

✳ "100 Most Useful Excel Formulas – MST Student Edition"

📖 Master Excel Skills for Maths, Science & Technology

No.	Formula	Example Input	Result
1	=SUM (A1:A5)	10,20,30,40,50	150
2	=AVERAGE (A1:A5)	10,20,30,40,50	30
3	=MAX (A1:A5)	10,20,30,40,50	50
4	=MIN (A1:A5)	10,20,30,40,50	10
5	=COUNT (A1:A5)	10,20,,40,50	4
6	=COUNTA (A1:A5)	10,"Hi",30,,50	4
7	=IF (A1>10, "Yes", "No")	A1=15	Yes
8	=A1+B1	A1=10, B1=5	15
9	=A1-B1	A1=10, B1=3	7
10	=A1*B1	A1=4, B1=5	20
11	=A1/B1	A1=20, B1=5	4
12	=TODAY ()	—	21/05/2025
13	=NOW ()	—	21/05/2025 10AM
14	=LEN (A1)	A1="Hello"	5
15	=A1 & " " & B12	A1="Hi", B1="There"	Hi There
16	=ROUND (A1, 2)	A1=3.14159	3.14
17	=INT (A1)	A1=5.8	5
18	=MOD (A1, B1)	A1=5, B1=2	1
19	=POWER (A1, 2)	A1=4	16
20	=SQRT (A1)	A1=25	5
21	=ABS (A1)	A1=-100	100
22	=TEXT (TODAY (), "dd/mm/yyyy")	—	21/05/2025
23	=LEFT (A1, 3)	A1="Excel"	Exc
24	=RIGHT (A1, 4)	A1="Formula"	mula
25	=MID (A1, 2, 3)	A1="Excel"	xce
26	=LOWER (A1)	A1="HELLO"	hello
27	=UPPER (A1)	A1="hello"	HELLO
28	=PROPER (A1)	A1="good day"	Good Day
29	=TRIM (A1)	A1=" Hello "	Hello
30	=IFERROR (A1/B1, "Error")	A1=10, B1=0	Error
31	=AVERAGEIF (A1:A5, ">10")	5,12,15,9,11	12.67
32	=SUMIF (A1:A5, ">10")	5,12,15,9,11	38
33	=COUNTIF (A1:A5, ">10")	5,12,15,9,11	3
34	=IF (AND (A1>10, B1<5), "Yes", "No")	A1=15, B1=3	Yes
35	=IF (OR (A1>10, B1<5), "Yes", "No")	A1=8, B1=3	Yes
36	=ISNUMBER (A1)	A1=123	TRUE
37	=ISTEXT (A1)	A1="Text"	TRUE
38	=ISBLANK (A1)	A1=	TRUE
39	=REPT ("x", 5)	—	xxxxx

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No.	Formula	Example Input	Result
40	=CHAR (65)	—	A
41	=CODE ("A")	—	65
42	=RAND ()	—	0.56 (random)
43	=RANDBETWEEN (1,100)	—	47 (random)
44	=LARGE (A1:A5, 2)	10,20,30,40,50	40
45	=SMALL (A1:A5, 2)	10,20,30,40,50	20
46	=SUBSTITUTE (A1, "old", "new")	A1="old pen"	new pen
47	=FIND ("e", A1)	A1="Excel"	4
48	=SEARCH ("e", A1)	A1="Excel"	4
49	=TEXT (A1, "0.00")	A1=5	5.00
50	=NOW () -TODAY ()	—	0.46 (time)

No.	Formula	Example Input	Result
51	=PI()	—	3.141593
52	=ROUNDUP(4.23,0)	—	5
53	=ROUNDDOWN(4.78,0)	—	4
54	=EVEN(5.2)	—	6
55	=ODD(4.7)	—	5
56	=NOW()+1	Today 10AM	Tomorrow 10AM
57	=WEEKDAY(A1)	A1 = 31/05/2025	7 (Saturday)
58	=ISODD(7)	—	TRUE
59	=ISEVEN(4)	—	TRUE
60	=DATEDIF(A1,B1,"D")	A1=1-Jan, B1=10-Jan	9
61	=YEAR(TODAY())	—	2025
62	=MONTH(TODAY())	—	5
63	=DAY(TODAY())	—	31
64	=HOUR(NOW())	—	10
65	=MINUTE(NOW())	—	25

No.	Formula	Example Input	Result	Explanation
66	=SECOND(NOW())	—	30	Current time ka second part return karta hai.
67	=CELL("address",A1)	A1 = 10	\$A\$1	Cell A1 ka full address return karta hai.

No.	Formula	Example Input	Result	Explanation
68	=CELL("type",A1)	A1 = 123	v	Batata hai cell me value hai ('v') ya formula ('l').
69	=CELL("width",A1)	A1 = "Hello"	8.43	Cell ki column width return karta hai.
70	=TRANSPOSE(A1:A3)	A1=1, A2=2, A3=3	1 2 3 (horizontal)	Vertical range ko horizontal (row) me convert karta hai.
71	=INDEX(A1:A5,3)	10,20,30,40,50	30	3rd position ka value return karta hai range me.
72	=MATCH(30,A1:A5,0)	10,20,30,40,50	3	30 kis position pe hai wo return karta hai.
73	=INDIRECT("A1")	A1 = 50	50	Text string ko cell reference me convert karta hai.
74	=OFFSET(A1,2,0)	A3 = 30	30	A1 se 2 row niche ka value return karta hai.
75	=CHOOSE(2,"Red","Blue","Green")	—	Blue	2nd item return karta hai list me se.
76	=ROW(A3)	A3 = 30	3	Batata hai ki A3 kis row me hai.
77	=COLUMN(B2)	B2 = 20	2	Batata hai ki B2 kis column me hai.
78	=UNIQUE(A1:A5)	10,20,20,30,30	10,20,30	Sirf unique values return karta hai range se.
79	=SORT(A1:A5)	30,10,20	10,20,30	Range ko ascending order me sort karta hai.
80	=FILTER(A1:A5,A1:A5>20)	10,30,40,15	30,40	Sirf un values ko dikhata hai jo 20 se bade hain.

Excel Notes: VLOOKUP vs HLOOKUP

◆ What is VLOOKUP?

- Full form: **Vertical Lookup**
- Use: Jab data **columns (upar se neeche)** me ho
- Search: **Leftmost column** me value dhoondhta hai
- Return: Us row ka **right-side ka data** deta hai

✓ Syntax:

```
=VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])
```

□ Example Table:

A (Roll No) B (Name) C (Marks)

101	Rohan	85
102	Sohan	90

🔍 Formula:

```
=VLOOKUP(102, A2:C3, 2, FALSE)
```

★ Output: Sohan

◆ What is HLOOKUP?

- Full form: **Horizontal Lookup**
- Use: Jab data **rows (left to right)** me ho
- Search: **Top row** me value dhoondhta hai
- Return: Us **column ka neeche wala data** deta hai

✓ Syntax:

```
=HLOOKUP(lookup_value, table_array, row_index_num, [range_lookup])
```

□ Example Table:

	A	B	C
1 Roll No	101	102	
2 Name	Rohan	Sohan	

A	B	C
3 Marks	85	90

🔍 Formula:

=HLOOKUP(102, A1:C3, 2, FALSE)

🚀 Output: **Sohan**

❑ Difference Table:

Feature	VLOOKUP	HLOOKUP
Search in Column (Top to Bottom)	Row (Left to Right)	
Best for	Vertical Tables	Horizontal Tables
Syntax	col_index_num	row_index_num

No.	Formula	Example Input	Result	Explanation (Hinglish)
83	=HYPERLINK("http://google.com","Go")	—	Go	Go ek clickable link ban jaata hai
84	=ISERROR(A1/B1)	A1=10, B1=0	TRUE	Kya formula me error aayega, ye check karta hai
85	=ISLOGICAL(A1)	A1=TRUE	TRUE	Kya value TRUE ya FALSE hai, ye check karta hai
86	=ISREF(A1)	—	TRUE	Kya diya gaya input ek valid cell reference hai
87	=N(A1)	A1="Hello"	0	Text ko number me badalta hai, text ka 0 banata hai
88	=T(A1)	A1=123	""	Number ko empty string me badal deta hai
89	=GCD(24,36)	—	12	Dono numbers ka greatest common divisor deta hai
90	=LCM(4,6)	—	12	Dono numbers ka least common multiple deta hai
91	=SUBTOTAL(9,A1:A10)	Filtered range	Total	Sirf visible rows ka sum karta hai (hidden ignore)
92	=SUMSQ(A1:A3)	1, 2, 3	14	Har number ka square karke total deta hai (1 ² +2 ² +3 ²)

S.No	Function	I/P Example	O/P Example	WhatsApp Style Explanation
93	AGGREGATE	=AGGREGATE(9,5,A1:A10)	Sum without hidden rows	Sum ya Avg nikalta hai, par hidden rows ignore kar sakta hai
94	ARABIC	=ARABIC("XIV")	14	Roman number (jaise XIV) ko normal number me convert karta hai
95	COMBIN	=COMBIN(5,2)	10	Kitne groups ban sakte hain, wo combinations se nikalta hai
96	BASE	=BASE(10,2)	"1010"	Number ko binary/octal/hex jaise system me convert karta hai
97	ENCODEURL	=ENCODEURL("hello world")	"hello%20world"	Text ko URL-safe bana deta hai (space ko %20 type banata hai)
98	SWITCH	=IF(A1=1, "One", IF(A1=2, "Two", "Other"))	One	Multiple conditions check karta hai, pehla match hone par value deta hai
99	FORMULATEXT	=FORMULATEXT(A1)	"=SUM(B1:B5)"	Kisi cell me jo formula hai, use text me dikhata hai
100	DAYS360	=DAYS360("01/01/2024","01/02/2024")	30	360-day calendar ke hisaab se date ke beech din batata hai



COMBIN :

★ Kya karta hai ye formula?

Yeh function batata hai:

"Agar mere paas **5 log** hain, aur mujhe unme se **2 logon ka group** banana hai, to **kitne alag-alag group possible hain?**"

⬇ **Input:** 5 log

⬆ **Output:** 10 groups possible

📌 Example with Names:

Maan lo 5 log hain: **A, B, C, D, E**

Ab 2-2 logon ke alag-alag group banayenge:

1. A-B
2. A-C
3. A-D
4. A-E
5. B-C
6. B-D
7. B-E
8. C-D
9. C-E
10. D-E

☐ Total = **10 unique groups** → That's why result = 10

Note: Isme order matter nahi karta — A-B aur B-A same group maane jaate hain.

📋 Summary (WhatsApp Style):

- **Formula:** =COMBIN(5, 2)
 - **Matlab:** 5 me se 2 log chun ke kitne group ban sakte ho
 - **Answer:** 10
-

S.No	Function	Explanation (WhatsApp Language)
93	AGGREGATE	Sum ya Average nikalta hai, lekin hidden rows ko ignore kar sakta hai
94	ARABIC	Roman number (jaise X, IV) ko normal number me convert karta hai
95	COMBIN	Maths ka combination nikalta hai — kitne group ban sakte hain
96	BASE	Number ko binary, octal, ya hex jaise system me convert karta hai
97	ENCODEURL	Text ko URL-safe bana deta hai (space ko %20 waqaira bana deta hai)
98	DOLLAR	Number ko dollar format me show karta hai (jaise \$1,234.50)
99	CUBESETCOUNT	Cube data source me kitne items hain, wo count batata hai

S.No	Function	Explanation (WhatsApp Language)
100	DAYS360	Do dates ke beech din count karta hai lekin 360-day year ke hisaab se

Unit	Matlab	Output
"Y"	Sirf saal ka difference batata hai (pure years)	=DATEDIF("01/01/2000", "01/01/2024", "Y") → 24
"M"	Sirf mahine ka difference (pure months)	=DATEDIF("01/01/2024", "01/06/2024", "M") → 5
"D"	Sirf din ka total difference	=DATEDIF("01/01/2024", "10/01/2024", "D") → 9
"YM"	Sirf mahine ka difference nikalta hai, saal ignore karta hai	=DATEDIF("01/01/2020", "01/06/2024", "YM") → 5
"YD"	Sirf din ka difference nikalta hai, saal ignore karta hai	=DATEDIF("01/01/2020", "10/01/2024", "YD") → 9
"MD"	Sirf din ka difference (mahina aur saal ignore) — ye kabhi kabhi error de sakta hai	=DATEDIF("01/01/2024", "10/02/2024", "MD") → 9