

Lecture 2. Excel basics (ii)

Curriculum

Absolute and relative references

- Understand the difference between absolute, mixed, and relative references and when to use each.
- Use F4 to cycle between the different kinds of references.
- LARGE and SMALL functions.

Conditionals and conditional aggregation

- Understand conditional formulas and their uses, such as the IF function, nested IFs, and the IFS function.
- Learn the conditional aggregation functions such as SUMIF/SUMIFS, COUNTIF/COUNTIFS, and MINIFS/MAXIFS functions.

Additional mathematical functions

- Most of the math functions are relevant to us. We won't cover all of them in detail. Here is a list of particularly important functions.

Name	Description
ABS	Find the absolute value of a number.
EXP	Find the value of e raised to the power of a number.
LOG	Get the logarithm of a number.
FLOOR.MATH	Round number down to nearest multiple.
CEILING.MATH	Round a number up to nearest multiple.
ROUND	Round a number to a given number of digits.
COMBIN	Get number of combinations without repetitions.

Name	Description
MOD / QUOTIENT	Get the remainder from division / Returns the quotient without a remainder.
POWER / ^ operator / SQRT	Raise a number to a power or calculate the square root.

- Learn about how and when to use the SUMPRODUCT function.

Working with text

- Understand the use of the & operator for concatenation.
- Learn to solve basic text manipulation tasks.
- Get an overview of the text manipulation functions in Excel and how to apply them.

Name	Description
CONCAT / TEXTJOIN	Join text values with(out) a delimiter.
LOWER/UPPER	Transform text to lower/upper case.
PROPER	Capitalize first letter of each word in text.
TRIM	Remove extra spaces from text.
TEXTBEFORE / TEXTAFTER	Extract text before / after delimiter.
SUBSTITUTE	Replace text based on content.
LEN	Get the length of the text
TEXTSPLIT	Split a text into parts.

Note that not all useful text manipulation tools are built-in and some tasks, such as counting the number of words in a text, may require creating custom functions.

Some of the most widely used text manipulation functions are outdated. You will see them used at work, on YouTube, and on Reddit, but the modern alternatives are better. These outdated functions are not nearly as important as the functions above, but you should be aware of them.

Name	Description
EXACT	Compare two text strings, taking case into account.
LEFT / MID / RIGHT	Extract text from the left/middle/right of a string
FIND / SEARCH	Get location substring in a string.
REPLACE	Replace text based on location.

Recommended resources

The YouTuber [Chandoo](#) discusses the text manipulation functions at length, so does the YouTuber Leila Gharani [Leila Gharani](#). There are many good videos about these topics, and I strongly encourage you to explore them.