#### LOOKUP

[Syntax](Syntax.docx):

vector form: LOOKUP ( lookup-value , lookup-vector , result-vector )

array form: LOOKUP ( lookup-value , array )

Description: The vector form looks in a vector for a value, and returns a value from the same position in a second vector. The array form looks in the first [row](row.docx) or column of an array for the specified value and returns a value from the same position in the last [row](row.docx) or column of that array.

Arguments:

|  |  |  |
| --- | --- | --- |
| Name | Type | Description |
| lookup-value | number, string, logical, name, [reference](reference.docx) | The value to search for in lookup-vector (or array).  |
| lookup-vector | [reference](reference.docx) | A range that contains only one [row](row.docx) or one column. The values in lookup-vector can be strings, numbers, or logical values. These values shall be placed in "ascending" order, as follows: …, -2, -1, 0, 1, 2, …, A–Z, [FALSE](FALSE.docx), TRUE. Upper- and lowercase strings are equivalent. If LOOKUP can't find the lookup-value, it matches the largest value in lookup-vector (or array) that is less than or equal to lookup-value. |
| result-vector | [reference](reference.docx) | A range that contains only one [row](row.docx) or column. It shall be the same size as lookup-vector. |
| array | [text](text.docx), number, logical | A range of cells whose values are to be compared with lookup-value. These values shall be placed in "ascending" order, as follows: …, -2, -1, 0, 1, 2, …, A–Z, [FALSE](FALSE.docx), TRUE. Upper- and lowercase strings are equivalent. If array covers an area that has more columns than rows, lookup-value is searched for in the first row. If array is square or has more rows than columns, lookup-value is searched for in the first column. |

Return Type and Value: any – The vector form looks in a vector for a value, and returns a value from the same position in a second vector. The array form looks in the first [row](row.docx) or column of an array for the specified value and returns a value from the same position in the last [row](row.docx) or column of that array.

However, if

* lookup-value is smaller than the smallest value in lookup-vector (or the first [row](row.docx) or column of array), the return value is unspecified.
* The size of the range specified by result-vector is not the same as that specified by lookup-vector, the return value is unspecified.
* The values in lookup-vector (or array) are not in "ascending" order, the return value is unspecified.

[Example: Given the following data:

|  |  |  |
| --- | --- | --- |
|  | A | B |
| 1 | Frequency | Color |
| 2 | 4.14 | red |
| 3 | 4.19 | orange |
| 4 | 5.17 | yellow |
| 5 | 5.77 | green |
| 6 | 6.39 | blue |

LOOKUP(4.19,A2:A6,B2:B6) results in orange
LOOKUP(5,A2:A6,B2:B6) results in orange
LOOKUP(7.66,A2:A6,B2:B6) results in blue

LOOKUP("C",{"a","[b](b.docx)","[c](c.docx)","[d](d.docx)";1,2,3,4}) results in 3
LOOKUP("bump",{"a",1;"[b](b.docx)",2;"[c](c.docx)",3}) results in 2

end example]