

# give me excel all formulas topic wise with explanation and example

Here's a comprehensive list of **Excel formulas grouped by topic**, including explanations and simple examples. This covers key areas for both beginners and more advanced users.

## 1. Basic Math Functions

- **SUM:** Adds a range of cells.
  - Example: `=SUM(A1:A5)` adds values in A1 to A5<sup>[1]</sup>.
- **AVERAGE:** Finds the average of values.
  - Example: `=AVERAGE(B1:B10)` gets average of B1 to B10<sup>[1]</sup>.
- **MIN/MAX:** Returns smallest/largest value in a range.
  - Example: `=MIN(C1:C5)`, `=MAX(D1:D10)`<sup>[1]</sup>.
- **COUNT:** Counts how many cells contain numbers.
  - Example: `=COUNT(E1:E10)`<sup>[1]</sup>.

## 2. Conditional & Logical Functions

- **IF:** Tests a condition, returns one value if true, another if false.
  - Example: `=IF(F1>10, "Pass", "Fail")`<sup>[1]</sup>.
- **AND:** Returns TRUE if all conditions are true.
  - Example: `=AND(A1>5, B1<10)`.
- **OR:** Returns TRUE if any condition is true.
  - Example: `=OR(C1="Yes", D1="No")`.
- **IFERROR:** Returns alternate value if formula causes an error.
  - Example: `=IFERROR(A2/B2, "Error")`<sup>[1]</sup>.

## 3. Lookup & Reference Functions

- **VLOOKUP:** Searches for a value in the leftmost column and returns a value in the same row from another column.
  - Example: `=VLOOKUP(G1, A1:B10, 2, FALSE)`<sup>[1]</sup>.
- **HLOOKUP:** Like VLOOKUP but searches horizontally.
  - Example: `=HLOOKUP("Apples", A1:Z2, 2, FALSE)`<sup>[1]</sup>.
- **INDEX:** Returns the value at a specific row and column in a range.

- Example: `=INDEX(A1:B10, 3, 2)` <sup>[1]</sup>.
- **MATCH:** Returns the position of a value in a column or row.
  - Example: `=MATCH(20, A1:A10, 0)` <sup>[1]</sup>.
- **OFFSET:** Returns a reference offset from a starting cell.
  - Example: `=OFFSET(A1, 2, 3)` <sup>[1]</sup>.

## 4. Text Functions

- **CONCAT, CONCATENATE:** Joins strings together.
  - Example: `=CONCATENATE("Hello ", "World")` <sup>[1]</sup>.
- **LEN:** Returns the number of characters in a string.
  - Example: `=LEN(A1)` <sup>[1]</sup>.
- **TRIM:** Removes extra spaces.
  - Example: `=TRIM(B1)` <sup>[1]</sup>.
- **LEFT, RIGHT, MID:** Extracts characters from strings.
  - Example: `=LEFT(C1, 5), =RIGHT(D1, 3), =MID(E1, 2, 4)` <sup>[1]</sup>.
- **UPPER/LOWER/PROPER:** Changes case of text.
  - Example: `=UPPER("excel")` returns "EXCEL" <sup>[1]</sup>.

## 5. Date & Time Functions

- **TODAY:** Returns current date.
  - Example: `=TODAY()` <sup>[1]</sup>.
- **NOW:** Returns current date and time.
  - Example: `=NOW()` <sup>[1]</sup>.
- **DATE:** Creates a date value.
  - Example: `=DATE(2025, 8, 2)` <sup>[1]</sup>.
- **TIME:** Creates a time value.
  - Example: `=TIME(10, 0, 0)` <sup>[1]</sup>.
- **DATEDIF:** Difference between dates.
  - Example: `=DATEDIF(A1, A2, "d")` <sup>[1]</sup>.
- **NETWORKDAYS:** Working days between two dates.
  - Example: `=NETWORKDAYS(B1, B2)` <sup>[1]</sup>.
- **EOMONTH:** Last day of the month, months in the future/past.
  - Example: `=EOMONTH(C1, 1)` <sup>[1]</sup>.

## 6. Statistical Functions

- **COUNTIF/COUNTIFS:** Counts cells that meet one/more criteria.
  - Example: =COUNTIF(D1:D10, ">50"), =COUNTIFS(D1:D10, ">50", E1:E10, "<100") <sup>[1]</sup>.
- **SUMIF/SUMIFS:** Adds only cells that meet one/more conditions.
  - Example: =SUMIF(F1:F10, "Apple", G1:G10), =SUMIFS(F1:F10, G1:G10, ">100", H1:H10, "<500") <sup>[1]</sup>.
- **AVERAGEIF/AVERAGEIFS:** Calculates average of cells meeting criteria.
  - Example: =AVERAGEIF(I1:I10, "Red", J1:J10) <sup>[1]</sup>.

## 7. Financial Functions

- **PMT:** Calculates loan payment.
  - Example: =PMT(5%/12, 60, -10000) for a 5% loan, 60 payments, \$10,000 loan.
- **FV:** Future value of an investment.
  - Example: =FV(0.06, 10, -2000, -50000, 1) gets FV of investment.
- **NPV/XNPV, IRR/XIRR:** Cash flow analysis.
  - Example: =NPV(0.1, A2:A6), =XNPV(0.1, B2:B6, C2:C6) <sup>[1]</sup>.

## 8. Array & Dynamic Functions (Excel 365/2019+)

- **FILTER:** Filters a range based on criteria.
  - Example: =FILTER(A1:B6, C1:C6>100) <sup>[2]</sup>.
- **SORT/SORTBY:** Sorts range or array.
  - Example: =SORT(A1:E6, 4) <sup>[2]</sup>.
- **UNIQUE:** Extracts unique values from range.
  - Example: =UNIQUE(A1:A6) <sup>[2]</sup>.
- **SEQUENCE:** Generates a sequence of numbers.
  - Example: =SEQUENCE(5,1,3,2) creates numbers from 3, increasing by 2 five times <sup>[2]</sup>.

## 9. Other Useful Functions

- **ROUND/ROUNDUP/ROUNDDOWN:** Rounds numbers.
  - Example: =ROUND(H1, 2) <sup>[1]</sup>.
- **POWER, SQRT:** Powers and roots.
  - Example: =POWER(I1, 2), =SQRT(I1) <sup>[1]</sup>.
- **LOG:** Natural logarithm.
  - Example: =LOG(J1) <sup>[1]</sup>.
- **SUBTOTAL:** Performs functions on a filtered list.
  - Example: =SUBTOTAL(9, A1:A10) for SUM <sup>[3]</sup>.

## Useful Resources for Exploring More

- See all formulas by category: Microsoft's official list<sup>[3]</sup>.
- Detailed formulas, explanations, and videos: ExcelJet<sup>[4]</sup>.
- Large list with examples: LinkedIn compilation<sup>[1]</sup>.

This covers the vast majority of daily and advanced use cases you need in Excel. For a deeper dive into specific advanced functions (like statistical distributions, finance, engineering), visit the Microsoft support site or ExcelJet for categorized lists and further examples<sup>[3]</sup> <sup>[4]</sup>.



1. <https://www.linkedin.com/pulse/top-100-excel-formulas-along-practice-examples-kumar-ajit-अजित->
2. <https://www.datacamp.com/cheat-sheet/getting-started-with-excel-cheat-sheet>
3. <https://support.microsoft.com/en-us/office/excel-functions-by-category-5f91f4e9-7b42-46d2-9bd1-63f26a86c0eb>
4. <https://exceljet.net/formulas>