M365 Excel Basics Video 06: Types of Formulas and Excel Table Feature

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Please note: For this class, we will use F12 to save our files for the first time and CTRL +S to save the changes we make to our files.

Types of Formula

Traditional Formulas (Single Input-Output Formulas)

These are formulas that operate on single inputs and deliver a single answer. This type of formula has single values entered in a function argument or has single values on either side of an operator. For example: =A1+B1, here the operator is an addition operator.

Formula Requirements:

- The type of cell references (relative, absolute, mixed) to use in the formula.
- Formula is entered in one cell and if the formula must be copied, you must manually copy the formula to other cells.
- To edit the formula, you edit the cell and re-copy the formula to other cells if necessary.
- You use this formula if you will have to send the solution to someone without the Office 365 (M365) Excel.

Dynamic Spilled Array Formulas (DSAF).

These are formulas that deliver a spilled array to the worksheet (neighboring cells) as the final answer. The Dynamic Spilled Array Formulas spill from the top cell to the neighboring cells but only live in the top cell. When you want to add the values that are in the spilled array, you refer to the spilled array with the spilled range operator # for example for the SUM it will be =SUM(G9#)

*Array Formulas are formulas that contain one or more array operations that deliver an array of answers rather than a single answer. The array operation can involve multiple values entered into a function argument, e.g. =FORMULATEXT(G9:G12), or there can be multiple values on one or more sides of an operator, for example: =F9:F14*G6. Array formula is the general term used to describe both types of array formulas.*

Excel Table Formulas

These are formulas that use the table formula nomenclature, rather than cell references.
Excel Tables Formulas are dynamic because if you add rows or columns, anything pointing to table will update with new data. You use this formula when you will add new records to your table, the formulas are automatically copied down the column, but you must remember to Lock the Cell Reference.

Some of the other items that will update in Excel automatically are formulas and Charts. The Pivot Tables will not update automatically if new data is added you must remember to refresh the Pivot Tables.

Do not use the Dynamic Spilled Array Formulas in Excel Tables as they are not allowed.

Excel Table Formulas

Commision Rate	0.0573	

Sales Amount ▾	Commission Amount ▾	
$20,345.98	$1,165.82	=ROUND([@[Sales Amount]]*L6,2)
$52,345.49	$2,999.40	
$37,235.80	$2,133.61	
$49,541.12	$2,838.71	

Table Formula nomenclature:

From the above Table – the references to the Table objects
Table Name: = SalesCommission
Field Name in the Excel Table: = SalesCommission[Sales Amount]
Relative Cell Reference: = [@[salesAmount]] or [@sales]
@ is the Implicit Intersection Operator. It allows to get a corresponding item in the current row of a column or a parallel column.

Excel Table Feature

To use an Excel Table feature you must have a proper Dataset. If your table is a proper dataset you can easily convert it to an Excel Table. Excel Table makes it easier to manage and analyze your data.

A table includes a Header Row. The columns on the table has filtering enabled in the header row which helps to efficiently sort and filter data quickly. You can turn on and off the filter button using the Filter button in the Sort and Filter group on your Data Tab on the Ribbon. We will cover the Sort and Filter at a later video in this class.

When converting your proper dataset to an Excel Table be sure to check the box "My table has headers". This helps to avoid Excel creating for your default headers for the table labeled as Column 1; Column 2
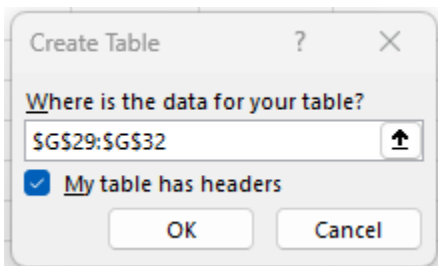

If you do not check the 'My table has headers' box Excel will default the column headers as seen below

The Excel Table has shading in rows to help distinguish the data. When you enter a formula in one cell Excel creates a calculated column where the formula is instantly applied to all the other cells in that table column.

Once you add the Total Rows, Excel gives you an Auto Sum drop-down list to select functions from. When you select one of the options, Excel will automatically convert them to a SUBTOTAL function. See the picture below.
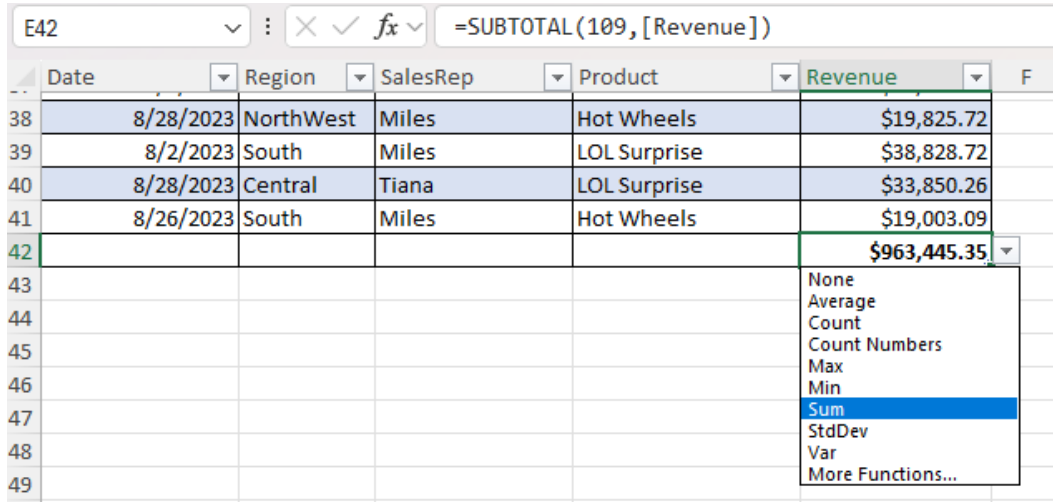
You can turn a range of cells or a proper dataset to an Excel table by following these steps:

Option 1:

1. Click on one cell in your table
2. Go to the Home Tab of the Ribbon, and in the Styles group, click the Format as Table button arrow to show the different table styles .
3. Pick a table style.
4. In the Format as Table (Create a Table) dialog box, select the checkbox next to My table as headers if you want the first row of the range to be the header row, and then click OK
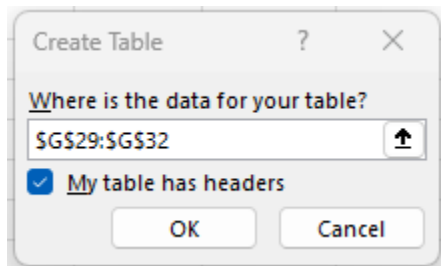
Option 2:

1. Click on one cell in your table
2. Go to the Insert Tab of the Ribbon, and in the Tables group, click the Table button.
3. In the Format as Table (Create a Table) dialog box, select the checkbox next to My table as headers if you want the first row of the range to be the header row, and then click OK

Option 3: (*This is the fastest one as you are using the keyboard shortcut*).

1. Click on one cell in your table
2. Press CTRL + T on your keyboard.
3. In the Format as Table (Create a Table) dialog box, select the checkbox next to My table as headers if you want the first row of the range to be the header row, and then click OK
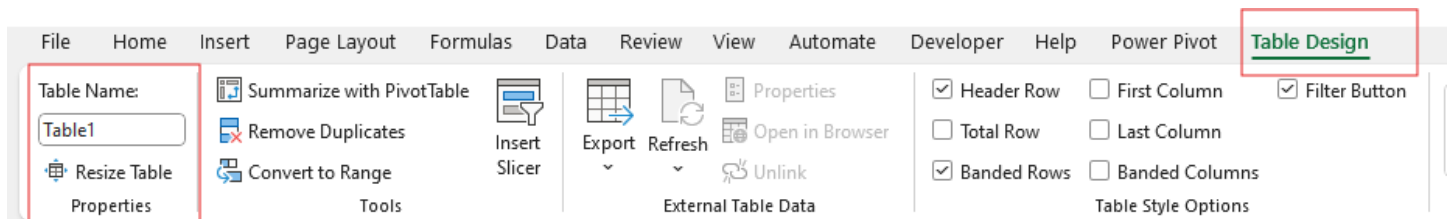
Naming the Excel Table

When you convert your proper dataset to an Excel Table the first thing that you need to make sure to do is name the Table. Once you have created your Excel Table, you will see a contextual Tab on your Ribbon named Table Design.

If you can recall from the File Explorer video lessons, contextual tabs are hidden tabs on the Ribbon and they appear when objects like images and Tables are selected in Microsoft programs.

To Name your Excel Table:

Go to the Table Design tab of the Ribbon, and on the Properties group, on the Table Name: change the default 'Table1' name and name your table to reflect the data that is in your Excel table.

Note: *If you do not see the contextual tab on your Ribbon, it is because you have selected a cell outside of your table. You need to select inside your Excel Table to see the contextual Tab – Table Design.*

When naming the Excel Table do not include any spaces for the name of the Table. Space or character isn't allowed.

A picture of a proper dataset that has been converted to an Excel Table

	A	B	C	D	E
10					
11	Date	Region	SalesRep	Product	Revenue
12	8/24/2023	Central	Miles	Hot Wheels	$23,935.30
13	8/23/2023	Central	Cinderelli	LOL Surprise	$46,241.84
14	8/7/2023	South	Tiana	LOL Surprise	$20,003.13
15	8/11/2023	South	Tiana	Hot Wheels	$24,148.61
16	8/26/2023	Central	Miles	Hot Wheels	$43,173.32
17	8/22/2023	NorthWest	Miles	LOL OMG Surprise	$23,553.65
18	8/26/2023	South	Tiana	Hot Wheels	$26,863.98
19	8/15/2023	North	Miles	LOL OMG Surprise	$35,320.76
20	8/6/2023	South	Cinderelli	Hot Wheels	$15,196.59
21	8/11/2023	South	Tiana	LOL Surprise	$48,533.17
22	8/19/2023	NorthWest	Cinderelli	LOL Surprise	$30,517.67
23	8/10/2023	NorthWest	Tiana	LOL OMG Surprise	$22,962.38
24	8/5/2023	South	Cinderelli	LOL OMG Surprise	$26,230.06
25	8/11/2023	North	Cinderelli	LOL Surprise	$34,445.91
26	8/10/2023	North	Cinderelli	LOL OMG Surprise	$41,175.59
27	8/18/2023	South	Tiana	LOL OMG Surprise	$28,456.15
28	8/30/2023	Central	Miles	Hot Wheels	$46,883.49
29	8/14/2023	South	Miles	Hot Wheels	$48,675.77
30	8/6/2023	NorthWest	Tiana	LOL Surprise	$19,604.95
31	8/20/2023	NorthWest	Miles	LOL Surprise	$48,922.29
32	8/31/2023	South	Tiana	Hot Wheels	$42,727.99
33	8/2/2023	Central	Cinderelli	LOL OMG Surprise	$21,408.69
34	8/3/2023	Central	Cinderelli	LOL Surprise	$24,455.63
35	8/8/2023	North	Tiana	Hot Wheels	$28,107.26
36	8/26/2023	Central	Cinderelli	Hot Wheels	$45,728.49
37	8/8/2023	North	Miles	Hot Wheels	$34,664.89
38	8/28/2023	NorthWest	Miles	Hot Wheels	$19,825.72
39	8/2/2023	South	Miles	LOL Surprise	$38,828.72
40	8/28/2023	Central	Tiana	LOL Surprise	$33,850.26
41	8/26/2023	South	Miles	Hot Wheels	$19,003.09

Advantages of using Excel Table Feature

The advantage of using the Excel Table Feature is that if you need to add new records to the table everything will update automatically.

Advantages of Excel Table Formulas

- Formulas will automatically copy down the column
- Formulas will update automatically
- Use Excel Tables when you will need to add new records to your Table

Define Names

You can define names for a cell range, a table, or a single cell reference. Using the names can make the formulas easier to understand and/or maintain.

How to name a cell:

1. Select the cell
2. In the Name box, type a name
3. Press Enter
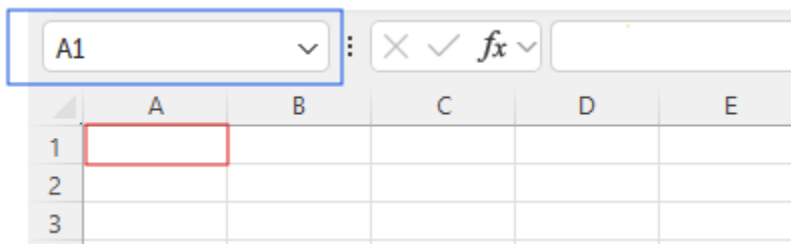
To reference the name the value of the cell you named in your formula, type the equal sign (=) and enter a formula and then type the first letter of the name, and select the name from the list that appears.

Define names for a selected range

1. Select the range you want to name, including the column and row labels
2. Go to Formulas tab of the Ribbon and in the Define Names group click on the Define Name button.
3. A New Name dialog box appears with a reference of the selected range. On the Name Box type the name that you would like to name your selected range.
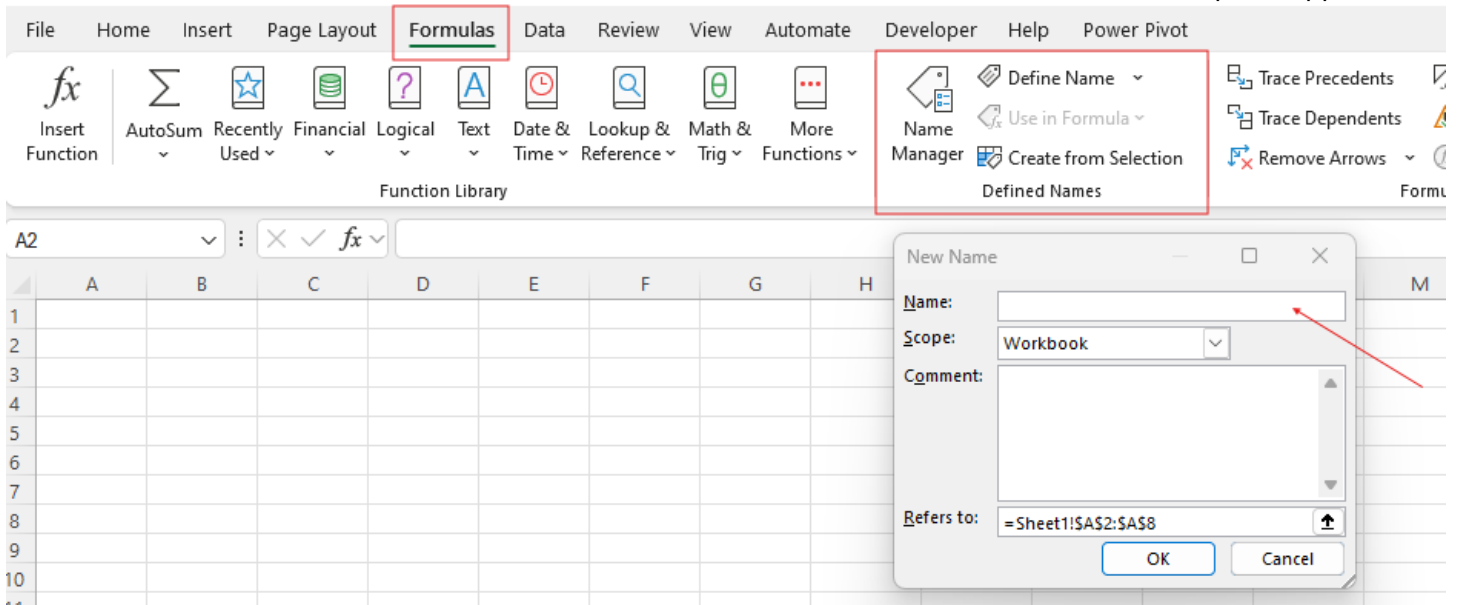
Use the Name Manager on the Define Names group to create, edit, delete and find all the names used in the workbook

Data Validation

Data Validation List feature lets you add a drop-down list to a cell to allow a user to select from a valid list of names. The feature shows an error message if the user types something that is not in the validation list.

UNIQUE array function allows you to look through a column and deliver a unique list of values without any duplicates. We then use the unique list of values to validate or for our data validation list.

PS. For more on Data validation, refer to the M365 Excel Basics Video 05 notes.

Calculations and Formulas

the

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2	**Goal:** Calculate the Commission Amount using 3 different Types of Formulas.														
3															
4	**Traditional Formula (Single-Input, Single-Output Formulas)**					**Dynamic Spilled Array Formulas**					**Excel Table Formulas**				
5															
6	Commision Rate	0.0573				Commision Rate	0.0573				Commision Rate		0.0573			
7															
8	Sales Amount	Commission Amount				Sales Amount	Commission Amount				Sales Amount	Commission Amount			
9	$20,345.98	$1,165.82		=ROUND(A9*B6,2)		$20,345.98	$1,165.82		=ROUND(F9:F12*G6,2)		$20,345.98	$1,165.82		=ROUND([@[Sales Amount]]*L6,2)	
10	$52,345.49	$2,999.40				$52,345.49	$2,999.40				$52,345.49	$2,999.40			
11	$37,235.80	$2,133.61				$37,235.80	$2,133.61				$37,235.80	$2,133.61			
12	$49,541.12	$2,838.71				$49,541.12	$2,838.71				$49,541.12	$2,838.71		=ROUND([@[Sales Amount]]*L6,2)	
13															
14															
15	**Notes - When to use:**					**Notes - Advantages:**					**Notes - When to use:**				
16	You use this formula when you will have to					Do not need to Lock the Cell References					You use this formula when you will add new records to your table				
17	send a solution to someone without					Do not need to manually copy the formula					Formulas are automatically copied down the column but you				
18	Microsoft Office 365 (M365) Excel					Editing a formula is easier and faster					still need to remember to Lock the Cell Reference.				
19															
20															
21															

Example 1:

COUNTIFS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Ex. 1																
2	GOAL:		COUNTIFS	Counts Matches											Sorted Unique List		
3	Convert Proper Dataset into an Excel Table and Name the Table						AND Logical Test:	The Product Field, SalesRep Field and Region Field must contain the specified fields							Product	SalesRep	Region
4	Count how many products were sold by which SalesRep														Hot Wheels	Cinderelli	Central
5	Count how many products were sold by which SalesRep in each Region						Criteria								LOL OMG Surprise	Miles	North
6	Create a Sorted Unique Lists for the Products and SalesRep						Product	SalesRep							LOL Surprise	Tiana	NorthWest
7	Add Data Validation to the Criteria Product and Sales Rep in the cells G7 and H7						Hot Wheels	Miles									South
8	from the Unique lists that you created.						Count		7	=COUNTIFS(ProductCntans[Product],G7,ProductCntans[SalesRep],H7)							
9																	
10							Excel Table Formulas										
11	Date	Region	SalesRep	Product	Revenue												
12	8/24/2023	Central	Miles	Hot Wheels	$23,935.30		Region	Count									
13	8/23/2023	Central	Cinderelli	LOL Surprise	$46,241.84		Central	3	=COUNTIFS(ProductCntans[Region],[@Region],ProductCntans[Product],G7,ProductCntans[SalesRep],H7)								
14	8/7/2023	South	Tiana	LOL Surprise	$20,003.13		North	1	COUNTIFS counts with two or more criterias/conditions								
15	8/11/2023	South	Tiana	Hot Wheels	$24,148.61		NorthWest	1									
16	8/26/2023	Central	Miles	Hot Wheels	$43,173.32		South	2									
17	8/22/2023	NorthWest	Miles	LOL OMG Surprise	$23,553.65												
18	8/26/2023	South	Tiana	Hot Wheels	$26,863.98		Advantages of Excel Table Formulas										
19	8/15/2023	North	Miles	LOL OMG Surprise	$35,320.76		Formulas will automatically copy down the column										
20	8/6/2023	South	Cinderelli	Hot Wheels	$15,196.59		Formulas will update automatically										
21	8/11/2023	South	Tiana	LOL Surprise	$48,533.17		Use Excel Tables when you will need to add new records to your Table										
22	8/19/2023	NorthWest	Cinderelli	LOL Surprise	$30,517.67												
23	8/10/2023	NorthWest	Tiana	LOL OMG Surprise	$22,962.38		***When using Excel Tables you still must lock the cell references										
24	8/5/2023	South	Cinderelli	LOL OMG Surprise	$26,230.06												
25	8/11/2023	North	Cinderelli	LOL Surprise	$34,445.91												
26	8/10/2023	North	Cinderelli	LOL OMG Surprise	$41,175.59												
27	8/18/2023	South	Tiana	LOL OMG Surprise	$28,456.15												
28	8/30/2023	Central	Miles	Hot Wheels	$46,883.49												
29	8/14/2023	South	Miles	Hot Wheels	$48,675.77												
30	8/6/2023	NorthWest	Tiana	LOL Surprise	$19,604.95												
31	8/20/2023	NorthWest	Miles	LOL Surprise	$48,922.29												
32	8/31/2023	South	Tiana	Hot Wheels	$42,727.99												
33	8/2/2023	Central	Cinderelli	LOL OMG Surprise	$21,408.69												
34	8/3/2023	Central	Cinderelli	LOL Surprise	$24,455.63												
35	8/8/2023	North	Tiana	Hot Wheels	$28,107.26												

Example 2:

COUNTIFS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Ex. 2													
2	GOAL:													
3	Convert Proper Dataset into an Excel Table and Name the Table						AND Logical Test: The Product Field, SalesRep Field and Region Field must contain the specified fields							
4	Count how many sales are GREATER THAN $40,000													
5	Count how many sales are GREATER THAN $40,000 in each Region													
6														
7	COUNTIFS	Counts Matches					Sales Hurdle	>40000						
8							Count	9		=COUNTIFS(RegionSalesCntans[Revenue],H7)				
9														
10							**Excel Table Formulas**							
11	Date	Region	SalesRep	Product	Revenue									
12	8/24/2023	Central	Miles	Hot Wheels	$23,935.30		Region	Count						
13	8/23/2023	Central	Cinderelli	LOL Surprise	$46,241.84		Central	4		=COUNTIFS(RegionSalesCntans[Revenue],H7,RegionSalesCntans[Region],[@Region])				
14	8/7/2023	South	Tiana	LOL Surprise	$20,003.13		North	1		COUNTIFS counts with one or more criterias/conditions				
15	8/11/2023	South	Tiana	Hot Wheels	$24,148.61		NorthWest	1						
16	8/26/2023	Central	Miles	Hot Wheels	$43,173.32		South	3						
17	8/22/2023	NorthWest	Miles	LOL OMG Surprise	$23,553.65									
18	8/26/2023	South	Tiana	Hot Wheels	$26,863.98		Advantages of Excel Table Formulas				*** In an example like this, a PivotTable might be harder			
19	8/15/2023	North	Miles	LOL OMG Surprise	$35,320.76		Formulas will automatically copy down the column				to create because for our condition "Greater Than"			
20	8/6/2023	South	Cinderelli	Hot Wheels	$15,196.59		Formulas will update automatically				We are using a comparative operator condition			
21	8/11/2023	South	Tiana	LOL Surprise	$48,533.17		Use Excel Tables when you will need to add new records to your Table				for the sales greater than condition/criteria			
22	8/19/2023	NorthWest	Cinderelli	LOL Surprise	$30,517.67									
23	8/10/2023	NorthWest	Tiana	LOL OMG Surprise	$22,962.38		***When using Excel Tables you still must lock the cell references							
24	8/5/2023	South	Cinderelli	LOL OMG Surprise	$26,230.06									
25	8/11/2023	North	Cinderelli	LOL Surprise	$34,445.91									
26	8/10/2023	North	Cinderelli	LOL OMG Surprise	$41,175.59									
27	8/18/2023	South	Tiana	LOL OMG Surprise	$28,456.15									
28	8/30/2023	Central	Miles	Hot Wheels	$46,883.49									
29	8/14/2023	South	Miles	Hot Wheels	$48,675.77									
30	8/6/2023	NorthWest	Tiana	LOL Surprise	$19,604.95									
31	8/20/2023	NorthWest	Miles	LOL Surprise	$48,922.29									
32	8/31/2023	South	Tiana	Hot Wheels	$42,727.99									
33	8/2/2023	Central	Cinderelli	LOL OMG Surprise	$21,408.69									
34	8/3/2023	Central	Cinderelli	LOL Surprise	$24,455.63									

Example 3:

AVERAGEIFS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	**EX. 3**															
2	**GOAL:**															
3	Convert Proper Dataset into an Excel Table and Name the Table														*Sorted Unique List*	
4	Average Sales for each Product in each Region														**Product**	
5	Create a Sorted Unique List for the Products						AND Logical Test:		The Product Field, and Region Field must contain the specified fields						Hot Wheels	
6	Add Data Validation for the Products on Cell G8 from the Range O5:O7														LOL OMG Surprise	
7							Product								LOL Surprise	
8	**AVERAGEIFS**	Averages Numbers (Arithmetic Mean of Numbers) with one or more Criterias					Hot Wheels									
9																
10							**Excel Table Formulas**									
11	**Date**	**Region**	**SalesRep**	**Product**	**Revenue**											
12	8/24/2023	Central	Miles	Hot Wheels	$23,935.30		**Region**	**Average Revenue**								
13	8/23/2023	Central	Cinderelli	LOL Surprise	$46,241.84		Central	$39,930.15		=AVERAGEIFS(RegionAvgans[Revenue],RegionAvgans[Product],G8,RegionAvgans[Region],[@Region])						
14	8/7/2023	South	Tiana	LOL Surprise	$20,003.13		North	$31,386.08		AVERAGEIFS averages numbers with one or more conditions/criteria						
15	8/11/2023	South	Tiana	Hot Wheels	$24,148.61		NorthWest	$19,825.72								
16	8/26/2023	Central	Miles	Hot Wheels	$43,173.32		South	$29,436.01								
17	8/22/2023	NorthWest	Miles	LOL OMG Surprise	$23,553.65											
18	8/26/2023	South	Tiana	Hot Wheels	$26,863.98		**Advantages of Excel Table Formulas**									
19	8/15/2023	North	Miles	LOL OMG Surprise	$35,320.76		Formulas will automatically copy down the column									
20	8/6/2023	South	Cinderelli	Hot Wheels	$15,196.59		Formulas will update automatically									
21	8/11/2023	South	Tiana	LOL Surprise	$48,533.17		Use Excel Tables when you will need to add new records to your Table									
22	8/19/2023	NorthWest	Cinderelli	LOL Surprise	$30,517.67											
23	8/10/2023	NorthWest	Tiana	LOL OMG Surprise	$22,962.38		***When using Excel Tables you still must lock the cell references									
24	8/5/2023	South	Cinderelli	LOL OMG Surprise	$26,230.06											
25	8/11/2023	North	Cinderelli	LOL Surprise	$34,445.91											
26	8/10/2023	North	Cinderelli	LOL OMG Surprise	$41,175.59											
27	8/18/2023	South	Tiana	LOL OMG Surprise	$28,456.15											
28	8/30/2023	Central	Miles	Hot Wheels	$46,883.49											
29	8/14/2023	South	Miles	Hot Wheels	$48,675.77											
30	8/6/2023	NorthWest	Tiana	LOL Surprise	$19,604.95											
31	8/20/2023	NorthWest	Miles	LOL Surprise	$48,922.29											
32	8/31/2023	South	Tiana	Hot Wheels	$42,727.99											
33	8/2/2023	Central	Cinderelli	LOL OMG Surprise	$21,408.69											
34	8/3/2023	Central	Cinderelli	LOL Surprise	$24,455.63											
35	8/8/2023	North	Tiana	Hot Wheels	$28,107.26											

Example 4:

SUMIFS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	**Ex. 4**													
2	GOAL:													
3	Convert Proper Dataset into an Excel Table and Name the Table						**AND Logical Test:** The Product Field, SalesRep Field and Region Field must contain the specified fields							
4	Add Total Revenue for a product for the Sales Rep Specified												Sorted Unique List	
5	Add the Total Revenue for the specified product in each region for a specified SalesRep												Products	SalesRep
6													Hot Wheels	Cinderelli
7	SUMIFS	Add Numbers with one or more criterias/conditions					Criteria						LOL OMG Surprise	Miles
8							Product	SalesRep					LOL Surprise	Tiana
9							Hot Wheels	Miles						
10							Total Revenue	$236,161.58		=SUMIFS(MonthlyRevnans[Revenue],MonthlyRevnans[Product],G9,MonthlyRevnans[SalesRep],H9)				
11														
12	Date	Region	SalesRep	Product	Revenue		**Excel Table Formulas**							
13	8/24/2023	Central	Miles	Hot Wheels	$23,935.30									
14	8/23/2023	Central	Cinderelli	LOL Surprise	$46,241.84		Region	Total Revenue						
15	8/7/2023	South	Tiana	LOL Surprise	$20,003.13		Central	$113,992.11		=SUMIFS(MonthlyRevnans[Revenue],MonthlyRevnans[Region],[@Region],MonthlyRevnans[Product],G9,MonthlyRevnans[SalesRep],H9)				
16	8/11/2023	South	Tiana	Hot Wheels	$24,148.61		North	$34,664.89		SUMIFS Add Numbers with one or more criterias/conditions				
17	8/26/2023	Central	Miles	Hot Wheels	$43,173.32		NorthWest	$19,825.72						
18	8/22/2023	NorthWest	Miles	LOL OMG Surprise	$23,553.65		South	$67,678.86						
19	8/26/2023	South	Tiana	Hot Wheels	$26,863.98									
20	8/15/2023	North	Miles	LOL OMG Surprise	$35,320.76		Advantages of Excel Table Formulas			*** In an example like this, a PivotTable might be easier				
21	8/6/2023	South	Cinderelli	Hot Wheels	$15,196.59		Formulas will automatically copy down the column			but you have to remember to "REFRESH"				
22	8/11/2023	South	Tiana	LOL Surprise	$48,533.17		Formulas will update automatically			if source data changes since PivotTables will				
23	8/19/2023	NorthWest	Cinderelli	LOL Surprise	$30,517.67		Use Excel Tables when you will need to add new records to your Table			not update automatically.				
24	8/10/2023	NorthWest	Tiana	LOL OMG Surprise	$22,962.38									
25	8/5/2023	South	Cinderelli	LOL OMG Surprise	$26,230.06		***When using Excel Tables you still must lock the cell references							
26	8/11/2023	North	Cinderelli	LOL Surprise	$34,445.91									
27	8/10/2023	North	Cinderelli	LOL OMG Surprise	$41,175.59									
28	8/18/2023	South	Tiana	LOL OMG Surprise	$28,456.15									
29	8/30/2023	Central	Miles	Hot Wheels	$46,883.49									
30	8/14/2023	South	Miles	Hot Wheels	$48,675.77									
31	8/6/2023	NorthWest	Tiana	LOL Surprise	$19,604.95									
32	8/20/2023	NorthWest	Miles	LOL Surprise	$48,922.29									
33	8/31/2023	South	Tiana	Hot Wheels	$42,727.99									
34	8/2/2023	Central	Cinderelli	LOL OMG Surprise	$21,408.69									
35	8/3/2023	Central	Cinderelli	LOL Surprise	$24,455.63									

Example 5:

Defined Names and Data Validation

	A	B	C	D	E	F	G	H	I	J
1	Ex. 5									
2	GOAL:	SUMIFS	Add Numbers with one or more criterias/conditions							
3	Create Define Names for each Field						AND Logical Test: The Product Field, SalesRep Field and Region Field must contain the specified fields			
4	Create Define Names for each of the Criteria to calculate						We will use the Define Names in our formulas.			
5	Add Total Revenue for a product for the Sales Rep Specified									
6	Add the Total Revenue for the specified product in each region for a specified SalesRep									
7							Criteria			
8							Product	SalesRep		
9							Hot Wheels	Tiana		
10							Total Revenue	$121,847.84		=SUMIFS(RevenueDNans,ProductDNans,ProductCriteriaDNans,SalesRepDNans,SalesRepCriteriaDNans)
11	Date	Region	SalesRep	Product	Revenue					
12	8/24/2023	Central	Miles	Hot Wheels	$23,935.30					
13	8/23/2023	Central	Cinderelli	LOL Surprise	$46,241.84		Excel Table Formulas			
14	8/7/2023	South	Tiana	LOL Surprise	$20,003.13					
15	8/11/2023	South	Tiana	Hot Wheels	$24,148.61		Region	Total Revenue		
16	8/26/2023	Central	Miles	Hot Wheels	$43,173.32		Central	$0.00		=SUMIFS(RevenueDNans,ProductDNans,ProductCriteriaDNans,SalesRepDNans,SalesRepCriteriaDNans,RegionDNans,[@Region])
17	8/22/2023	NorthWest	Miles	LOL OMG Surprise	$23,553.65		North	$28,107.26		
18	8/26/2023	South	Tiana	Hot Wheels	$26,863.98		NorthWest	$0.00		SUMIFS Add Numbers with one or more criterias/conditions
19	8/15/2023	North	Miles	LOL OMG Surprise	$35,320.76		South	$93,740.58		
20	8/6/2023	South	Cinderelli	Hot Wheels	$15,196.59					
21	8/11/2023	South	Tiana	LOL Surprise	$48,533.17		Advantages of Excel Table Formulas			
22	8/19/2023	NorthWest	Cinderelli	LOL Surprise	$30,517.67		Formulas will automatically copy down the column			
23	8/10/2023	NorthWest	Tiana	LOL OMG Surprise	$22,962.38		Formulas will update automatically			
24	8/5/2023	South	Cinderelli	LOL OMG Surprise	$26,230.06		Use Excel Tables when you will need to add new records to your Table			
25	8/11/2023	North	Cinderelli	LOL Surprise	$34,445.91					
26	8/10/2023	North	Cinderelli	LOL OMG Surprise	$41,175.59		***When using Excel Tables you still must lock the cell references			
27	8/18/2023	South	Tiana	LOL OMG Surprise	$28,456.15					
28	8/30/2023	Central	Miles	Hot Wheels	$46,883.49					
29	8/14/2023	South	Miles	Hot Wheels	$48,675.77					
30	8/6/2023	NorthWest	Tiana	LOL Surprise	$19,604.95					
31	8/20/2023	NorthWest	Miles	LOL Surprise	$48,922.29					
32	8/31/2023	South	Tiana	Hot Wheels	$42,727.99					
33	8/2/2023	Central	Cinderelli	LOL OMG Surprise	$21,408.69					
34	8/3/2023	Central	Cinderelli	LOL Surprise	$24,455.63					
35	8/8/2023	North	Tiana	Hot Wheels	$28,107.26					

*** In an example like this, a PivotTable might be easier
but you have to remember to "REFRESH"
if source data changes since PivotTables will
not update automatically.