

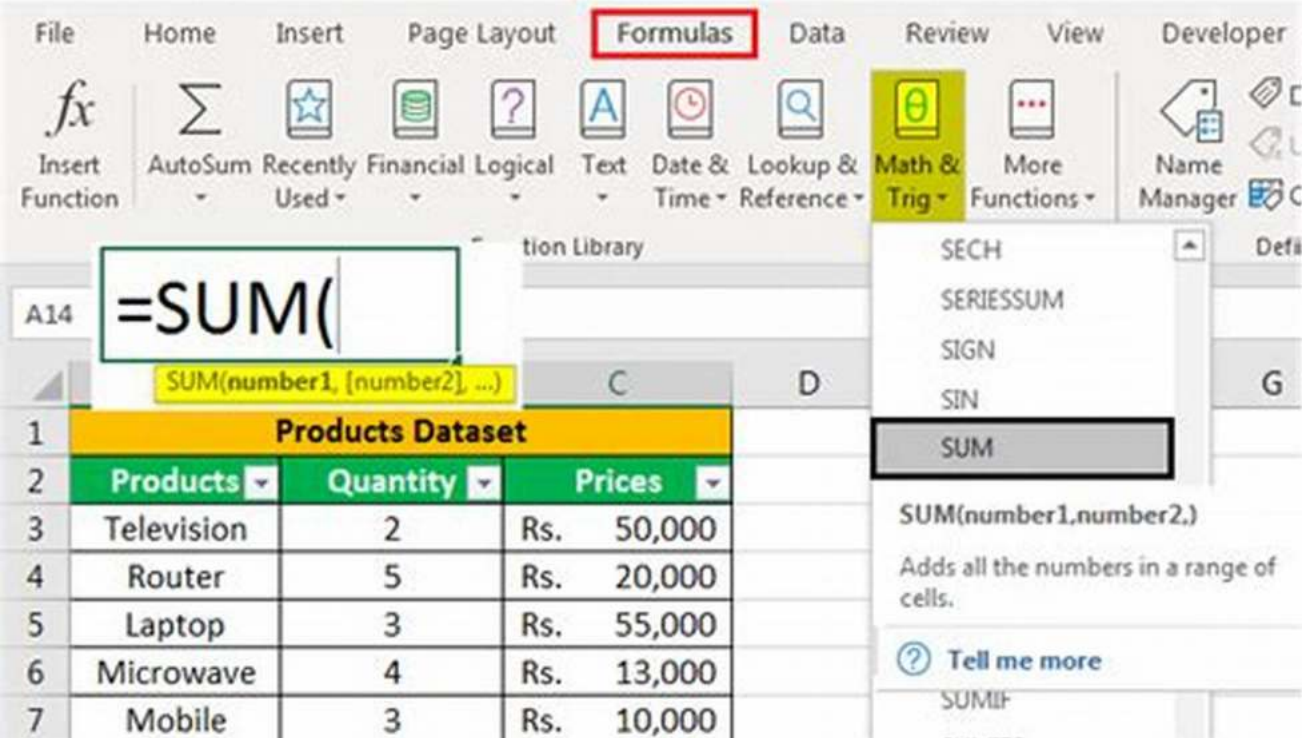
# The Step By Step Guide To The 25 Most Common Microsoft Excel Formulas Features

Microsoft Excel is a powerful tool that allows users to analyze, organize, and manipulate data with ease. Whether you are a beginner or an advanced user, understanding and using formulas is essential to make the most out of Excel. In this article, we will provide a step-by-step guide to the 25 most common Microsoft Excel formulas features.

## 1. SUM Formula

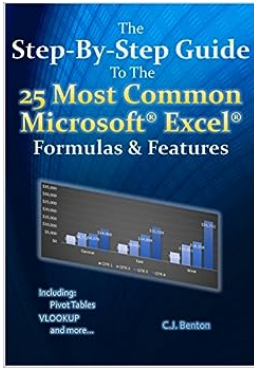
The SUM formula is one of the basic building blocks in Excel. It allows you to calculate the sum of a range of cells. To use the SUM formula, select the cell where you want the result to appear and enter "=SUM" followed by the range of cells you want to sum.

### SUM Formula in Excel



The screenshot illustrates the process of using the SUM formula in Excel. The 'Formulas' ribbon is selected, and the 'Math & Trig' dropdown menu is open, showing the 'SUM' function. The formula bar shows the entry of '=SUM(' in cell A14. Below the spreadsheet, a table titled 'Products Dataset' is shown with columns for Products, Quantity, and Prices.

Products Dataset		
Products	Quantity	Prices
Television	2	Rs. 50,000
Router	5	Rs. 20,000
Laptop	3	Rs. 55,000
Microwave	4	Rs. 13,000
Mobile	3	Rs. 10,000



## The Step-By-Step Guide To The 25 Most Common Microsoft Excel Formulas & Features (The Microsoft Excel Step-By-Step Training Guide Series Book 1) by C.J. Benton (Kindle Edition)

★★★★☆ 4.7 out of 5

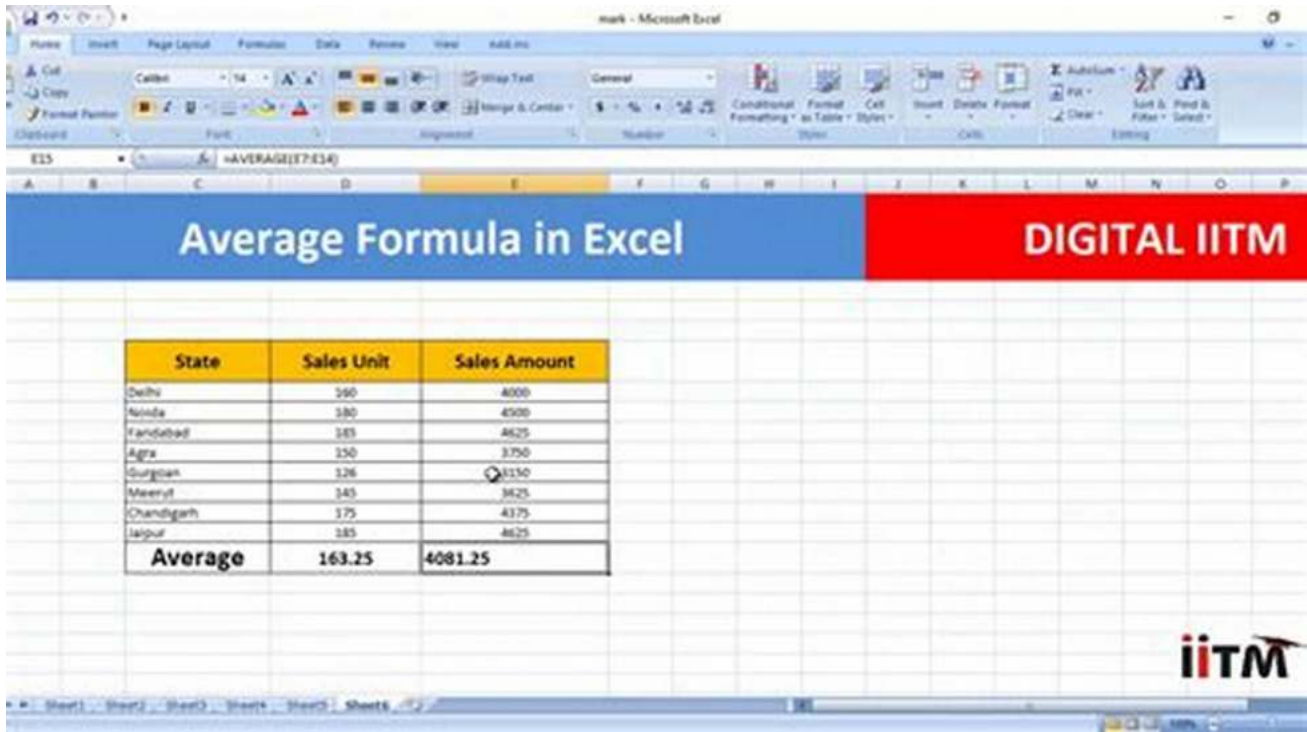
Language	: English
File size	: 8353 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Lending	: Enabled
Print length	: 133 pages



This simple formula can save you a lot of time and effort, especially when dealing with large datasets.

## 2. AVERAGE Formula

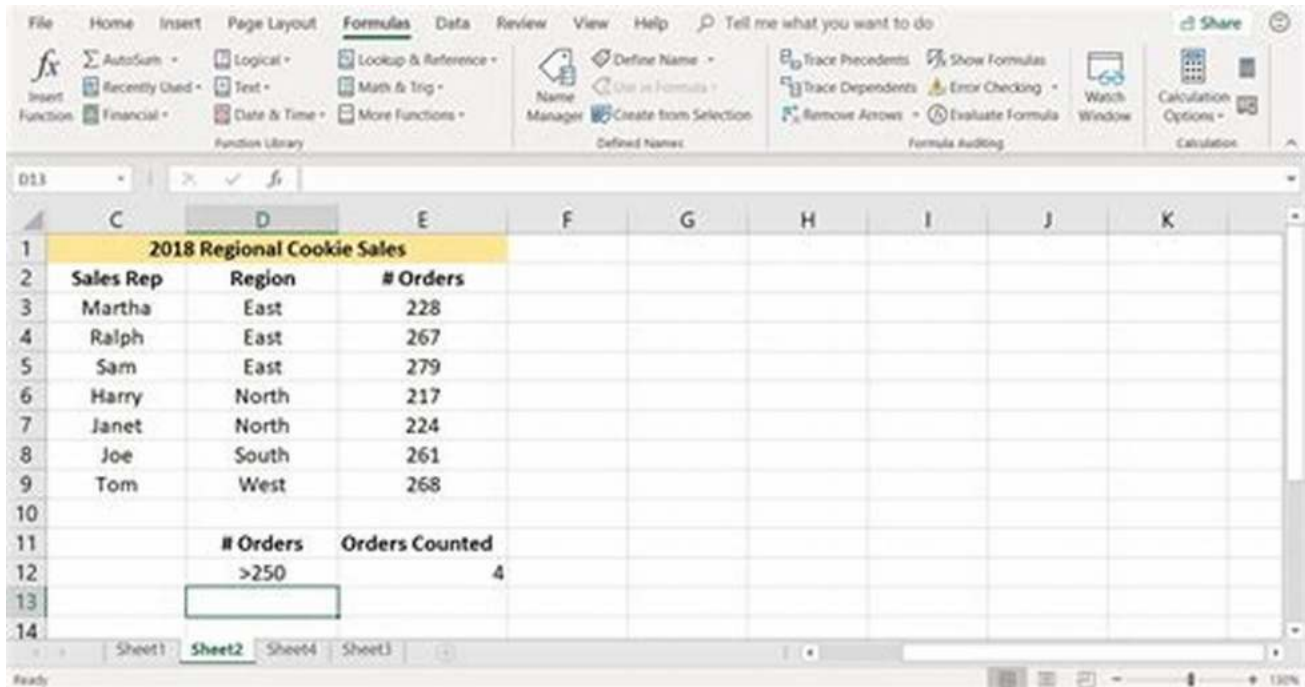
The AVERAGE formula calculates the average value of a range of cells. It is useful when you need to determine the overall average of a set of numbers. To use the AVERAGE formula, enter "`=AVERAGE`" followed by the range of cells you want to average.



By using this formula, you can quickly obtain the average of a set of data, which is often a key statistic when analyzing numerical information.

### 3. COUNT Formula

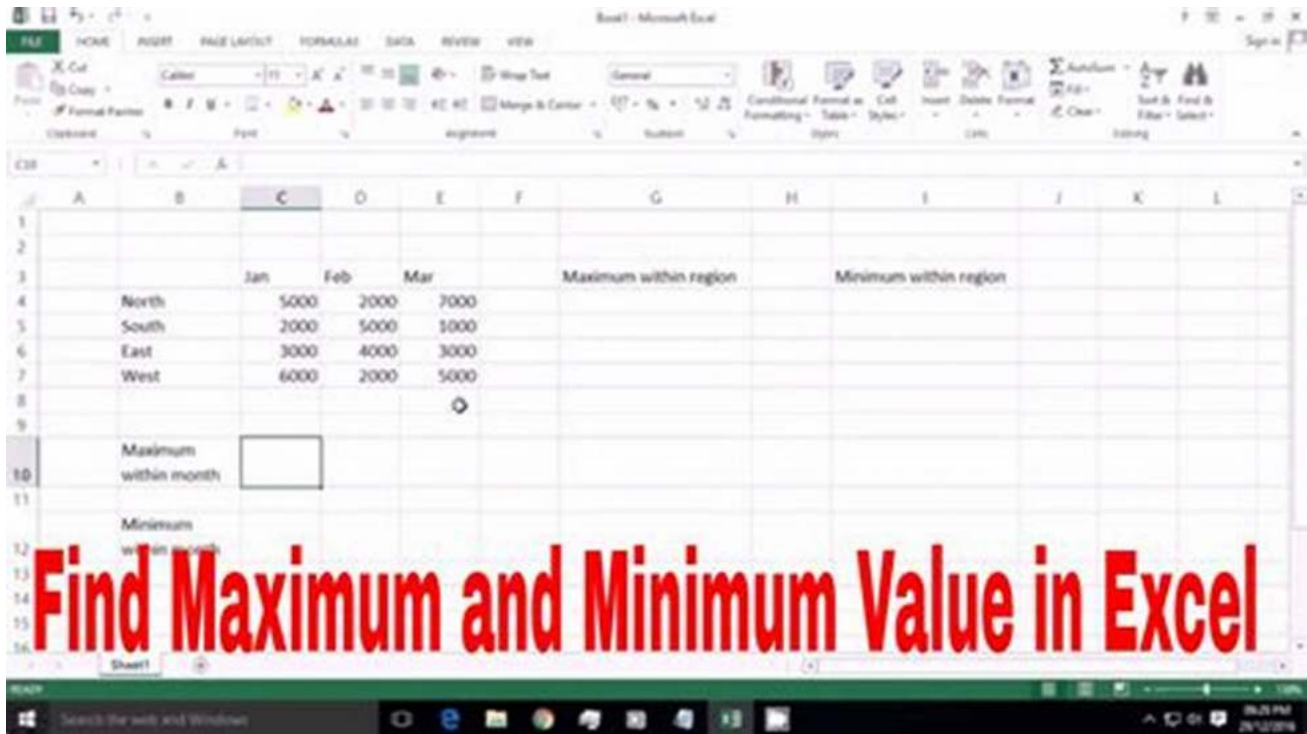
The COUNT formula allows you to count the number of cells within a range that contain numerical values. It comes in handy when you need to determine how many values exist within a given range. To use the COUNT formula, enter "=COUNT" followed by the range of cells you want to count.



With this formula, you can easily keep track of the number of entries in a dataset, helping you in various analytical tasks.

#### 4. MAX Formula

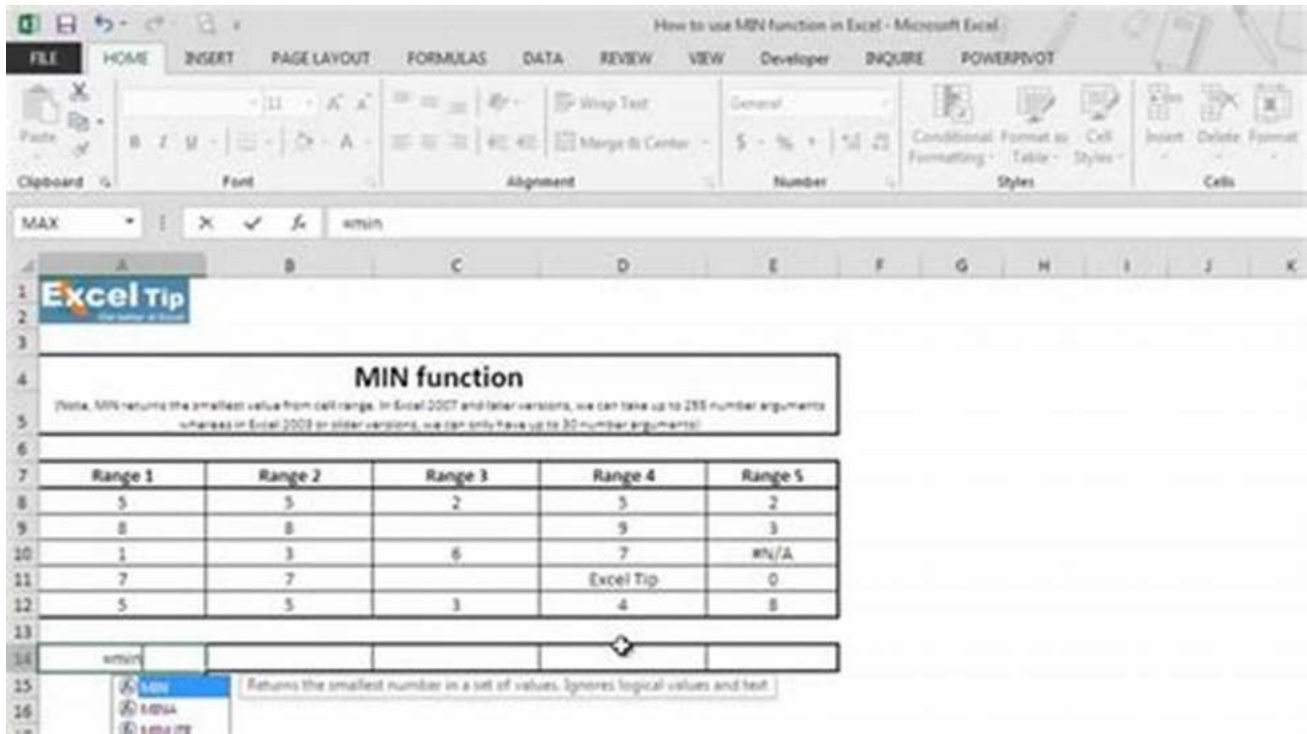
The MAX formula identifies the highest value within a range of cells. It is particularly useful when you are working with datasets and want to find the highest value. To use the MAX formula, enter "`=MAX`" followed by the range of cells you want to evaluate.



This formula helps you quickly pinpoint the maximum value in a dataset, allowing you to make data-driven decisions based on the highest values.

## 5. MIN Formula

The MIN formula works just like the MAX formula, but instead, it identifies the lowest value within a range of cells. It is valuable when you want to find the minimum value within a dataset. To use the MIN formula, enter "=MIN" followed by the range of cells you want to evaluate.



By utilizing this formula, you can quickly identify the lowest value in a dataset, helping you track down outliers and understand the range of values in your data.

## 6. CONCATENATE Formula

The CONCATENATE formula allows you to combine text from different cells into one cell. It is helpful when you want to merge data for better organization. To use the CONCATENATE formula, enter "=CONCATENATE" followed by the cells you want to combine.



	A	B	C	D	E
1	Base	Second	Combined	Formula	
2	Base	ball	Baseball	=CONCATENATE(A2,B2)	
3	Base	ball	Baseball	=A3&B3	
4	Mary	Jones	Mary Jones	=CONCATENATE(A4, " ", B4)	
5	Joe	Smith	Joe Smith	=A5&" "&B5	
6	Thompson	Holt	Thompson & Holt	=CONCATENATE(A6, " & ", B6)	
7	123	456	123456	=A7&B7	
8					
9					
10					
11					
12					
13					
14					

With this formula, you can easily merge data from separate cells, making it easier to analyze information or create reports.

## 7. IF Formula

The IF formula is a conditional formula that allows you to perform different calculations based on a specified condition. It helps automate decision-making processes in Excel. To use the IF formula, enter "=IF" followed by the condition you want to evaluate and the calculations to perform based on that condition.

	A	B	C	D	E	F	G	H	I
1	<b>Full name</b>	<b>Department</b>	<b>Salary</b>						
2	Abigail Aalderink	Sales	\$ 60.569						
3	Sanford Bartolo	Sales	\$ 81.603						
4	Samuel Bartnick	Sales	\$ 86.281						
5	John Dumas	IT	\$ 84.186						
6	Kristi Hines	Production	\$ 85.775						
7	Apple Lyn	IT	\$ 75.144						
8	Lee Nazal	HR	\$ 82.162						
9	Lindsay Kline	Marketing	\$ 98.91						
10	Vicky James	HR	\$ 83.207						
11	Bradley Sack		\$ 64.7						
12	Steven Lama		\$ 64.9						
13	Tom Briones		\$ 70.9						
14	Mike O'Neil		\$ 72.254						
15	Elly Kam	Adm	\$ 63.434						
16	Stacy Davidson	Adm	\$ 62.627						

This formula is exceptionally useful when you need to apply different calculations depending on specific criteria, saving you time and effort.

## 8. VLOOKUP Formula

The VLOOKUP formula is a powerful feature that allows you to search for a value in a specific column and retrieve a corresponding value from another column. It is commonly used when dealing with large databases. To use the VLOOKUP formula, enter "=VLOOKUP" followed by the search value, the table range, the column to retrieve the value from, and the type of match you want.



	A	B	C	D	E	F	G	H	I
1	<b>Full name</b>	<b>Department</b>	<b>Salary</b>						
2	Abigail Aalderink	Sales	\$ 60.569						
3	Sanford Bartolo	Sales	\$ 81.603						
4	Samuel Bartnick	Sales	\$ 86.281						
5	John Dumas	IT	\$ 84.186						
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7	Apple Lyn	IT	\$ 75.144						
8	Lee Nazal	HR	\$ 82.162						
9	Lindsay Kline	Marketing	\$ 98.91						
10	Vicky James	HR	\$ 83.207						
11	Bradley Sack		\$ 64.7						
12	Steven Lama		\$ 64.9						
13	Tom Briones		\$ 70.9						
14	Mike O'Neil		\$ 72.254						
15	Elly Kam	Adm	\$ 63.434						
16	Stoun Davidson	Adm	\$ 62.627						

This formula simplifies data analysis by helping you find specific information from a vast amount of data, saving you time and improving accuracy.

## 9. HLOOKUP Formula

The HLOOKUP formula works similarly to the VLOOKUP formula but performs horizontal searches instead. It allows you to find values in the top row of a table and retrieve corresponding values from a specified row. To use the HLOOKUP formula, enter "=HLOOKUP" followed by the search value, the table range, the row to retrieve the value from, and the type of match you want.

B2    fx    =HLOOKUP(B1,\$B\$6:\$F\$7,2,FALSE)

	A	B	C	D	E	F
1	Part Name:	Widgets				
2	Price:	\$14.76				
3						
4						
5						
6	Part Name:	Gizmos	DooDads	Widgets	Gadgets	Loose Screws
7	Price:	\$17.34	\$23.56	\$14.76	\$1.54	\$1.43
8						
9						
10						
11						

Finding specific data with HLOOKUP

By using this formula, you can effectively search for specific values across a row, providing you with more options for data analysis and organization.

### 10. PMT Formula

The PMT formula helps you calculate the monthly payment required for a loan based on a specified interest rate, loan term, and loan amount. It is commonly used when dealing with financial and loan-related calculations. To use the PMT formula, enter "=PMT" followed by the interest rate, the number of periods, and the loan amount.

	B	C	D	E	F
2					
3		Cost of House	\$900,000.00	Annual Interest Rate	9%
4				Monthly Interest Rate	0.75%
5		Loan Amount	\$900,000.00	Years of Loan	5
6		<b>PMT or EMI or Monthly Payment</b>	<b>(\$18,682.52)</b>	Total Months	60
7				Periods Per year	12
8					
9		Total Amount Payable:	<b>(\$1,120,951.18)</b>		
10					

This formula simplifies complex financial calculations and provides accurate results for loan payments, helping with budgeting and financial planning.

## 11. INDEX Formula

The INDEX formula allows you to retrieve a value from a specific row and column within a given range. It is valuable when you want to extract specific data points from a larger dataset. To use the INDEX formula, enter "=INDEX" followed by the range, the row number, and the column number.

The screenshot shows an Excel spreadsheet with the following data:

	1	2	3	
2	<b>Team</b>	<b>Avg. points</b>	<b>Wins</b>	
3	1	Boston Celtics	110	17
4	2	Brooklyn Nets	108	16
5	3	New York Knicks	106	16
6	4	Philadelphia 76ers	107	15
7	5	Toronto Raptors	100	15
8	6	Chicago Bulls	98	15
9	7	Cleveland Cavaliers	98	14
10	8	Detroit Pistons	102	12
11	9	Indiana Pacers	130	11
12	10	Milwaukee Bucks	93	10

**Examples**

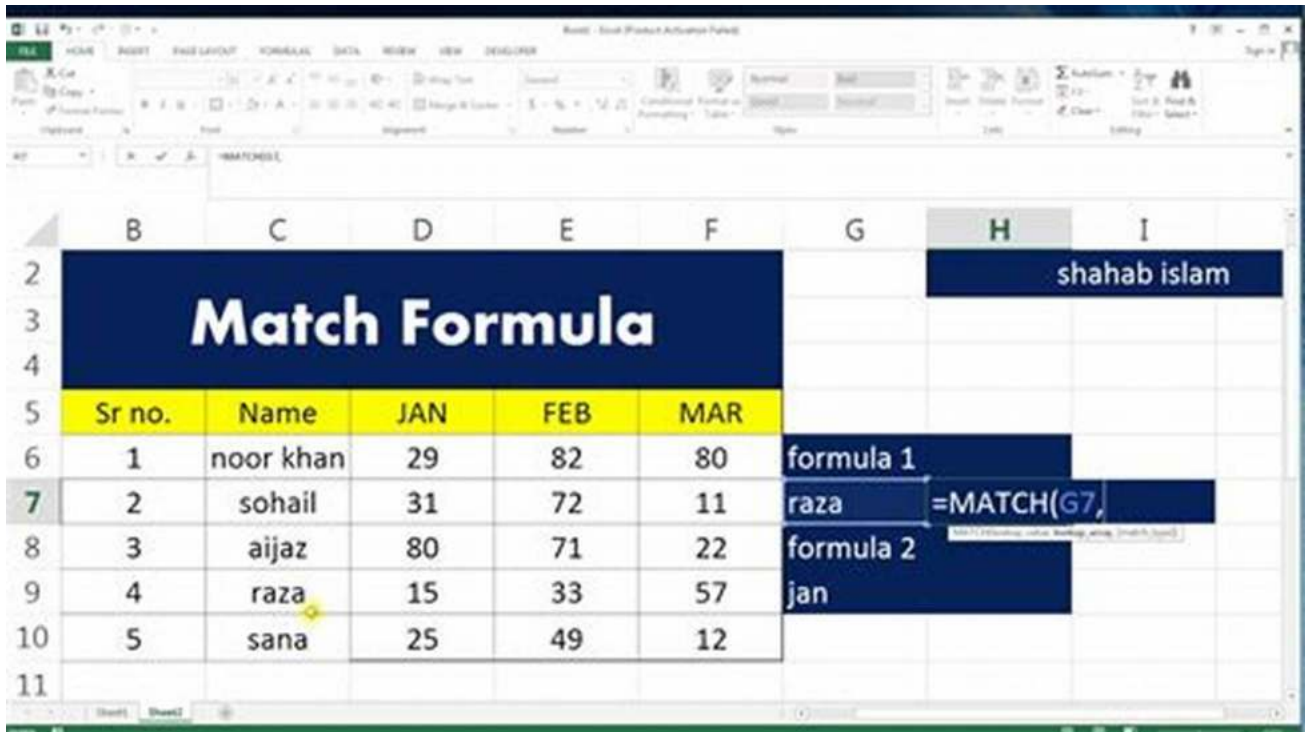
Get 6th team	Chicago Bulls
Get 7th number of wins	14

G3 contains formula =INDEX(B3:B12,6)  
G4 contains formula =INDEX(B3:D12,7,3)

By using this formula, you can easily extract relevant data for further analysis or to create customized reports.

## 12. MATCH Formula

The MATCH formula helps you locate the position of a specified value within a given range. It is useful when you need to find the relative position of a specific value. To use the MATCH formula, enter "=MATCH" followed by the value you want to locate and the range to search within.



This formula simplifies the process of finding specific values within a range, assisting you in data analysis and decision-making.

### 13. SUBTOTAL Formula

The SUBTOTAL formula calculates a subtotal within a range of cells, excluding any other subtotals present. It is helpful when you want to obtain subtotals in a data range. To use the SUBTOTAL formula, enter "=SUBTOTAL" followed by the type of subtotal you want and the range of cells to include.



# The SUBTOTAL function in Excel

**A**

	A	B	C
	COUNTRY	Number of Calls Received	
1			
2	North America		
3	California	5	✓
4	New York	5	✓
5	Texas	5	✓
6	Sub Total	15	✗
7	Europe		
8	London	10	✓
9	Paris	10	✓
10	Rome	10	✓
11	Sub Total	30	✗
12	Africa		
13	Algeria	1	✓
14	Egypt	1	✓
15	Morocco	1	✓
16	Sub Total	3	✗
17	Total	48	

✓ Add these values only  
✗ Not these

**B**

	A	B	C	D	E	F
	COUNTRY	Number of Calls Received				
1						
2	North America					
3	California	5				
4	New York	5				
5	Texas	5				
6	Sub Total	15				
7	Europe					
8	London	10				
9	Paris	10				
10	Rome	10				
11	Sub Total	30				
12	Africa					
13	Algeria	1				
14	Egypt	1				
15	Morocco	1				
16	Sub Total	3				
17	Total	=SUBTOTAL(9,82:B16)				
18		=SUBTOTAL(function_num, ref1, [ref2], ...)				
19						

Function list: 1 - AVERAGE, 2 - COUNT, 3 - COUNTA, 4 - MAX, 5 - MIN, 6 - PRODUCT, 7 - STDEV.S, 8 - STDEV.P, 9 - SUM, 10 - VAR.S, 11 - VAR.P, 101 - AVERAGE

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By using this formula, you can easily calculate subtotals within a range without affecting any preexisting subtotals, providing a clearer view of the data.

## 14. COUNTIF Formula

The COUNTIF formula counts the number of cells within a range that meet specific criteria. It is useful when you need to track the occurrence of certain values in a dataset. To use the COUNTIF formula, enter "=COUNTIF" followed by the range you want to evaluate and the condition to meet.



The screenshot shows an Excel spreadsheet titled "Golden State Warriors" with the following data:

Date	Points Scored	Win/Loss
12/31/2018	132	W
12/29/2018	115	W
12/27/2018	109	L
12/25/2018	101	L
12/23/2018	129	W
12/22/2018	120	W
12/19/2018	103	L
12/17/2018	110	W
12/14/2018	130	W
12/12/2018	93	L
12/10/2018	116	W
12/7/2018	105	W
<b>Average PPG</b>	<b>113.6</b>	

The formula bar shows: `=COUNTIF(B5:B16, ">"&DATE(2018,12,24))`

Examples table:





Examples	
Wins	8
Over 100 points	11
Score above average (113.6 ppg)	6
Played after Dec. 24th	=COUNTIF(B5:B16, ">"&DATE(2018,12,24))





Note: `points_scored = C5:C16`

With this formula, you can easily determine the frequency of specific values or conditions within a dataset, assisting you in data analysis and reporting.

## 15. SUMIF Formula

The SUMIF formula calculates the sum of cells in a range that meet specific criteria. It is similar to the COUNTIF formula but performs a sum instead of a count. To use the SUMIF formula, enter "`=SUMIF`" followed by the range you want to evaluate, the condition to meet, and the range to sum.

Automatisches Speichern    

D1 :    =SUMIF (A1: A10; "Profit"; B1: B10) 

	A	B	C	D	E	F	G	H
1	Profit	10.000		37600				
2	Loss	500						
3	Loss	5.000						
4	Profit	12.000						
5	Profit	600						
6	Profit	1.000						
7	Loss	12.000						
8	Loss	1.000						
9	Loss	1.000						
10	Profit	14.000						
11								
12								
13								

This formula allows you to calculate the sum of specific cells that meet certain criteria, providing a customizable way to analyze and manipulate numerical data.

## 16. IFERROR Formula

The IFERROR formula helps you handle potential errors within a formula. It allows you to specify a value or action to take if an error occurs. To use the IFERROR formula, enter "=IFERROR" followed by the formula you want to evaluate and the value or action to perform if an error occurs.

D2 =IFERROR(VLOOKUP(A2,\$G\$1:\$H\$6,2,0),"Not Found")								
	A	B	C	D	E	F	G	H
1	Order ID	Product	Amount VLOOKUP Result	Amount IFERROR Result			Order ID	Amount
2	10247	Apples	#N/A	Not Found			10248	\$ 2,030.00
3	10249	Oranges	\$3,120.00	\$3,120.00			10249	\$ 3,120.00
4	10250	Bananas	\$4,320.00	\$4,320.00			10250	\$ 4,320.00
5	10254	Pears	#N/A	Not Found			10251	\$ 2,110.00
6	10252	Grapes	\$5,230.00	\$5,230.00			10252	\$ 5,230.00
7								
8								

By incorporating this formula, you can make your calculations more robust by anticipating and managing potential errors, resulting in accurate outputs.

### 17. SUMPRODUCT Formula

The SUMPRODUCT formula helps you perform multiplication and addition operations simultaneously. It is useful when you want to multiply corresponding elements in arrays and sum the products. To use the SUMPRODUCT formula, enter "=SUMPRODUCT" followed by the arrays you want to multiply.

	A	B	C	D	E	F	G	H	I
1	Product	Quantity	Price						
2	Computer	2	1000						
3	Keyboard	4	250						
4	Mouse	4	100						
5	Printer	2	50						
6									
7		Total	3500						
8									

This formula simplifies complex calculations involving multiple arrays, allowing you to obtain accurate results in a single step.

## 18. LEN Formula

The LEN formula calculates the length of a given string or the number of characters within a cell. It proves useful when you want to determine the length of textual data. To use the LEN formula, enter "=LEN" followed by the cell you want to evaluate.

# LEN Formula in Excel

The first screenshot shows the formula bar with `=LEN("This is len function")` and the spreadsheet grid with the result `20` in cell B2.

The second screenshot shows the formula bar with `=LEN("This is len function")` and the spreadsheet grid with the result `20` in cell B2.

The third screenshot shows a table with the following data:

Order_Number	Length
227 504425	10
2253 87159	
21 8 5318 84	
215 178509	
2209 62192	
2184 27223	
2197 27660	
219 787 6 60	
2263871 59	
2575 0 4425	

By using this formula, you can easily analyze and manipulate textual data based on character count, helping you in data cleansing and quality control.

## 19. TRIM Formula

The TRIM formula eliminates leading and trailing spaces from a cell containing text. It is helpful when you want to clean up data by removing unnecessary spaces. To use the TRIM formula, enter `"=TRIM"` followed by the cell containing the text you want to trim.

## HOW TO USE TRIM FUNCTION

TRIM function is useful for removing extra spaces in a cell whether at beginning, trailing or anywhere between the words.

Syntax for TRIM Function  
=TRIM(Cell Address)

	A	B	C	D
1	I Love Excel		Formula Result	I Love Excel
2			Formula	=TRIM(A1)
3				
4			Character Count With Trim	12
5			Character Count Without Trim	13

FORMULA: =TRIM(A1)

[www.exceldatapro.com](http://www.exceldatapro.com)

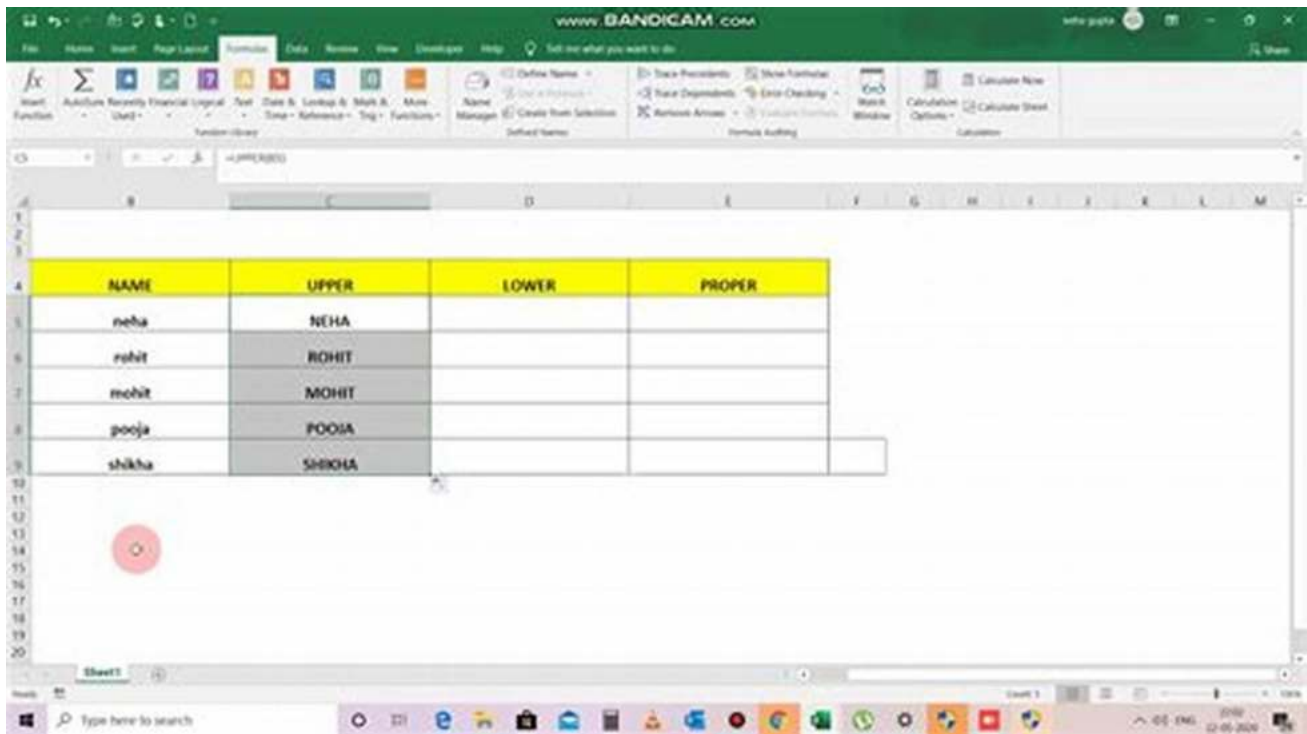
This formula allows you to clean up data and ensure consistency by removing unwanted spaces, contributing to overall data accuracy.

## 20. UPPER/LOWER/PROPER Formula

The UPPER, LOWER, and PROPER formulas are used to change the case of text within cells. UPPER converts text to uppercase, LOWER converts text to lowercase, and PROPER capitalizes the first letter of each word. To use these



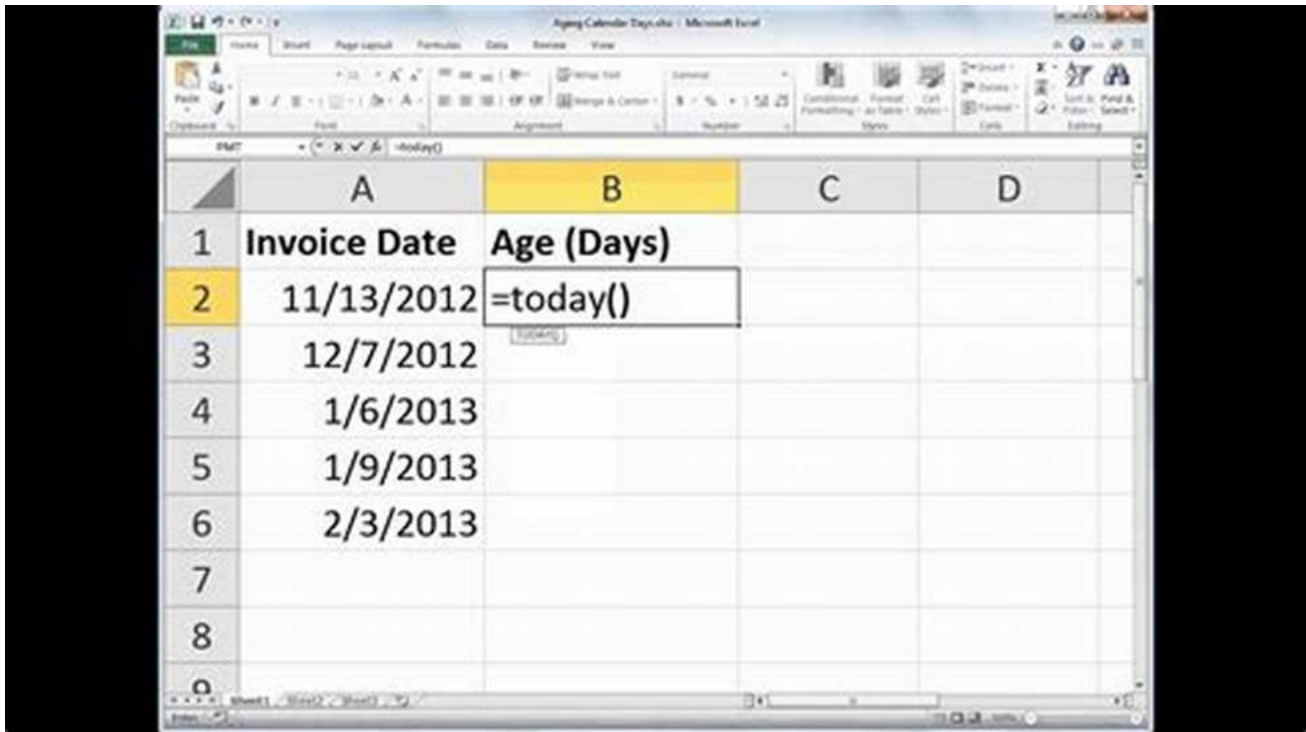
formulas, enter "=UPPER", "=LOWER", or "=PROPER" followed by the cell containing the text you want to modify.



By employing these formulas, you can standardize text formatting and ensure consistency, enhancing readability and professionalism.

## 21. NOW/TODAY Formula

The NOW and TODAY formulas provide the current date and time in Excel. NOW returns both the date and time, while TODAY only returns the current date. To use these formulas, enter "=NOW" or "=TODAY" in the desired cell.



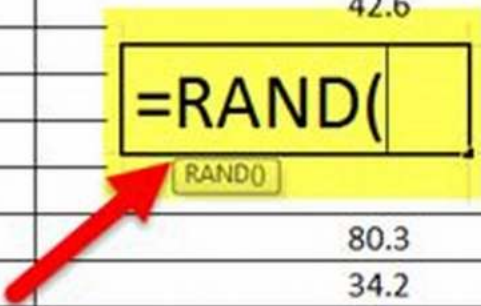
By including these formulas, you can dynamically display the current date or time, allowing you to track data updates and perform time-based calculations.

## 22. RAND Formula

The RAND formula generates a random number between 0 and 1 in Excel. It is useful when you need to simulate random values for certain scenarios. To use the RAND formula, simply enter "=RAND" in the desired cell.

# RAND Function in Excel

Formula	Random number between 0 and 100
=100*RAND()	57.9
=100*RAND()	42.6
=100*RAND()	
=100*RAND()	
=100*RAND()	
=100*RAND()	
=100*RAND()	
=100*RAND()	80.3
=100*RAND()	34.2
=100*RAND()	94.9
=100*RAND()	45.0
=100*RAND()	25.5
=100*RAND()	88.2526658374307



By employing this formula, you can introduce randomness in your data analysis, modeling, and simulations.

## 23. RANK Formula

The RANK formula assigns a rank to a value within a given range. It helps you determine the relative position of a value compared to other values. To use the RANK formula, enter "=RANK" followed by the value you want to rank and the range to rank within.

	A	B	C	D	E
1	<b>Name</b>	<b>Percentage</b>	<b>Rank</b>		
2	Hari Rai	58	1		
3	Shyam KC	45	5		
4	Bikram Pandey	55	2		
5	Milan Bogati	48	4		
6	Sita Rai	52	3		
7					
8					
9					
10					
11					

# Calculate Rank In Excel

This formula allows you to assign ranks to values, facilitating data comparison and identifying top performers or outliers.

## 24. DATE/YEAR/MONTH Formula

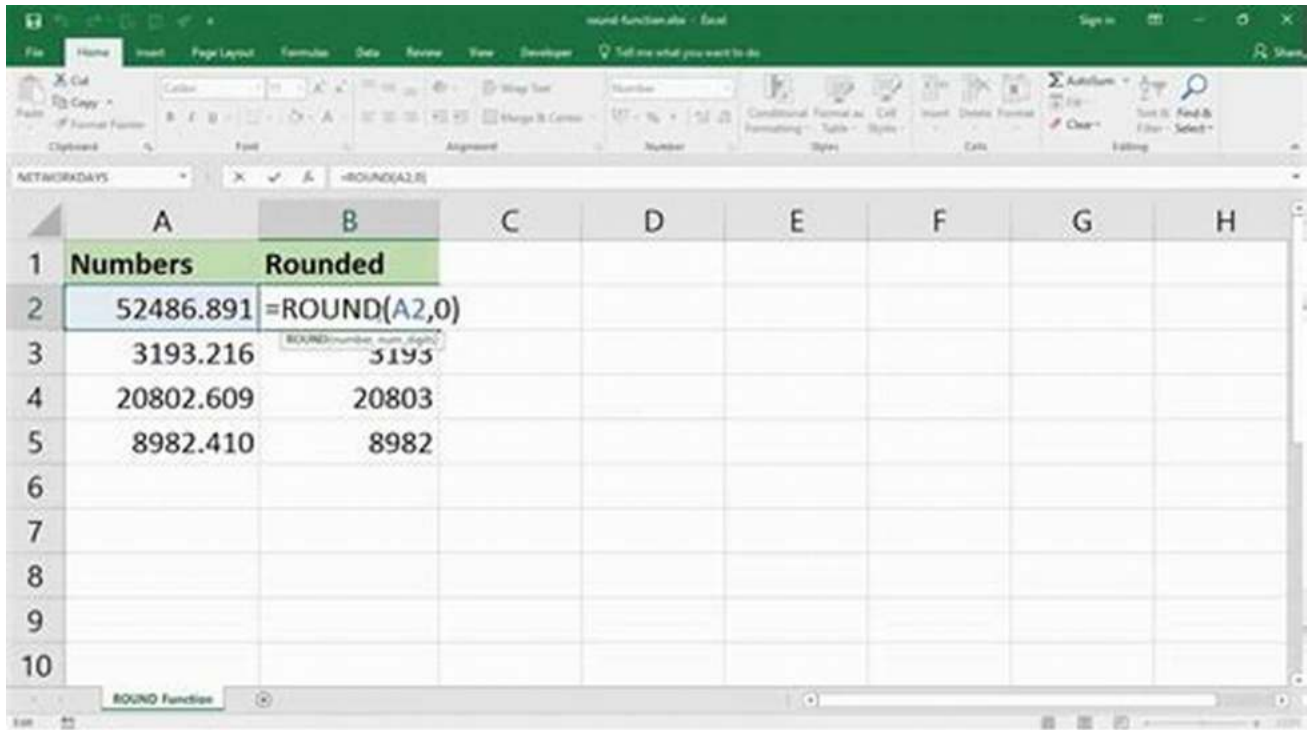
The DATE, YEAR, and MONTH formulas are used to manipulate and extract specific components from dates in Excel. DATE is used to create a date from specified year, month, and day values. YEAR extracts the year from a given date, and MONTH returns the month. To use these formulas, enter "=DATE," "=YEAR," or "=MONTH" followed by the relevant date or cell reference.

	A	B	C	D	E	F	G	H	I	J
1	Date	Day	Month	Year						
2	01-05-17	Monday	May	2017						
3	02-05-17	Tuesday	May	2017						
4	03-05-17	Wednesday	May	2017						
5	04-05-17	Thursday	May	2017						
6	05-05-17	Friday	May	2017	তারিখ থেকে সপ্তাহের দিন ও মাসের নাম গণনা .					
7	06-05-17	Saturday	May	2017						
8	07-05-17	=TEXT(A8,"ddd")	May	2017						
9	08-05-17	Monday	May	2017						
10	09-05-17	Tuesday	May	2017						
11	10-05-17	Wednesday	May	2017						
12										

By incorporating these formulas, you can perform calculations and analysis based on specific date components, facilitating time-based analysis and reporting.

## 25. ROUND Formula

The ROUND formula allows you to round a number to a specified number of decimal places. It is useful when you want to control the precision of numerical values. To use the ROUND formula, enter "=ROUND" followed by the number you want to round and the desired number of decimal places.



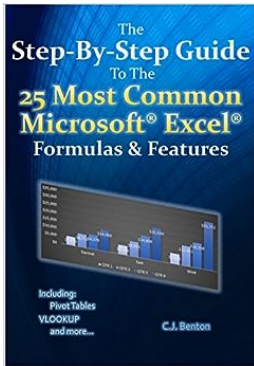
This formula enables you to control the precision of numerical values, presenting them in a more suitable format for analysis and presentation.

Now that you have a comprehensive guide to the 25 most common Microsoft Excel formulas features, you can unlock the full potential of Excel and become a proficient user. Whether you are working with financial data, conducting data analysis, or simply organizing information, these formulas will enhance your productivity, accuracy, and efficiency. Remember to practice using them in real-world scenarios to cement your understanding and make Excel your trusted ally in handling and manipulating data.

**The Step-By-Step Guide To The 25 Most Common Microsoft Excel Formulas & Features (The Microsoft Excel Step-By-Step Training Guide Series Book 1)** by C.J. Benton (Kindle Edition)

★★★★☆ 4.7 out of 5  
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Screen Reader	: Supported
Enhanced typesetting	: Enabled
Lending	: Enabled
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Learn the 25 most common Microsoft® Excel® Formulas & Features quickly and easily with this detailed step-by-step guide!

This book offers easy to follow examples with screenshots demonstrating how to use the 25 most common basic and intermediate Microsoft® Excel® formulas & features. The book is organized into 5 step-by-step sections, allowing you to grow your knowledge of Excel® at your own pace:

\*\*\*\*Excel v2016 is now available, with 5 bonus formulas included\*\*\*\*[Part 1 - Excel® Formula Fundamentals](#)

- SUM, SUBTRACTION, MULTIPLICATION, & DIVISION
- AVERAGE
- MIN & MAX
- TODAY & NETWORKDAYS
- SUMIF

[Part 2 – to Pivot Tables](#)

- How to create a basic Pivot Table
- Formatting Pivot Table results
- Inserting Pivot Charts

### Part 3 – Excel® Features

- Data Sorting
- Formula Trace
- Text-To-Columns
- Conditional Formatting & Filtering

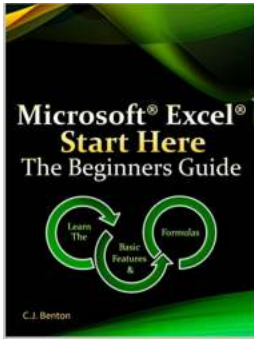
### Part 4 – Text Functions

- LEN & TRIM
- CONCATENATE & MID
- PROPER, UPPER, & LOWER

### Part 5 – Logic & Lookup Formulas

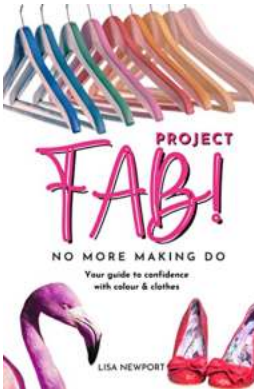
- IF
- Nested IF
- VLOOKUP

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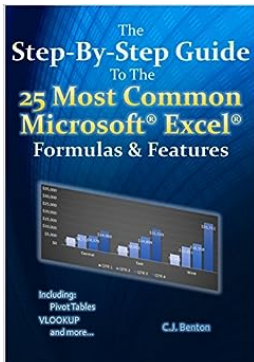
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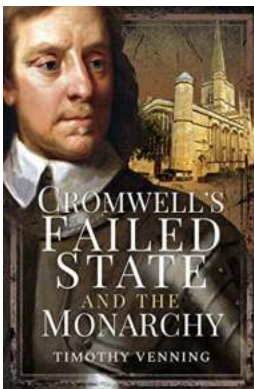
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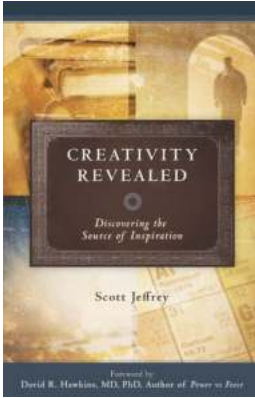
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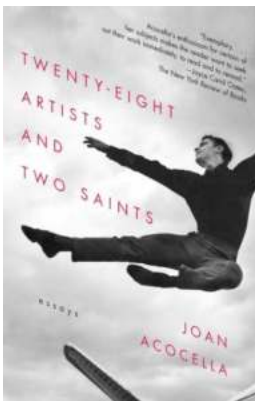
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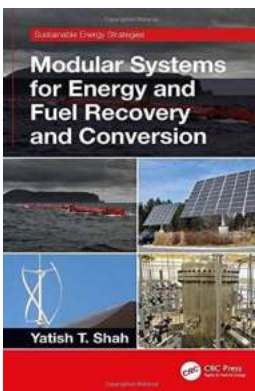
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