



Excel

Lookup & Reference functions

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CONTEÚDO

1. Objective
2. Vertical lookup: VLOOKUP
3. Horizontal lookup: HLOOKUP
4. Lookup with two criteria

Objective

- Allow extracting certain values from a table
- Allow searching information in a set of cells

VLOOKUP (Vertical Lookup)

Search **exact** values on the rows of the table's first column

| E8 | | | | | | | | | =VLOOKUP("Diana";A2:E6;4;FALSE) |
|----|---------|-------------|---------------|------|----------|---|---|---|---------------------------------|
| | A | B | C | D | E | F | G | H | |
| 1 | Name | Income | Group | Rate | Quota | | | | |
| 2 | Ann | 32 934,00 € | 3 | 3,0% | 988,02 € | | | | |
| 3 | Bob | 28 181,00 € | 2 | 2,0% | 563,62 € | | | | |
| 4 | Charles | 32 511,00 € | 3 | 2,0% | 650,22 € | | | | |
| 5 | Diana | 22 346,00 € | 1 | 1,5% | 335,19 € | | | | |
| 6 | Ellie | 27 489,00 € | 2 | 2,0% | 549,78 € | | | | |
| 7 | | | | | | | | | |
| 8 | | | Diana's Rate: | 1,5% | | | | | |

| E8 | | | | | | | | | =VLOOKUP("Charles";A2:E6;2;FALSE) |
|----|---------|-------------|------------------|-------------|----------|---|---|---|-----------------------------------|
| | A | B | C | D | E | F | G | H | |
| 1 | Name | Income | Group | Rate | Quota | | | | |
| 2 | Ann | 32 934,00 € | 3 | 3,0% | 988,02 € | | | | |
| 3 | Bob | 28 181,00 € | 2 | 2,0% | 563,62 € | | | | |
| 4 | Charles | 32 511,00 € | 3 | 2,0% | 650,22 € | | | | |
| 5 | Diana | 22 346,00 € | 1 | 1,5% | 335,19 € | | | | |
| 6 | Ellie | 27 489,00 € | 2 | 2,0% | 549,78 € | | | | |
| 7 | | | | | | | | | |
| 8 | | | Charles' Income: | 32 511,00 € | | | | | |

VLOOKUP (Vertical Lookup)

Search values **in a range** on the rows of the table's first column

B12 =VLOOKUP(A12;A2:B9;2;TRUE)

| | A | B | C | D | E | F | G |
|----|--------|----------|---|---|---|---|---|
| 1 | Income | IRS Rate | | | | | |
| 2 | 0 | 0,00% | | | | | |
| 3 | 654 | 0,20% | | | | | |
| 4 | 683 | 4,40% | | | | | |
| 5 | 715 | 7,40% | | | | | |
| 6 | 736 | 8,30% | | | | | |
| 7 | 811 | 10,50% | | | | | |
| 8 | 919 | 11,70% | | | | | |
| 9 | 1001 | 12,50% | | | | | |
| 10 | | | | | | | |
| 11 | Income | IRS Rate | | | | | |
| 12 | 600 | 0,00% | | | | | |

B12 =VLOOKUP(A12;A2:B9;2;TRUE)

| | A | B | C | D | E | F | G |
|----|--------|----------|---|---|---|---|---|
| 1 | Income | IRS Rate | | | | | |
| 2 | 0 | 0,00% | | | | | |
| 3 | 654 | 0,20% | | | | | |
| 4 | 683 | 4,40% | | | | | |
| 5 | 715 | 7,40% | | | | | |
| 6 | 736 | 8,30% | | | | | |
| 7 | 811 | 10,50% | | | | | |
| 8 | 919 | 11,70% | | | | | |
| 9 | 1001 | 12,50% | | | | | |
| 10 | | | | | | | |
| 11 | Income | IRS Rate | | | | | |
| 12 | 800 | 8,30% | | | | | |

B12 =VLOOKUP(A12;A2:B9;2;TRUE)

| | A | B | C | D | E | F | G |
|----|--------|----------|---|---|---|---|---|
| 1 | Income | IRS Rate | | | | | |
| 2 | 0 | 0,00% | | | | | |
| 3 | 654 | 0,20% | | | | | |
| 4 | 683 | 4,40% | | | | | |
| 5 | 715 | 7,40% | | | | | |
| 6 | 736 | 8,30% | | | | | |
| 7 | 811 | 10,50% | | | | | |
| 8 | 919 | 11,70% | | | | | |
| 9 | 1001 | 12,50% | | | | | |
| 10 | | | | | | | |
| 11 | Income | IRS Rate | | | | | |
| 12 | 1200 | 12,50% | | | | | |

Search with two criteria

VLOOKUP

| | | | | | | | | | | | | | | | | | | | | | | | |
|----|------------|------|-------|------|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| C7 | | | | | | | | | | | | =VLOOKUP(A7;A2:D4;IF(B7=2020;2;IF(B7=2021;3;4));FALSE) | | | | | | | | | | | |
| | A | B | C | D | E | F | G | H | I | J | | | | | | | | | | | | | |
| 1 | Type/ Year | 2020 | 2021 | 2022 | | | | | | | | | | | | | | | | | | | |
| 2 | A | 1000 | 1250 | 1400 | | | | | | | | | | | | | | | | | | | |
| 3 | B | 1150 | 1300 | 1450 | | | | | | | | | | | | | | | | | | | |
| 4 | C | 1200 | 1350 | 1500 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | Type | Year | Value | | | | | | | | | | | | | | | | | | | | |
| 7 | B | 2021 | 1300 | | | | | | | | | | | | | | | | | | | | |

HLOOKUP

| | | | | | | | | | | | | | | |
|----|------------|------|-------|------|---|---|---|---|---|---|---|---|----|--|
| C7 | | | | | | | | | | | ✕ | ✓ | fx | =HLOOKUP(B7;B1:D4;IF(A7="A";2;IF(A7="B";3;4));FALSE) |
| | A | B | C | D | E | F | G | H | I | J | | | | |
| 1 | Type/ Year | 2020 | 2021 | 2022 | | | | | | | | | | |
| 2 | A | 1000 | 1250 | 1400 | | | | | | | | | | |
| 3 | B | 1150 | 1300 | 1450 | | | | | | | | | | |
| 4 | C | 1200 | 1350 | 1500 | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | |
| 6 | Type | Year | Value | | | | | | | | | | | |
| 7 | B | 2021 | 1300 | | | | | | | | | | | |



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