**VLOOKUP in Excel**

**VLOOKUP** stands for **Vertical Lookup**. It is used to **search for a value** in the **first column** of a table and **return a value in the same row** from a specified column.

**VLOOKUP Syntax**

=VLOOKUP(lookup\_value, table\_array, col\_index\_num, [range\_lookup])

| **Argument** | **Description** |
| --- | --- |
| lookup\_value | The value to search in the first column of the table. |
| table\_array | The range that contains the data. |
| col\_index\_num | The column number (starting from 1) from which to return the value. |
| range\_lookup | Optional: TRUE for approximate match, FALSE for exact match. |

**Understanding Each Argument**

1. **lookup\_value**: The value you want to find.
2. **table\_array**: The area where VLOOKUP will search. Always **fix with $ signs** for accurate dragging: $A$2:$D$10
3. **col\_index\_num**: For example, 2 means the second column from the left in your table.
4. **range\_lookup**:
   * FALSE → Exact match
   * TRUE → Approximate match (used in sorted data)

**Important Notes**

* VLOOKUP **only works from left to right**.
* Lookup value must be in the **first column** of the table.
* If value is not found, it returns **#N/A**.
* It’s **not case sensitive**.
* If two values match, **first match is returned**.

**Practice Questions on VLOOKUP**

**Dataset 1: Employee Records**

| **EmpID** | **Name** | **Dept** | **Salary** |
| --- | --- | --- | --- |
| 101 | Rajesh | HR | 30000 |
| 102 | Meena | Sales | 35000 |
| 103 | Arun | IT | 45000 |
| 104 | Seema | Admin | 28000 |
| 105 | Pooja | IT | 47000 |

**Q1–Q5**

1. Find the department of employee with EmpID 102.
2. Return the salary of employee Meena.
3. Get the name of employee with EmpID 104.
4. Lookup salary of employee ID 103.
5. Display the department of employee ID 105.

**Dataset 2: Product Prices**

| **ProductID** | **Product** | **Category** | **Price** |
| --- | --- | --- | --- |
| P001 | Notebook | Stationery | 50 |
| P002 | Pen | Stationery | 10 |
| P003 | Mouse | Electronics | 400 |
| P004 | Keyboard | Electronics | 600 |
| P005 | Marker | Stationery | 25 |

**Q6–Q10**

1. Get the price of ‘Pen’.
2. Find the category of ProductID P003.
3. Lookup price of Marker.
4. Return product name for ProductID P002.
5. What is the category of ProductID P005?

**Dataset 3: Student Scores**

| **RollNo** | **Name** | **Subject** | **Marks** |
| --- | --- | --- | --- |
| 1 | Anuj | Maths | 88 |
| 2 | Neha | Science | 76 |
| 3 | Rohan | English | 69 |
| 4 | Sanya | Maths | 90 |
| 5 | Priya | Science | 85 |

**Q11–Q15**

1. Get marks of RollNo 3.
2. What is the subject for RollNo 5?
3. Find name of student with RollNo 2.
4. Return marks of Sanya.
5. Find subject of Anuj.

**Dataset 4: Bank Accounts**

| **AccNo** | **Holder** | **Type** | **Balance** |
| --- | --- | --- | --- |
| 1001 | Arjun | Savings | 50000 |
| 1002 | Sneha | Current | 75000 |
| 1003 | Ramesh | Savings | 63000 |
| 1004 | Kavita | Current | 82000 |
| 1005 | Manish | Savings | 71000 |

**Q16–Q20**

1. Lookup balance of account 1003.
2. Return holder name of AccNo 1002.
3. Find account type of Kavita.
4. What is the balance of Arjun?
5. Find account type of 1005.

**Dataset 5: City Temperature**

| **City** | **State** | **Temp (°C)** |
| --- | --- | --- |
| Delhi | Delhi | 42 |
| Mumbai | Maharashtra | 34 |
| Kolkata | WB | 38 |
| Chennai | TN | 36 |
| Jaipur | Rajasthan | 40 |

**Q21–Q25**

1. Get temperature of Mumbai.
2. Find the state of Chennai.
3. Lookup temperature of Kolkata.
4. Return city with Temp 40 (Reverse lookup).
5. Find state of Jaipur.

**Solutions to Practice Questions**

**Q1–Q5**

1. =VLOOKUP(102, A2:D6, 3, FALSE) → Sales
2. =VLOOKUP("Meena", B2:D6, 3, FALSE) → 35000
3. =VLOOKUP(104, A2:D6, 2, FALSE) → Seema
4. =VLOOKUP(103, A2:D6, 4, FALSE) → 45000
5. =VLOOKUP(105, A2:D6, 3, FALSE) → IT

**Q6–Q10**

1. =VLOOKUP("Pen", B2:D6, 3, FALSE) → 10
2. =VLOOKUP("P003", A2:D6, 3, FALSE) → Electronics
3. =VLOOKUP("Marker", B2:D6, 3, FALSE) → 25
4. =VLOOKUP("P002", A2:D6, 2, FALSE) → Pen
5. =VLOOKUP("P005", A2:D6, 3, FALSE) → Stationery

**Q11–Q15**

1. =VLOOKUP(3, A2:D6, 4, FALSE) → 69
2. =VLOOKUP(5, A2:D6, 3, FALSE) → Science
3. =VLOOKUP(2, A2:D6, 2, FALSE) → Neha
4. =VLOOKUP("Sanya", B2:D6, 3, FALSE) → Maths → (Error: Use INDEX+MATCH here)  
   ⚠️ VLOOKUP won’t work unless Sanya is in the first column.
5. =VLOOKUP("Anuj", B2:D6, 3, FALSE) → Maths

**Q16–Q20**

1. =VLOOKUP(1003, A2:D6, 4, FALSE) → 63000
2. =VLOOKUP(1002, A2:D6, 2, FALSE) → Sneha
3. =VLOOKUP("Kavita", B2:D6, 2, FALSE) → Current
4. =VLOOKUP("Arjun", B2:D6, 3, FALSE) → 50000
5. =VLOOKUP(1005, A2:D6, 3, FALSE) → Savings

**Q21–Q25**

1. =VLOOKUP("Mumbai", A2:C6, 3, FALSE) → 34
2. =VLOOKUP("Chennai", A2:C6, 2, FALSE) → TN
3. =VLOOKUP("Kolkata", A2:C6, 3, FALSE) → 38
4. VLOOKUP cannot do reverse lookup. Use INDEX+MATCH.
5. =VLOOKUP("Jaipur", A2:C6, 2, FALSE) → Rajasthan