

How can I use the SUMIF function in Excel to calculate the sum of values that meet multiple criteria across different ranges?

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The SUMIF function in Excel allows users to calculate the sum of values that meet certain criteria within a specified range. This function can also be used to calculate the sum of values that meet multiple criteria across different ranges. By specifying the criteria in separate ranges, the function can accurately sum up the values that satisfy all the specified conditions. This feature is particularly useful for complex data analysis and allows for efficient and accurate calculations of sums based on multiple criteria.

Excel: Use SUMIF with Multiple Ranges

You can use the following basic syntax to perform a SUMIF function with multiple ranges in Excel:

```
=SUMIF(A2:A11,G2,B2:B11) +  
SUMIF(A2:A11,G2,C2:C11)
```

This particular formula adds the values in the ranges B2:B11 and C2:C11 where the corresponding values in the range A2:A11 are equal to G2.

The following example shows how to use this syntax in practice.

Example: Using SUMIF with Multiple Ranges in Excel

Suppose we have the following dataset that shows the number of points scored by various basketball players during two different games:

	A	B	C	D	E	F
1	Team	Game 1 Points	Game 2 Points			
2	Mavs	22	20			
3	Warriors	14	29			
4	Mavs	15	32			
5	Lakers	10	10			
6	Mavs	12	14			
7	Lakers	14	13			
8	Lakers	19	12			
9	Warriors	21	22			
10	Lakers	23	29			
11	Mavs	10	15			
12						
13						
14						
15						
16						
17						
18						
19						
20						

Now suppose we would like to calculate the total sum of all points scored between both games for only the players on the Mavs team.

We can use the following formula to do so:

=SUMIF(A2:A11,E2,B2:B11) + SUMIF(A2:A11,E2,C2:C11)

We'll type this formula into cell F2 and then press Enter:

	A	B	C	D	E	F	G
1	Team	Game 1 Points	Game 2 Points		Team	Total Points	
2	Mavs	22	20		Mavs	140	
3	Warriors	14	29				
4	Mavs	15	32				
5	Lakers	10	10				
6	Mavs	12	14				
7	Lakers	14	13				
8	Lakers	19	12				
9	Warriors	21	22				
10	Lakers	23	29				
11	Mavs	10	15				
12							
13							
14							
15							
16							
17							
18							
19							
20							

We can see that the total sum of all points scored between both games for the players on the Mavs team was 140.

We can verify this is correct by manually taking the sum of all points values for the Mavs players between the two games:

$$\text{Total Points: } 22 + 20 + 15 + 32 + 12 + 14 + 10 + 15 = 140.$$

This matches the value that we calculated using our

formula.

Note: In this example, we used the **SUMIF()** function with two cell ranges, but we can use similar syntax to include any number of cell ranges that we'd like.

The following tutorials explain how to perform other common tasks in Excel:

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