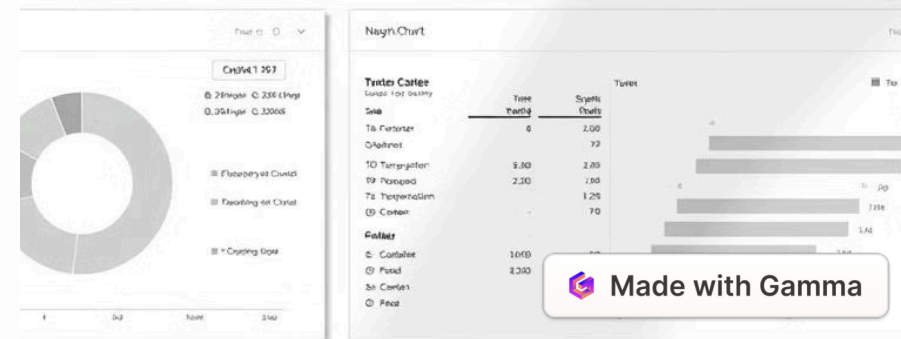# Computations in a Worksheet in Microsoft Excel

Welcome to this presentation exploring how to perform powerful calculations in Microsoft Excel, leveraging formulas, functions, and automation features to optimize your work.

S **by Simranjeet Kaur**

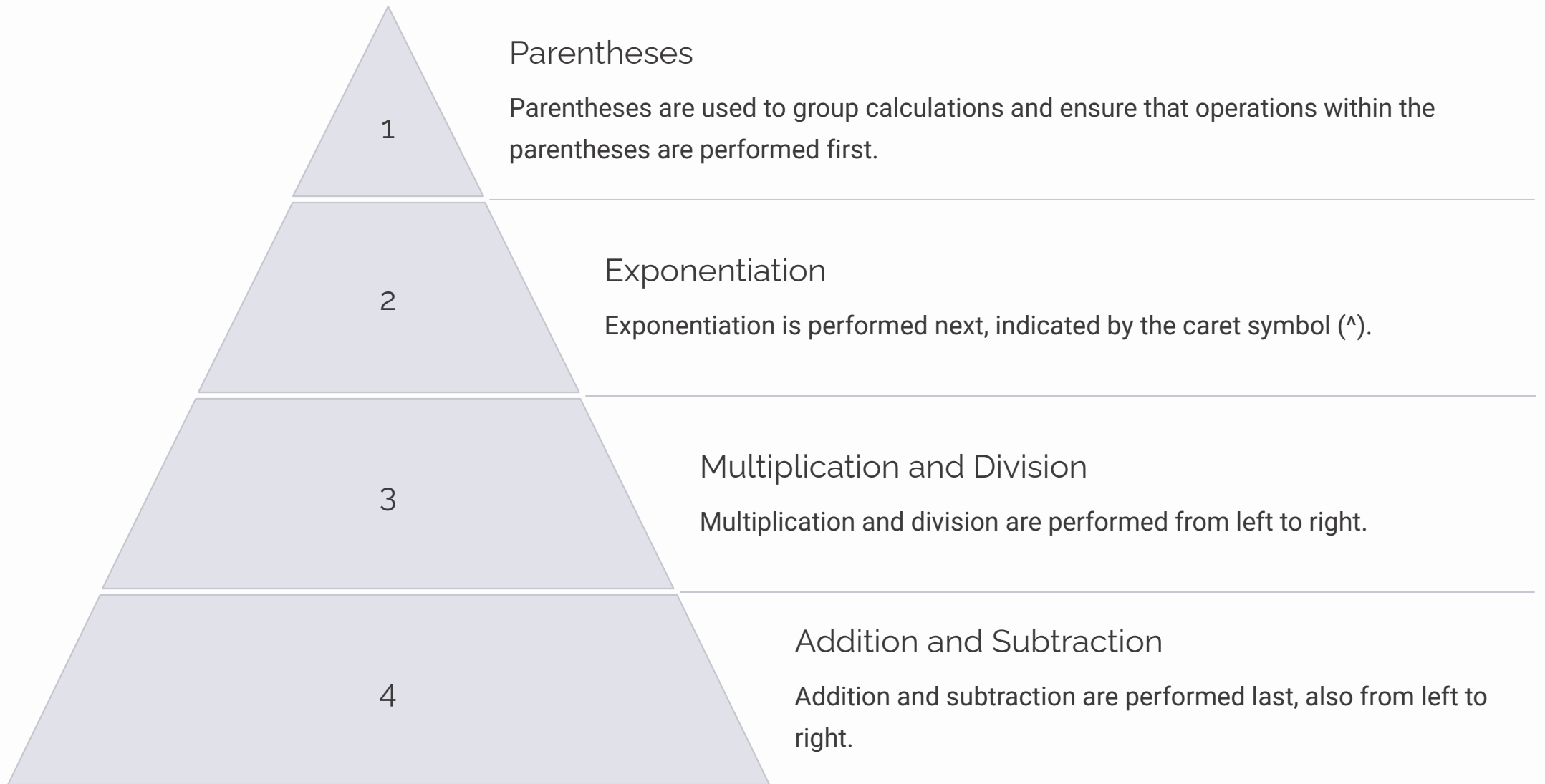# Introduction to Excel Formulas and Calculations

Formula Basics

Excel formulas are powerful tools for performing calculations. They start with an equals sign (=) followed by a mathematical expression, which can include numbers, operators, and cell references.

Common Operators

Basic mathematical operations can be performed using operators like addition (+), subtraction (-), multiplication (*), division (/), and exponentiation (^).

Order of Operations in Excel Formulas

Parentheses

1 Parentheses are used to group calculations and ensure that operations within the parentheses are performed first.

Exponentiation

2 Exponentiation is performed next, indicated by the caret symbol (^).

Multiplication and Division

3 Multiplication and division are performed from left to right.

Addition and Subtraction

4 Addition and subtraction are performed last, also from left to right.

Using Functions and Cell References in Formulas

1 Functions

Built-in functions like SUM, AVERAGE, and MAX simplify complex calculations.

2 Cell References

Cell references, like A1 or B2, allow formulas to use data stored in specific cells.

3 Example Formula

=SUM(A1:A5) calculates the sum of values in cells A1 to A5.

Copying and Pasting Formulas

1	2

Relative References

By default, Excel adjusts cell references when formulas are copied.

Copy and Paste

Use the Copy and Paste commands or drag the fill handle to copy formulas to multiple cells.

Absolute, Relative, and Mixed Cell References

Absolute References

Use dollar signs ($) to prevent cell references from changing when copied, e.g., A1.

Relative References

Relative references change based on the cell's position, e.g., A1.

Mixed References

Combine absolute and relative references, e.g., $A1 or A$1, to control which aspect of the reference adjusts.

2	68,00	40,30	36,000	31,730
3	37,00	23.170	38,000	31,350
4	36.30	35.190	77,800	35.100
5	55.50	39.310	36,000	36.140
6	59.00	39.3.0	34,200	35,560
10	34.50	33,310	38,380	30,150

auto Sum

Automating Calculations with Excel's AutoSum Feature

AutoSum Feature

Excel's AutoSum feature quickly calculates sums, averages, counts, and more.

Automatic Formula Generation

Excel automatically generates formulas based on the selected range of cells.

Made with Gamma

Conclusion and Next Steps

Congratulations! By mastering these Excel techniques, you've unlocked the power of automated calculations for your worksheets. For further exploration, delve into advanced functions, data analysis tools, and macros to streamline your processes.