


1. Basic Formulas

Function	Purpose	Example
SUM	Adds values	=SUM(A1:A5)
AVERAGE	Calculates average	=AVERAGE(B1:B5)
MIN / MAX	Finds smallest/largest value	=MIN(C1:C5)
COUNT	Counts numeric entries	=COUNT(D1:D10)
COUNTA	Counts non-empty cells	=COUNTA(E1:E10)
ROUND	Rounds a number	=ROUND(F1, 2)


2. Logical Formulas

Function	Purpose	Example	
IF	Logical test	<code>=IF(A1>10, "Yes", "No")</code>	
AND	All conditions must be TRUE	<code>=AND(A1>5, B1<10)</code>	
OR	At least one condition is TRUE	<code>=OR(A1>5, B1<10)</code>	
IFERROR	Handles errors	<code>=IFERROR(A1/B1, "Error")</code>	

3. Lookup & Reference

Function	Purpose	Example
VLOOKUP	Vertical lookup	=VLOOKUP(101, A2:B10, 2, FALSE)
HLOOKUP	Horizontal lookup	=HLOOKUP("Q1", A1:D4, 2, FALSE)
INDEX	Returns value at a location	=INDEX(A1:C3, 2, 3)
MATCH	Finds position of a value	=MATCH(50, A1:A10, 0)
XLOOKUP	Modern lookup function (Excel 365+)	=XLOOKUP(105, A2:A10, B2:B10)


4. Text Functions

Function	Purpose	Example	
CONCATENATE / CONCAT	Joins text	=CONCAT(A1, " ", B1)	
TEXT	Formats numbers/dates	=TEXT(A1, "MM/DD/YYYY")	
LEFT , RIGHT , MID	Extracts text	=LEFT(A1, 5)	
LEN	Length of text	=LEN(A1)	
TRIM	Removes extra spaces	=TRIM(A1)	
UPPER , LOWER , PROPER	Changes text case	=UPPER(A1)	

5. Date & Time

Function	Purpose	Example
TODAY()	Current date	=TODAY()
NOW()	Current date and time	=NOW()
DATEDIF	Difference between dates	=DATEDIF(A1, B1, "Y")
EDATE	Adds months	=EDATE(A1, 3)
NETWORKDAYS	Working days between two dates	=NETWORKDAYS(A1, B1)

6. Financial Functions

Function	Purpose	Example	
PMT	Loan payment	<code>=PMT(5%/12, 60, -10000)</code>	
FV	Future value	<code>=FV(0.05, 10, -2000)</code>	
NPV	Net present value	<code>=NPV(0.08, A2:A6)</code>	

7. Advanced/Array Formulas

Function	Purpose	Example
UNIQUE	Returns unique values (Excel 365+)	=UNIQUE(A1:A10)
FILTER	Filters data (Excel 365+)	=FILTER(A2:B10, B2:B10>100)
SORT	Sorts data (Excel 365+)	=SORT(A1:A10)