



WEEK 5 — LOGICAL & LOOKUP FUNCTIONS

The focus this week was on using Excel's logical and lookup functions to manipulate values categorise data and match data sets. This handy quick reference guide includes all functions we looked at, a list of logical operators and some other functions worth investigating.

LOGICAL AND LOOKUP FUNCTIONS		LOOKUP TIPS	LOGICAL OPERATORS
IF (logical_test, value_if_true, [value_if_false])	Return different values depending on a test.	<ul style="list-style-type: none">• Name lookup ranges• Convert lookup data to tables• Specify if it is a Range lookup or Exact Match• Keep formulas as simple as possible	= Equal to < Less than ≤ Less than or equal > Greater than ≥ Greater or equal ≠ Not equal
AND (logical1, [logical2], ...)	Combine several tests. Will return true only if all the tests are true.		
OR (logical1, [logical2], ...)	Combine several tests. Will return true if any of the tests are true.		
VLOOKUP (lookup_value, table_array, col_index_num, [range_lookup])	Look up a value in a range of cells. Return the value in the same row but a different column.		
INDEX (array, row_num, [column_num])	Returns the value from the array given by position row_num and column_num. Often used with MATCH to find the row and column positions.		
MATCH (lookup_value, lookup_array, [match_type])	Look up a value in an array. Returns the position of the value in the array.		
XLOOKUP		BONUS CONTENT	
XLOOKUP (lookup_value, lookup_array, return_array, [if_not_found], [match_mode], [search_mode])		IFS — The IF function only allows 1 logical test. We have seen how we can nest IFs if you need to perform multiple tests, which can get messy with several tests. Another option is the IFS function, introduced in recent versions of Excel. It can perform multiple tests, returning the value associated with the first test that returns true.	IFERROR/IFNA — sometimes you want to perform a calculation that might produce an error. Using these functions, you can return a specified value if your calculation produces an error. IFERROR traps all errors, IFNA only traps a #N/A error.
XLOOKUP is the newest lookup function in Excel. It only became available in the Office 365 version of Excel in early 2020. It combines the ease-of-use of VLOOKUP with the power of INDEX/MATCH . One limitation of VLOOKUP is that it can only look up values in the leftmost column of the array. With XLOOKUP you specify the lookup array and return arrays separately.			
There is also a new XMATCH function that expands on the MATCH function.			