	225
6	4	A	4	Isha	76	68	46	11	22	223
7	5	A	5	Chetan	55	31	56	99	93	334
8	6	A	6	Neeti	84	57	68	30	31	270
9	7	A	7	Chanchal	18	46	51	63	22	200
10	8	A	8	Preeti	93	93	31	93	20	330

#2 – AVERAGE Function

For calculating Average Marks,

we will use the **AVERAGE** function. The syntax for the **AVERAGE** function is the same as the **SUM** function.

```
=AVERAGE(
```

AVERAGE(number1, [number2], ...)

This function returns the average of its arguments.

We can pass arguments to this function in the same way as we pass arguments to the **SUM** function.

For evaluating the average in the excel mark sheet, we will use the **AVERAGE** function in the following way. We will select marks scored by

