

# Learning Google Sheets Query: Using AND/OR for Multiple Criteria

Authored by  
**Mohammed looti**

November 2, 2025

## RECOMMENDED CITATION

Mohammed looti (2025). *Learning Google Sheets Query: Using AND/OR for Multiple Criteria*. PSYCHOLOGICAL STATISTICS. Retrieved from <https://statistics.arabpsychology.com/?p=8568>

The [Google Sheets QUERY function](#) is arguably the most powerful tool available for advanced data manipulation within the spreadsheet environment. It allows users to execute sophisticated data retrieval commands using a dialect similar to standard [SQL](#) (Structured Query Language). When working with large datasets, it is rarely sufficient to filter based on a single condition; instead, you need to apply multiple, interdependent criteria. This is achieved by incorporating logical operators, specifically **AND** and **OR**, into the query's `WHERE` clause. Understanding how to correctly implement these operators is fundamental to mastering complex data analysis in Google Sheets.

## Mastering the QUERY Function for Complex Data Retrieval

The core objective of multi-criteria querying is to refine the result set based on rules derived from [Boolean logic](#). The `QUERY` function syntax requires careful construction of the query string, which defines what data to `SELECT` and under what conditions to filter (`WHERE`). When multiple conditions must be evaluated simultaneously, the choice between the **AND** and **OR** operators dictates the inclusion criteria for each row of data. Selecting the correct operator is crucial, as using **AND** when **OR** is required, or vice versa, will result in an entirely different and potentially misleading filtered dataset.

To illustrate the basic structure, consider a scenario where we are filtering a range defined as `A2:C10`. The conditions applied in the `WHERE` clause determine which rows are returned in the final output table. Note that all column references (A, B, C, etc.) within the query string refer to the columns in the specified data range, not necessarily the columns in the main spreadsheet. We will explore how these two foundational operators function and provide concrete examples of their implementation within the Google Sheets environment.

### The Mechanics of the AND Logical Operator

The **AND** operator is used when a record must satisfy **all** specified conditions simultaneously to be included in the result set. If you link two criteria using **AND**, a row is only returned if the first criterion evaluates to true **and** the second criterion also evaluates to true. This operator performs a restrictive filtering action, often narrowing the resulting dataset significantly compared to a single-criterion query.

For example, if we want to retrieve records where Column A contains the string 'Hello' **and** the numeric value in Column C is greater than 10, we utilize the **AND** structure. This ensures a highly specific result set that adheres strictly to both requirements. Here is the canonical structure for implementing the **AND** operator:

#### Example of AND Operator Syntax:

```
=QUERY(A2:C10, "select A, B, C where A contains 'Hello' and C > 10")
```

It is important to remember that the comparison operators (such as `contains`, `=`, `>`, `<`, etc.) must be correctly formatted within the query string. Text strings are enclosed in single quotes, while numeric comparisons are written directly. The use of **AND** guarantees that the output table will only contain rows that satisfy this dual requirement, making it invaluable for targeted data extraction.

## Practical Application of the AND Operator in Google Sheets

To see the **AND** operator in action, let us consider a sample dataset detailing basketball team performance. This dataset includes information on the Team Name, Conference, Points Scored, and Wins. We aim to identify teams that meet two specific, restrictive conditions: belonging to the 'East' conference **and** scoring over 90 points.

Suppose we have the following dataset in Google Sheets that contains information about various basketball teams:

	A	B	C	D	E
1	Team	Conference	Points	Assists	
2	Hornets	East	78	14	
3	Hawks	East	89	19	
4	Spurs	West	79	22	
5	Mavericks	West	93	24	
6	Rockets	West	94	18	
7	Nets	East	86	15	
8	Suns	West	89	29	
9	Warriors	West	94	23	
10	Magic	East	99	12	
11	Heat	East	103	16	
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					

We can use the following query to retrieve the teams that are in the East conference **and** scored more than 90 points. In this case, Column B represents the Conference and Column C represents

the Points Scored:

**=QUERY(A2:D11, "select A, B, C, D where B contains 'East' and C > 90")**

The resulting output clearly demonstrates the restrictive power of **AND**. The query successfully filters the raw data, returning only those rows where both conditions--Conference B containing 'East' and Points C being greater than 90--are simultaneously satisfied. The following screenshot illustrates the practical result of executing this query:

	A	B	C	D	E	F
A14	=QUERY(A2:D11, "select A, B, C, D where B contains 'East' and C > 90")					
1	<b>Team</b>	<b>Conference</b>	<b>Points</b>	<b>Assists</b>		
2	Hornets	East	78	14		
3	Hawks	East	89	19		
4	Spurs	West	79	22		
5	Mavericks	West	93	24		
6	Rockets	West	94	18		
7	Nets	East	86	15		
8	Suns	West	89	29		
9	Warriors	West	94	23		
10	Magic	East	99	12		
11	Heat	East	103	16		
12						
13						
14	Magic	East	99	12		
15	Heat	East	103	16		
16						
17						
18						
19						
20						
21						

Upon reviewing the output, it is clear that only the Magic and the Heat are selected. These teams are the only two records that **meet both criteria** specified in our query, reinforcing the requirement for dual adherence imposed by the **AND** operator.

## Implementing the Inclusive Logic of the OR Operator

In contrast to the restrictive nature of **AND**, the **OR** operator is designed for inclusive filtering. When two criteria are linked using **OR**, a row is included in the result set if the first condition is true,

**or** the second condition is true, **or** if both conditions are true. This means that **OR** significantly expands the potential result set, as it only requires a row to satisfy a minimum of one condition.

The **OR** operator is particularly useful when you are attempting to segment data based on distinct, yet equally important, characteristics. For instance, we might want to see all teams that belong to the 'East' conference regardless of their score, or any team that scored over 90 points regardless of their conference. This flexibility allows for broader data exploration and identification of subsets that satisfy alternative requirements.

#### **Example of OR Operator Syntax:**

**=QUERY(A2:C10, "select A, B, C where A contains 'Hey' or C = 10")**

To demonstrate this inclusive logic, let us revisit the basketball dataset. We will now structure a query using **OR** to select teams that are either in the 'East' conference or have scored more than 90 points. This approach will necessarily yield a larger result set than the previous **AND** example because fewer constraints are placed on the inclusion of each record.

Once again suppose we have the following dataset in Google Sheets:

	A	B	C	D	E
1	<b>Team</b>	<b>Conference</b>	<b>Points</b>	<b>Assists</b>	
2	Hornets	East	78	14	
3	Hawks	East	89	19	
4	Spurs	West	79	22	
5	Mavericks	West	93	24	
6	Rockets	West	94	18	
7	Nets	East	86	15	
8	Suns	West	89	29	
9	Warriors	West	94	23	
10	Magic	East	99	12	
11	Heat	East	103	16	
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					

The corresponding query utilizes the **OR** operator:

**=QUERY(A2:D11, "select A, B, C, D where B contains 'East' or C > 90")**

The following screenshot shows how to use this query in practice, highlighting the expanded output:

	A	B	C	D	E	F
A14	=QUERY(A2:D11, "select A, B, C, D where B contains 'East' or C > 90")					
1	<b>Team</b>	<b>Conference</b>	<b>Points</b>	<b>Assists</b>		
2	Hornets	East	78	14		
3	Hawks	East	89	19		
4	Spurs	West	79	22		
5	Mavericks	West	93	24		
6	Rockets	West	94	18		
7	Nets	East	86	15		
8	Suns	West	89	29		
9	Warriors	West	94	23		
10	Magic	East	99	12		
11	Heat	East	103	16		
12						
13						
14	Hornets	East	78	14		
15	Hawks	East	89	19		
16	Mavericks	West	93	24		
17	Rockets	West	94	18		
18	Nets	East	86	15		
19	Warriors	West	94	23		
20	Magic	East	99	12		
21	Heat	East	103	16		
22						
23						
24						

Notice how every team that is selected **met at least one of the criteria** specified in our query. That is, each team selected was either in the 'East' conference *or* they scored more than 90 points. This outcome confirms the inclusive nature of the **OR** operator, which is essential for broad data sampling.

## Handling Complex Criteria: Operator Precedence and Grouping

While simple queries rely solely on **AND** or **OR**, real-world data analysis often requires combining both operators within a single `WHERE` clause. When mixing operators, understanding [operator precedence](#) is critical. In the Google Visualization API Query Language (upon which the Sheets `QUERY` function is based), the **AND** operator generally takes precedence over the **OR** operator, meaning that **AND** operations are evaluated before **OR** operations.

To override this default precedence or to ensure absolute clarity in complex filtering, parentheses

`()` must be used. Parentheses allow you to group conditions logically, forcing the query engine to evaluate the enclosed conditions first, much like in traditional [relational algebra](#). For example, if you want teams that are in the East conference **AND** (either scored over 90 points **OR** won more than 5 games), the grouping is essential to define the desired logic accurately. Without parentheses, the query engine might incorrectly group the **AND** condition with only the first part of the **OR** clause.

Consider the structure required to ensure specific criteria grouping:

`... where (B = 'East' or B = 'West') and C > 90`: This query first evaluates if the conference is East or West, and then checks if the resulting set has scores greater than 90.

`... where B = 'East' and (C > 90 or D > 5)`: This query selects teams in the East conference, but only if they satisfy at least one of the two scoring/winning metrics defined within the parentheses.

Mastering the combination of **AND**, **OR**, and parentheses ensures that even the most complex filtering requirements can be translated accurately into the Google Sheets `QUERY` language, yielding reliable and precise data subsets for analysis.

## Additional Resources for Advanced Querying

To further enhance your skills in leveraging the full potential of the `QUERY` function, we recommend exploring the official documentation and advanced tutorials focused on specific filtering requirements.

The following tutorials explain how to perform other common tasks with Google Sheet queries: