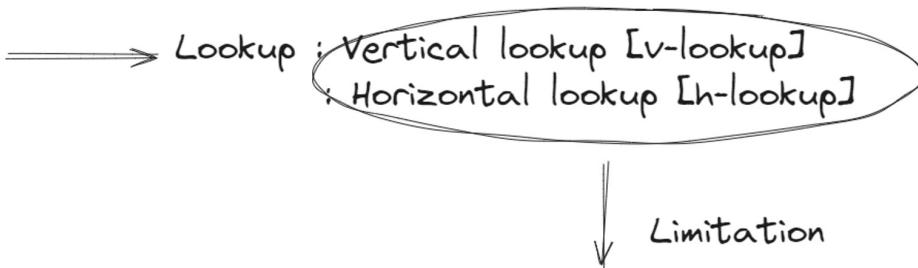
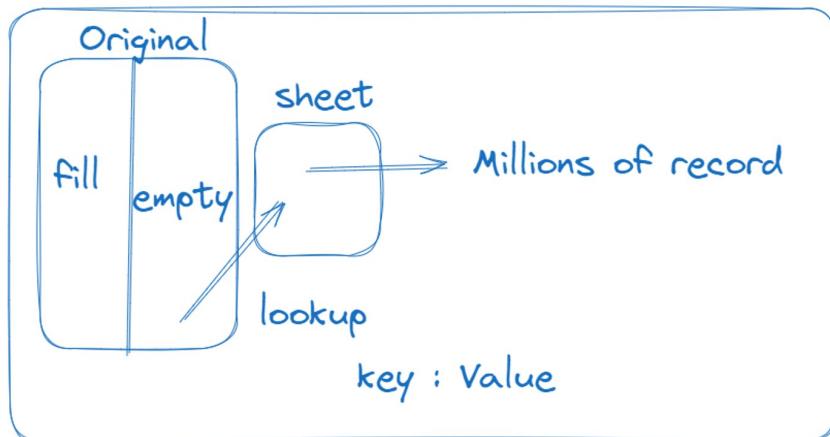


Lookup & Date Functions

29 March 2024 23:21

Lookup & Date Function



v-lookup : key will get searched in the right direction

Test Cricket - Top 100 Batsman (Nov - 2010)

| A | B | C | D | E | F | G |
|-----|---------|-------------------|--------|---------|-----|-----|
| ID | Ratings | Name | N.Code | Nations | | |
| 1 | 891 | S.R. Tendulkar | IND | | | |
| 2 | 874 | K.C. Sangakkara | SL | | | |
| 3 | 819 | V. Sehwag | IND | | | |
| 4 | 807 | S. Chanderpaul | WI | | | |
| 5 | 807 | D.P.M.D. Jayaward | SL | | | |
| 5 | 791 | J.H. Kallis | SA | | | |
| 7 | 787 | G.C. Smith | SA | | | |
| 8 | 767 | V.V.S. Laxman | IND | | | |
| 9 | 766 | R.L. Taylor | NZ | | | |
| 10 | 762 | A.B. de Villiers | SA | | | |
| 11 | 748 | T.T. Samaraweera | SL | | | |
| 12 | 745 | H.M. Amla | SA | | | |
| 13 | 738 | M.J. Clarke | AUS | | | |
| 14 | 735 | S.M. Katich | AUS | | | |
| 15 | 733 | I.J.L. Trott | ENG | | | |
| 16 | 731 | R.T. Ponting | AUS | | | |
| 17 | 717 | G. Gambhir | IND | | | |
| 17 | 717 | Mohammad Yous | PAK | | | |
| 19 | 710 | Younus Khan | PAK | | | |
| 20 | 707 | Tamim Iqbal | BAN | | | |
| 21 | 670 | C.H. Gayle | WI | | | |
| 22 | 657 | R. David | IND | | | |
| ... | ... | ... | ... | ... | ... | ... |

| H | I |
|--------|--------------|
| N.Code | Nations |
| IND | India |
| SL | Sri Lanka |
| WI | West Indies |
| SA | South Africa |
| NZ | New Zealand |
| AUS | Australia |
| ENG | England |
| PAK | Pakistan |
| BAN | Bangladesh |

lookup

Search in Right Direction

table, sheet, spreadsheet

Locked

absolute reference
\$A\$4:\$D\$20

Vertical direction limitation

v-lookup - Table Vertical

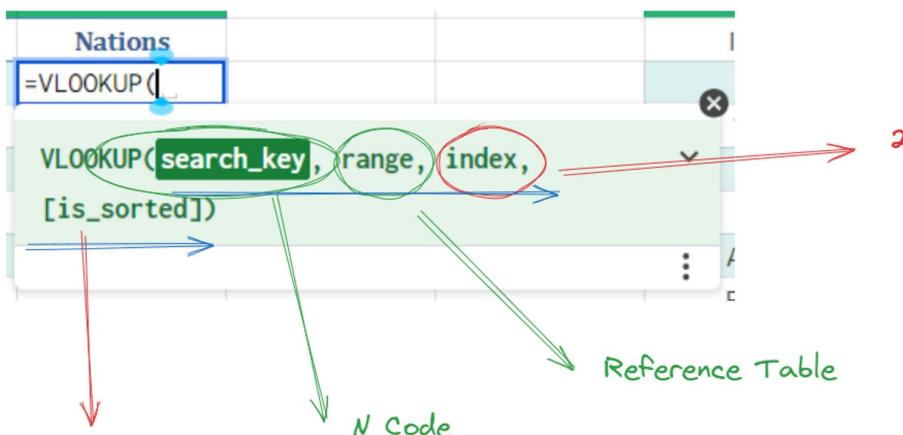
Hlookup : down direction [Limitation]

A diagram showing a 2D coordinate system with a vertical *y-axis* and a horizontal *x-axis*. A green arrow points downwards from the *y-axis* towards a table, illustrating the limitation of HLOOKUP to search vertically.

| | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|-------|---------|-------|-------|--------|------------|---|---------|------|-------|--------|---|---|---|---|
| Code | Builder | Units | Price | Amount | Commission | | Builder | | | | | | | |
| n-08 | Doug | 8 | 389 | 3112 | | | Doug | | | | | | | |
| b-08 | Dave | 10 | 385 | 3850 | | | | Dave | | | | | | |
| ur-08 | Dave | 3 | 771 | 2313 | | | | | Brian | | | | | |
| r-08 | Brian | 5 | 313 | 1565 | | | | | Larry | | | | | |
| y-08 | Larry | 10 | 574 | 5740 | | | | | | Rob | | | | |
| y-08 | Rob | 8 | 730 | 5840 | | | | | | Morgan | | | | |
| n-08 | Morgan | 4 | 471 | 1884 | | | | | | Jones | | | | |
| g-08 | Jones | 1 | 548 | 548 | | | | | | | | | | |
| c-08 | Doug | 3 | 323 | 969 | | | | | | | | | | |
| r-09 | Dave | 5 | 712 | 3560 | | | | | | | | | | |
| y-09 | Dave | 9 | 432 | 3888 | | | | | | | | | | |
| p-09 | Brian | 6 | 460 | 2760 | | | | | | | | | | |

v-lookup - Table Vertical
[Right] Direction Limit

h-lookup - Table Horizontal
[Down] Direction Limit



Down Direction [Limitation]

A diagram showing a reference table with two columns: *N.Code* and *Nations*. The table is sorted by *N.Code*. A green arrow points downwards from the table, illustrating the limitation of VLOOKUP to search vertically.

| N.Code | Nations |
|--------|--------------|
| IND | India |
| SL | Sri Lanka |
| WI | West Indies |
| SA | South Africa |
| NZ | New Zealand |
| AUS | Australia |
| ENG | England |
| PAK | Pakistan |
| BAN | Bangladesh |

Values provided in the reference table are sorted or not.
[True/False] → [1/0]

Screenshot of a spreadsheet showing a list of codes and their corresponding nations. The list includes IND, SL, IND, WI, SL, SA, SA, IND, NZ, SA, SL, and SA. The second row (SL) is highlighted in green, indicating it is part of the sorted range for the VLOOKUP function.

| N.Code | Nations |
|--------|------------------|
| IND | =VLOOKUP() |
| SL | |
| IND | VLOOKUP(search_k |
| WI | [is_sorted]) |
| SL | |
| SA | |
| SA | |
| IND | |
| NZ | |
| SA | |
| SL | |
| SA | |
| All | |

| |
|-----|
| SA |
| SL |
| SA |
| AUS |
| AUS |
| ENG |
| AUS |
| IND |
| PAK |
| PAK |
| BAN |
| WI |
| IND |
| ENG |

Index - work with Match Function :

INDEX Function:

The INDEX function in Google Sheets returns the value of a cell in a specified row and column of a range. The syntax is as follows:

- =INDEX(range, row_number, column_number)
- **range:** The range of cells from which to retrieve the value.
 - **row_number:** The row number within the range.
 - **column_number:** The column number within the range.

MATCH Function:

The MATCH function searches for a specified value in a range and returns the relative position of that item. The syntax is as follows:

- =MATCH(search_key, search_range, [search_type])
- **search_key:** The value to search for.
 - **search_range:** The range of cells to search within.
 - **search_type:** (optional) The type of match: 1 for less than, 0 for an exact match, -1 for greater than. If omitted, it defaults to 1.

| A | B | C | D |
|-------|------|---------|---------|
| Name | Math | English | Science |
| Alice | 90 | 85 | 92 |
| Bob | 88 | 92 | 89 |
| Carol | 76 | 89 | 78 |

1 - Less than
0 - exact value
-1 - greater value

| | | | | |
|-------|----|----|----|--|
| | 90 | 85 | 92 | |
| Bob | 88 | 92 | 89 | |
| Carol | 76 | 80 | 78 | |

Right Direction

Math Col - 94 :

$\{1\} \rightarrow 90, 88, 76$

$\{0\} \rightarrow NA$

$\{-1\} \rightarrow NA$

Science : 89 : $\{1\} : 78$

$\{0\} : 89$

$\{-1\} : 92$

| Test Cricket - Top 100 Batsman (Nov - 2010) | | | | | F | G | H | I |
|---|----|---------|-------------------|--------|--------------|--------------|--------|---|
| | A | B | C | D | E | Nations | N.Code | |
| 1 | ID | Ratings | Name | N.Code | Nations | India | IND | |
| 2 | 1 | 891 | S.R. Tendulkar | IND | India | Sri Lanka | SL | |
| 4 | 2 | 874 | K.C. Sangakkara | SL | Sri Lanka | West Indies | WI | |
| 5 | 3 | 819 | V. Sehwag | IND | India | South Africa | SA | |
| 6 | 4 | 807 | S. Chanderpaul | WI | West Indies | New Zealand | NZ | |
| 7 | 5 | 807 | D.P.M.D. Jayaward | SL | Sri Lanka | Australia | AUS | |
| 8 | 5 | 791 | J.H. Kallis | SA | South Africa | England | ENG | |
| 9 | 7 | 787 | G.C. Smith | SA | South Africa | Pakistan | PAK | |
| 10 | 8 | 767 | V.V.S. Laxman | IND | India | Bangladesh | BAN | |
| 11 | 9 | 766 | R.L. Taylor | NZ | New Zealand | | | |
| 12 | 10 | 762 | A.B. de Villiers | SA | South Africa | | | |
| 13 | 11 | 748 | T.T. Samaraweera | SL | Sri Lanka | | | |
| 14 | 12 | 745 | H.M. Amla | SA | South Africa | | | |
| 15 | 13 | 738 | M.J. Clarke | AUS | Australia | | | |
| 16 | 14 | 735 | S.M. Katich | AUS | Australia | | | |
| 17 | 15 | 733 | I.J.L. Trott | ENG | England | | | |
| 18 | 16 | 731 | R.T. Ponting | AUS | Australia | | | |
| 19 | 17 | 717 | G. Gambhir | IND | India | | | |
| 20 | 17 | 717 | Mohammad Yousu | PAK | Pakistan | | | |
| 21 | 19 | 710 | Younus Khan | PAK | Pakistan | | | |
| 22 | 20 | 707 | Tamim Iqbal | BAN | Bangladesh | | | |
| 23 | 21 | 670 | C.H. Gavle | WI | West Indies | | | |

Vertical Table : Row - Search [Match]
Col - Direct Index pass

=INDEX(\$G\$2:\$H\$10,MATCH(D4,\$H\$2:\$H\$10,0),1)

et INDEX(reference, [row], [column])

=INDEX(\$G\$2:\$H\$10,MATCH(D4,\$H\$2:\$H\$10,0),1)

MATCH(search_key, range, [search_type])

Horizontal Table : Row : Passing Index
Col : Match Function

| Builder | Doug | Dave | Brian | Larry | Rob |
|------------|------|------|-------|-------|-----|
| Commission | 3% | 4% | 7% | 10% | 12% |

| Nations | N.Code |
|--------------|--------|
| India | IND |
| Sri Lanka | SL |
| West Indies | WI |
| South Africa | SA |
| New Zealand | NZ |

| | |
|--------------|-----|
| Sri Lanka | SL |
| West Indies | WI |
| South Africa | SA |
| New Zealand | NZ |
| Australia | AUS |
| England | ENG |
| Pakistan | PAK |
| Bangladesh | BAN |

0 - exact Match

search_key

The value to search for. For example '42', 'Cats' or 'I24'.

range

The one-dimensional array to be searched.