

IF, AND, OR in Excel — Quick Reference Card

Syntax · Truth Table · Mistakes · Patterns · TechFitFlow.com

Write your decision logic as a plain-language table first, then translate each row to an IFS condition-result pair. This prevents mismatched brackets, wrong nesting order, and silent wrong values before they reach a report.

FUNCTION SYNTAX REFERENCE

Function	Syntax	Key rule
IF	=IF(logical_test, value_if_true, value_if_false)	Returns value_if_true when test is TRUE, value_if_false when FALSE. Omitting value_if_false returns the word FALSE — use "" for blank.
AND	=AND(condition1, condition2, ...)	Returns TRUE only when ALL conditions are TRUE. Returns FALSE if even one condition is FALSE. No practical limit on conditions.
OR	=OR(condition1, condition2, ...)	Returns TRUE when AT LEAST ONE condition is TRUE. Returns FALSE only when ALL conditions are FALSE.
NOT	=NOT(logical)	Reverses TRUE to FALSE and FALSE to TRUE. Use when expressing the negative is simpler than listing all positives.
IFS	=IFS(cond1,result1, cond2,result2, ..., TRUE,default)	Evaluates condition-result pairs in order, returns first match. Always end with TRUE, "default" or IFS returns #N/A if nothing matches.
IFERROR	=IFERROR(formula, value_if_error)	Intercepts ANY error type — #N/A, #REF!, #VALUE!, #DIV/0!, etc. Use deliberately; avoid hiding structural errors.
IFNA	=IFNA(formula, value_if_na)	Intercepts ONLY #N/A errors. Structural errors pass through. Preferred over IFERROR for VLOOKUP/XLOOKUP not-found scenarios.

AND / OR TRUTH TABLE

Condition A	Condition B	AND(A,B)	OR(A,B)	Plain language
TRUE	TRUE	TRUE	TRUE	Both conditions met. AND and OR both pass.
TRUE	FALSE	FALSE	TRUE	AND fails: not all conditions met. OR passes: at least one.
FALSE	TRUE	FALSE	TRUE	Same — AND requires all; OR only needs one.
FALSE	FALSE	FALSE	FALSE	Neither condition met. Both AND and OR fail.

THE 6 MOST COMMON IF LOGIC MISTAKES

#	Mistake	What happens	Fix
1	Forgetting quotes around text	IF(A2=Pass,...) treats Pass as a named range → #NAME! error	Always: IF(A2="Pass",...)

2	Wrong nesting order	Less specific condition catches records meant for more specific one	Order: most restrictive first → least restrictive last
3	Omitting value_if_false	Returns the word FALSE (not blank) when condition is not met	Use "" for blank: IF(A2="Pass","✓","")
4	Using IF instead of AND/OR	IF(A2="D",IF(B2="BCBS","Flag",""),"") — needless nesting	Use AND: IF(AND(A2="D",B2="BCBS"),"Flag","")
5	Wrapping everything in IFERROR	Structural errors (#REF!, #VALUE!) silently hidden. Wrong numbers look right.	Use IFERROR only for expected errors. Use IFNA for lookup not-found.
6	Comparing numeric text as numbers	IF(D2=197,...) fails when "197" is stored as text (left-aligned)	Use IF(D2="197",...) for text codes, or VALUE() if type is uncertain

SQL CASE WHEN TO EXCEL IFS — TRANSLATION MAP

SQL CASE WHEN	Excel IFS Equivalent
WHEN condition THEN result	condition, result (IFS condition-result pair)
AND between conditions	AND(cond1, cond2) — all must be true
OR / IN ('A','B')	OR(col="A", col="B") — any one suffices
NOT condition	NOT(condition) or use <> operator
ELSE default	TRUE, "default" — final catch-all pair
No ELSE clause	No catch-all → IFS returns #N/A if no match