Greek Orthodox Patriarchate School International - Hanina

Excel functions

Grade 10

1. Arithmetic Operators

Used in formulas to perform calculations:

- + : Addition =A1+B1
- - : Subtraction =A1-B1
- * : Multiplication =A1*B1
- / : Division =A1/B1
- ^ : Exponentiation =A1^2

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2. SUM

Adds a range of numbers.

=SUM(A1:A10)

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3. AVERAGE

Calculates the mean of a range.

=AVERAGE(B1:B10)

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4. IF

Performs a logical test and returns one value if TRUE, another if FALSE.

=IF(A1>100,"High","Low")

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5. COUNT

Counts numeric entries in a range.

=COUNT(A1:A10)

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6. COUNTA

Counts all non-empty cells (numbers and text).

=COUNTA(A1:A10)

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7. ROUND

Rounds a number to a specified number of digits.

=ROUND(A1,2)

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8. MAX

Returns the highest value in a range.

=MAX(A1:A10)

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9. MIN

Returns the lowest value in a range.

=MIN(A1:A10)

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10. NOW

Returns the current date and time.

=NOW()

11. TODAY

Returns the current date.

=TODAY()

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12. INT

Rounds a number down to the nearest integer.

=INT(3.75) → 3

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13. MOD

Returns the remainder after division.

=MOD(10,3) → 1

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14. CONCATENATE

Joins text from multiple cells.

=CONCATENATE(A1," ",B1)

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15. VLOOKUP

Searches for a value in the first column of a table and returns a value in the same row.

=VLOOKUP("John",A2:C10,2,FALSE)

VLOOKUP is a powerful Excel function used to search for a value in the first column of a table and return a value in the same row from another column. It's short for **"Vertical Lookup."**

Basic Syntax

=VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup])

Parameters Explained

- **lookup_value**: The value you want to search for.
- **table_array**: The range of cells that contains the data.
- **col_index_num**: The column number in the table from which to retrieve the value.
- **[range_lookup]**: Optional. Use FALSE for an exact match, TRUE (or omit) for an approximate match.

Example

Suppose you have this table in cells A2:C5:

ID	Name	Score
1	Alice	85
2	Bob	90
3	Charlie	78

To find Bob's score:

=VLOOKUP("Bob", A2:C5, 3, FALSE)

This returns 90.

⚠ Limitations

- Only searches **left to right** (lookup value must be in the first column).
- Returns the **first match** only.
- Can break if columns are inserted or deleted.

Common Mistakes

- The value you're searching for must be in the **first column** of your table.
- If you use TRUE instead of FALSE, Excel might give you the wrong result unless your data is sorted.
- If Excel can't find the value, it shows #N/A

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16. HLOOKUP

HLOOKUP is like VLOOKUP, but it searches *horizontally* across the top row of a table instead of vertically down the first column. It helps you find a value in a row and return something from a row below it.

Searches for a value in the first row and returns a value in the same column.

=HLOOKUP("Math",A1:D5,2,FALSE)

What HLOOKUP Does (In Simple Terms)

Imagine a table like this:

Subject	**Math**	**English**	**Science**
Score	90	85	88

You want to know the score for **English**. Instead of searching manually, you use HLOOKUP to ask Excel:

“Look across the top row for ‘English’, then give me the value from the row below.”

🧪 HLOOKUP Formula Example

=HLOOKUP("English", A1:D2, 2, FALSE)

- **"English"** → the value you’re looking for
- **A1:D2** → the table range
- **2** → the row number to return from (Score is row 2)
- **FALSE** → means you want an exact match

This will return **85**.

Step-by-Step Guide

1. **Choose the value to search for** (e.g., a subject name).
2. **Select the table** where the top row contains the values.
3. **Tell Excel which row** to pull the result from.
4. **Use FALSE** for exact match (recommended).

Common Mistakes

- The value you're searching for must be in the **first row** of your table.
- If Excel can't find the value, it shows #N/A.
- If you use TRUE instead of FALSE, Excel might give you the wrong result unless your data is sorted.
