Sum Product Formula in Excel

Usage

The SUMPRODUCT function in Excel is used to multiply corresponding components in given arrays and return the sum of those products. It is particularly useful for calculations involving multiple criteria or for weighted averages.

How to Use

Syntax

The syntax for the SUMPRODUCT function is:

excel
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```
SUMPRODUCT(array1, [array2], [array3], ...)
```

- **array1**: The first array or range that you want to multiply.
- **array2**: (Optional) The second array or range to multiply.
- **array3**: (Optional) Additional arrays or ranges to multiply.

Example

Suppose you have the following data: For Product A, you sold 10 units at a price of 5. For Product B, you sold 20 units at a price of 15. For Product C, you sold 5 units at a price of 20.

To calculate the total revenue, you would use the formula:

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```
=SUMPRODUCT(B2:B4, C2:C4)
```

This formula multiplies the quantity by the price for each product and sums the results.

Step-by-Step Calculation

1. For Product A: 10 multiplied by 5 equals 50.
2. For Product B: 20 multiplied by 15 equals 300.
3. For Product C: 5 multiplied by 20 equals 100.
4. The total revenue is 50 plus 300 plus 100, which equals 450.

Applications

1. **Financial Analysis**: Calculate total revenue, expenses, or profit margins.
2. **Data Analysis**: Use with conditional criteria to analyze data based on multiple factors.
3. **Inventory Management**: Determine the value of stock on hand by multiplying quantities with their respective costs.
4. **Weighted Averages**: Calculate averages where different items contribute unequally.