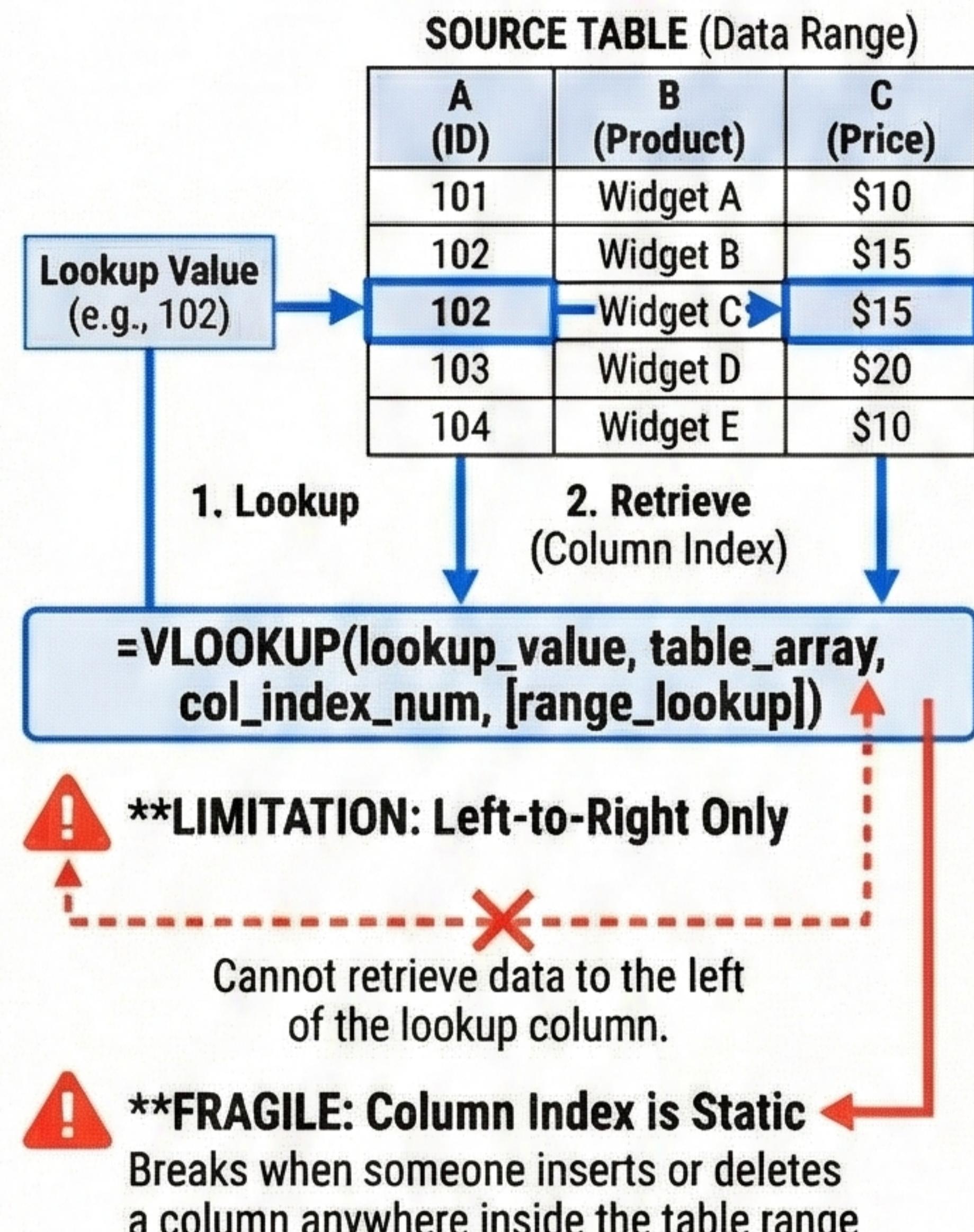


04 EN Excel INDEX and MATCH versus VLOOKUP functions	2
05 EN Excel INDEX and MATCH versus XLOOKUP functions	3
06 EN Excel INDEX and MATCH versus INDEX and XMATCH functions	4

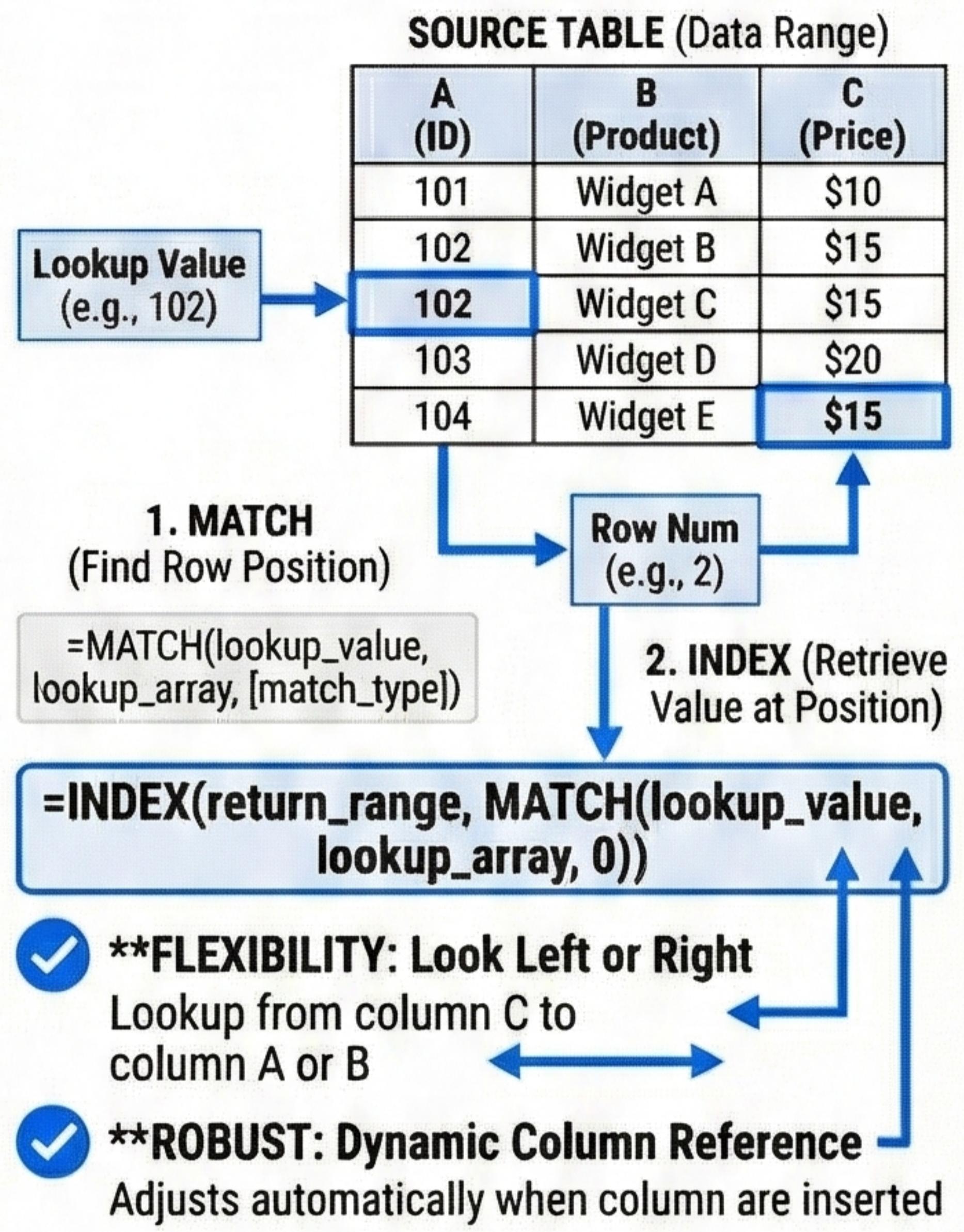
EXCEL FUNCTIONS FOR DATA RETRIEVAL: VLOOKUP vs. INDEX & MATCH

A Comparative Analysis of Legacy (VLOOKUP) and Flexible (INDEX & MATCH) Approaches for Management Data Analysis.

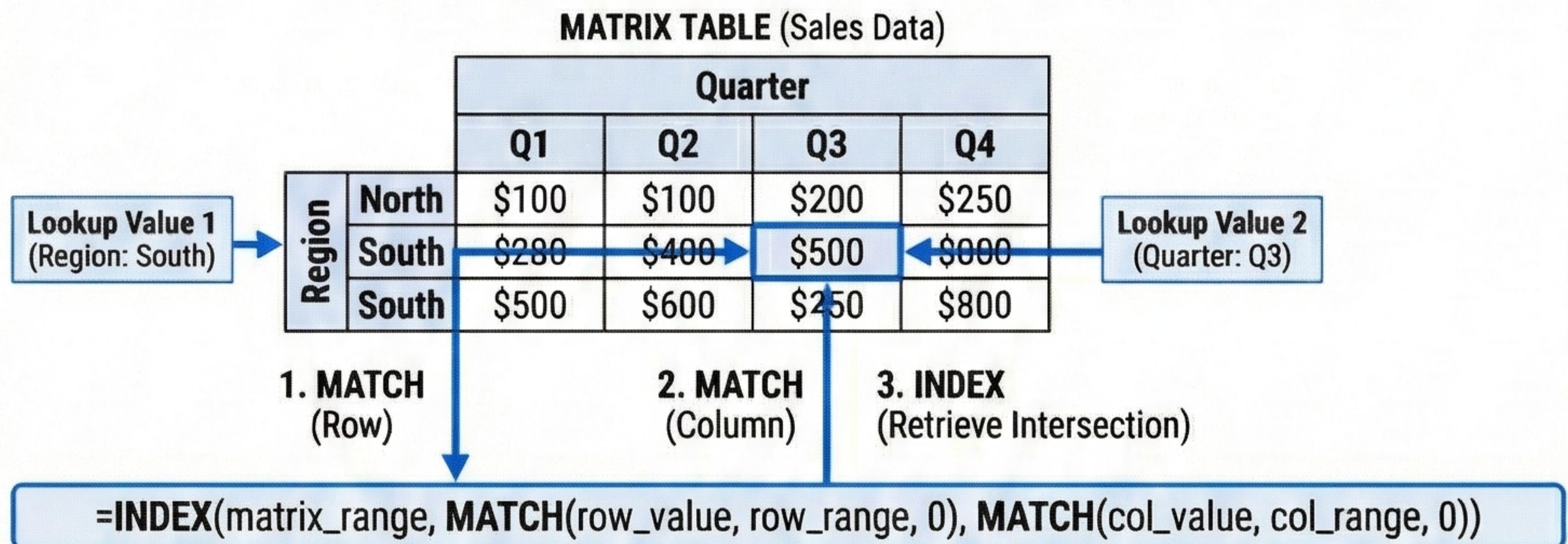
SECTION 1: VLOOKUP (LEGACY APPROACH - RIGID)



SECTION 2: INDEX & MATCH (FLEXIBLE APPROACH - ROBUST)



SECTION 3: TWO-DIMENSIONAL LOOKUP (INDEX & MATCH)



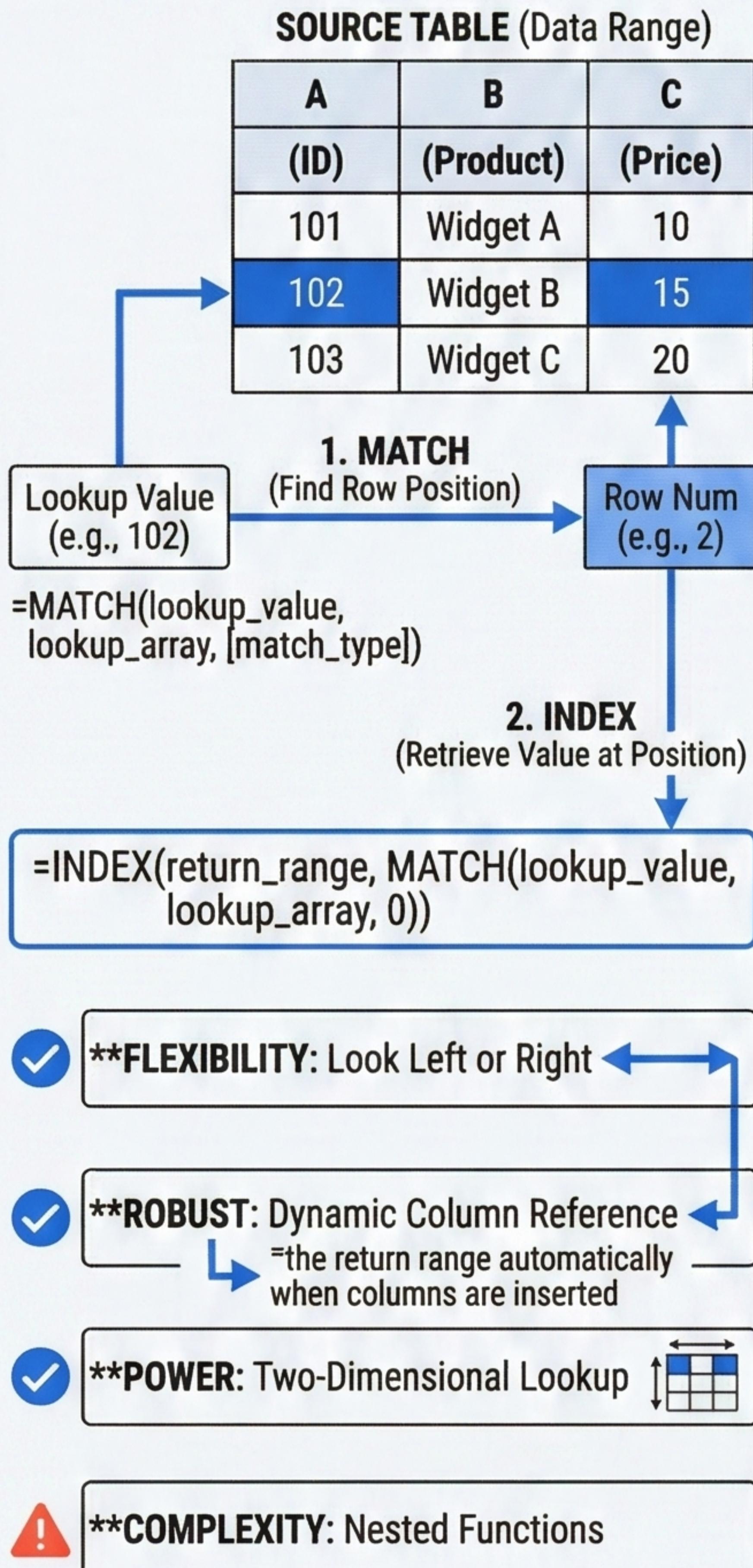
SECTION 4: COMPARATIVE SUMMARY (KEY DIFFERENCES)

FEATURE	VLOOKUP	INDEX & MATCH
Lookup Direction	✗ Left-to-Right Only	✓ Any Direction (Left/Right)
Flexibility (Column Insertion)	✗ Breaks (Static Index)	✓ Robust (Dynamic)
Performance (Large Datasets)	✗ Slower	✓ Faster
Two-Dimensional Lookup	✗ No (Requires Helper)	✓ Yes (Native)
Formula Complexity	✓ Simpler (Single Function)	✗ More Complex (Nested)

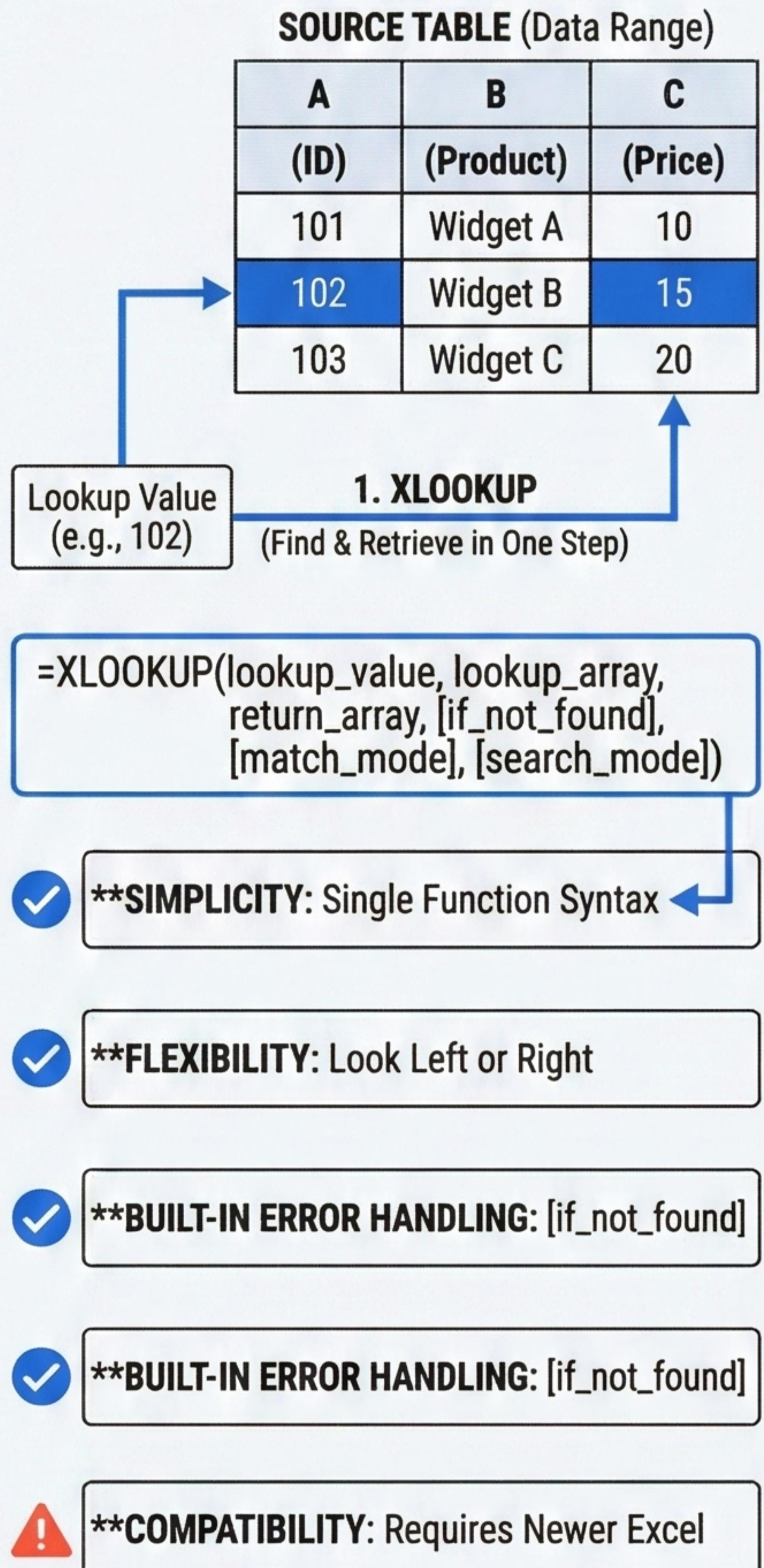
EXCEL FUNCTIONS FOR DATA RETRIEVAL: INDEX & MATCH vs. XLOOKUP

A Comparative Analysis of Robust (INDEX & MATCH) and Modern (XLOOKUP)
Approaches for Management Data Analysis

SECTION 1: INDEX & MATCH (ROBUST LEGACY APPROACH)



SECTION 2: XLOOKUP (MODERN SIMPLIFIED APPROACH)



SECTION 3: COMPARATIVE SUMMARY (KEY DIFFERENCES)

FEATURE	INDEX & MATCH	XLOOKUP
Lookup Direction	✓ Any Direction (Left/Right)	✓ Any Direction (Left/Right)
Flexibility (Column Insertion)	✓ Robust (Dynamic)	✓ Robust (Dynamic)
Syntax Complexity	✗ More Complex (Nested)	✓ Simpler (Single Function)
Error Handling	✗ Requires IFERROR	✓ Built-in ([if_not_found])
Two-Dimensional Lookup	✓ Yes (Native)	✓ Yes (Native)
Compatibility	✓ Universal (All Versions)	✗ Newer Versions Only

EXCEL FUNCTIONS FOR DATA RETRIEVAL: INDEX & MATCH vs. INDEX & XMATCH

A Comparative Analysis of Legacy (INDEX & MATCH) and Modern (INDEX & XMATCH) Approaches for Management Data Analysis.

SECTION 1: INDEX & MATCH (LEGACY ROBUST APPROACH)

SOURCE TABLE (Data Range)

A (ID)	B (Product)	C (Price)
101	"Widget A"	10
102	"Widget B"	15
103	"Widget C"	20
...

1. MATCH
(Find Row Position) → Row Num
(e.g., 2)

=MATCH(lookup_value, lookup_array,
[match_type])

⚠ **CAUTION: Default is Approximate Match (1). Must specify 0 for Exact Match.

2. INDEX (Retrieve Value at Position)

=INDEX(return_range,
MATCH(lookup_value, lookup_array, 0))

✓ ROBUST: Dynamic Column Reference
return range - adjusts automatically when columns are inserted.

SECTION 2: INDEX & XMATCH (MODERN SIMPLIFIED APPROACH)

SOURCE TABLE (Data Range)

A (ID)	B (Product)	C (Price)
101	"Widget A"	10
102	"Widget B"	15
103	"Widget C"	20
...

1. XMATCH
(Find Row Position) → Lookup Value
(e.g., 102)

=XMATCH(lookup_value, lookup_array,
[match_mode], [search_mode])

✓ ADVANTAGE: Default is Exact Match (0). No need to specify.

2. INDEX (Retrieve Value at Position)

=INDEX(return_range,
XMATCH(lookup_value, lookup_array))

- ✓ SIMPLER SYNTAX: Fewer Arguments
- ✓ POWER: Advanced Search Modes
Supports reverse search (last to first) and binary search.
- ⚠ COMPATIBILITY: Requires Newer Excel

SECTION 3: COMPARATIVE SUMMARY (KEY DIFFERENCES)

FEATURE	INDEX & MATCH	INDEX & XMATCH
Default Match Type	⚠ Approximate (1)	✓ Exact (0)
Search Modes (e.g., Reverse)	✗ No (Requires Workarounds)	✓ Yes (Native, Simple)
Syntax Complexity	✗ More Complex (Nested, Match Type)	✓ Simpler (Fewer Arguments)
Robustness (Dynamic Columns)	✓ Robust (Dynamic)	✓ Robust (Dynamic)
Compatibility	✓ Universal (All Versions)	✗ Newer Versions Only