

## Excel Formulas Reference Guide

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### 1. Mathematical Formulas

=SUM(A1:A10) - Total sum  
=AVERAGE(A1:A10) - Mean/average  
=MEDIAN(A1:A10) - Median value  
=MIN(A1:A10) - Minimum  
=MAX(A1:A10) - Maximum  
=PRODUCT(A1:A10) - Multiply values  
=ROUND(A1, 2) - Round to 2 decimals  
=ROUNDUP(A1, 0) - Round up  
=ROUNDDOWN(A1, 0) - Round down  
=INT(A1) - Integer part  
=MOD(A1, B1) - Remainder  
=ABS(A1) - Absolute value  
=POWER(A1, 2) - Exponentiation  
=SQRT(A1) - Square root  
=RAND(), =RANDBETWEEN(1,10) - Random values

### 2. Logical Formulas

=IF(A1>10, "Yes", "No") - Basic condition  
=IFERROR(A1/B1, "Divide by zero") - Handle errors  
=IFNA(VLOOKUP(...), "Not found") - Handle #N/A  
=AND(A1>0, B1<10) - True if all conditions are met  
=OR(A1>0, B1<10) - True if any condition is met  
=NOT(A1>10) - Negation  
=IFS(A1=1,"One",A1=2,"Two",TRUE,"Other") - Multiple IFs  
=SWITCH(A1, 1, "One", 2, "Two", "Other") - Value selector

### 3. Date & Time Formulas

=TODAY() - Current date  
=NOW() - Current date & time  
=DATE(2025, 5, 29) - Create a specific date  
=DAY(A1), =MONTH(A1), =YEAR(A1) - Extract date parts  
=HOUR(A1), =MINUTE(A1), =SECOND(A1) - Extract time parts  
=TEXT(A1, "dd-mmm-yyyy") - Format date  
=EDATE(A1, 1) - Add one month  
=EOMONTH(A1, 0) - End of month  
=NETWORKDAYS(A1, B1) - Working days

=WORKDAY(A1, 5) - Add workdays  
=DATEDIF(A1, B1, "d") - Days difference  
=WEEKDAY(A1), =WEEKNUM(A1) - Week calculations

#### 4. Text Formulas

=CONCAT(A1, B1) - Join text  
=TEXTJOIN(" ", TRUE, A1:A3) - Join with delimiter  
=LEFT(A1, 3), =RIGHT(A1, 4) - Extract characters  
=MID(A1, 2, 5) - Extract mid string  
=LEN(A1) - String length  
=LOWER(A1), =UPPER(A1), =PROPER(A1) - Change case  
=TRIM(A1) - Remove extra spaces  
=SUBSTITUTE(A1, "old", "new") - Replace text  
=REPT("x", 5) - Repeat character  
=TEXT(A1, "0.00") - Format numbers

#### 5. Lookup & Reference Formulas

=VLOOKUP("Item", A2:C10, 2, FALSE) - Vertical lookup  
=HLOOKUP("Jan", A1:D3, 2, FALSE) - Horizontal lookup  
=INDEX(A2:C10, 3, 2) - Cell by position  
=MATCH(100, A1:A10, 0) - Find position  
=XLOOKUP("Item", A2:A10, B2:B10) - Flexible lookup  
=CHOOSE(2, "Red", "Green", "Blue") - Select by index  
=OFFSET(A1, 2, 1) - Dynamic reference  
=INDIRECT("A"&B1) - Create reference

#### 6. Statistical Formulas

=COUNT(A1:A10) - Count numbers  
=COUNTA(A1:A10) - Count non-empty  
=COUNTBLANK(A1:A10) - Count blanks  
=COUNTIF(A1:A10, ">100") - Condition count  
=COUNTIFS(A1:A10, ">100", B1:B10, "OK") - Multi-condition count  
=AVERAGEIF(A1:A10, ">0") - Average with condition  
=STDEV(A1:A10) - Standard deviation  
=VAR(A1:A10) - Variance  
=MODE(A1:A10) - Most frequent  
=RANK(A1, A1:A10) - Rank

#### 7. Financial Formulas

=PMT(rate, nper, pv) - Loan payment  
=FV(rate, nper, pmt, [pv], [type]) - Future value

=NPV(rate, A1:A5) - Net present value

=IRR(A1:A5) - Internal rate of return

=RATE(nper, pmt, pv) - Interest rate

## 8. Dynamic Arrays (Excel 365+)

=SORT(A1:A10) - Sort

=FILTER(A2:B10, B2:B10="Active") - Filter

=UNIQUE(A1:A10) - Unique values

=SEQUENCE(5) - Sequence numbers

=RANDARRAY(3, 2) - Random matrix

=LET(x, A1+10, x\*2) - Named variable

=LAMBDA(x, x+1)(5) - Custom inline function

## 9. Error & Information Functions

=IFERROR(A1/B1, "Error!") - Custom error message

=ISERROR(A1), =ISERR(A1), =ISNA(A1) - Check for errors

=NA() - Returns #N/A

=ISBLANK(A1) - Empty check

=ISNUMBER(A1), =ISTEXT(A1) - Type check

=CELL("address", A1), =INFO("osversion") - System info

## 10. Special & Utility Functions

=HYPERLINK("https://openai.com", "OpenAI") - Create hyperlink

=FORMULATEXT(A1) - Show formula

=SUBTOTAL(9, A1:A10) - Dynamic subtotal

=AGGREGATE(9, 6, A1:A10) - Advanced summary

=GETPIVOTDATA(...) - Pivot table data extraction

## Bonus Example: Status Tracking

=COUNTIF('Raised Changes'!F:F, "Normal") - COUNTIFS('Raised Changes'!F:F, "Normal", 'Raised Changes'!B:B, "Cancelled")

Purpose: Counts rows marked "Normal" but not "Cancelled" in another column.