vlook up

**v LOOKUP (Vertical Lookup)**

**VLOOKUP** is designed to search for data in **columns**. It works like this: you provide a lookup value, and VLOOKUP searches for that value in the first column of a table. Once it finds a match, it returns the corresponding value from a different column in the same row.

The syntax for VLOOKUP is:=VLOOKUP(lookup\_value, table\_array, col\_index\_num, [range\_lookup])

* **lookup\_value**: The value you want to find.
* **table\_array**: The range of cells containing the data.
* **col\_index\_num**: The column number (from left to right, starting at 1) in the table\_array that contains the data you want to retrieve.
* **[range\_lookup]**: An optional argument that specifies whether you want an exact match (FALSE or 0) or an approximate match (TRUE or 1). **For most cases, you'll want an exact match, so you should use FALSE or 0.**

**Example**

Imagine a student gradebook with columns for **Student ID**, **Name**, and **Grade**. If you wanted to find the grade for a student with ID "123," you'd use VLOOKUP. You'd tell VLOOKUP to look up "123" in the first column, and then return the value from the "Grade" column in that same row.

**HLOOKUP (Horizontal Lookup)**

**HLOOKUP** is the horizontal counterpart to VLOOKUP. Instead of searching in columns, it searches for data in **rows**. You provide a lookup value, and HLOOKUP searches for it in the **first row** of a table. Once it finds a match, it returns the corresponding value from a different row in the same column.

The syntax for HLOOKUP is:=HLOOKUP(lookup\_value, table\_array, row\_index\_num, [range\_lookup])

* **lookup\_value**: The value you want to find.
* **table\_array**: The range of cells containing the data.
* **row\_index\_num**: The row number (from top to bottom, starting at 1) in the table\_array that contains the data you want to retrieve.
* **[range\_lookup]**: An optional argument for an exact or approximate match. Again, **FALSE or 0 for an exact match is most common.**

**Example**

Consider a table where the top row contains different months (**Jan**, **Feb**, **Mar**, etc.), and the rows below contain corresponding sales data for different regions. If you wanted to find the sales for "Region A" in "Jan," you'd use HLOOKUP. You'd tell HLOOKUP to look for "Jan" in the first row, and then return the value from the "Region A" row in that same column.

**Key Difference**

The main difference is the **orientation of the data**.

* **VLOOKUP** is for data arranged **vertically** (with unique identifiers in the first column).
* **HLOOKUP** is for data arranged **horizontally** (with unique identifiers in the first row).

In most spreadsheets, data is organized vertically, which makes VLOOKUP much more common than HLOOKUP. While VLOOKUP and HLOOKUP have been the go-to functions for a long time, more recent versions of Excel offer a more flexible and powerful function called **XLOOKUP**, which can perform both vertical and horizontal lookups and has several advantages over the older functions.