

How do I use a weighted average IF formula in Excel?

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To use a weighted average IF formula in Excel, first select the cell where you want the result to appear. Then, enter the formula "`=SUMPRODUCT(range1,range2)/SUM(range2)`", replacing 'range1' with the data range you want to multiply and 'range2' with the data range you want to use as weights. Finally, add the criteria for the IF statement within the SUMPRODUCT function. This formula calculates the weighted average of a set of values based on specified criteria.

Use a Weighted Average IF Formula in Excel

You can use the following syntax in Excel to apply a weighted average IF formula:

```
=SUMPRODUCT(--(A2:A7="A"),           B2:B7,  
C2:C7)/SUMIF(A2:A7, "A", C2:C7)
```

This formula calculates the weighted average of the values in the range B2:B7, using C2:C7 as the weights, *only* for the cells where A2:A7 are equal to "A".

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

Example: Weighted Average IF Formula in Excel

First, let's enter the following data that shows the scores for two students (Student A and Student B) on three different exams:

	A	B	C	D	E	F
1	Student	Score	Weight			
2	A	60	2			
3	A	90	5			
4	B	70	2			
5	B	80	5			
6	A	70	3			
7	B	75	3			
8						
9						
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Next, we'll use the following formula to calculate the weighted average of exam scores for student A only:

=SUMPRODUCT(--(A2:A7="A"), B2:B7, C2:C7)/SUMIF(A2:A7, "A", C2:C7)

The following screenshot shows how to use this formula in practice:

	A	B	C	D	E	F	G	H	I
1	Student	Score	Weight		Weighted Avg.	78			
2	A	60	2						
3	A	90	5						
4	B	70	2						
5	B	80	5						
6	A	70	3						
7	B	75	3						
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									

The weighted average of exam scores for student A is 78.

We can verify this is correct by manually computing the weighted average exam score for student A.

Recall that we use the following formula for weighed average:

$$\text{Weighed Average} = \frac{\sum w_i X_i}{\sum w_i}$$

where:

w_i = the weight values X_i = the data values Weighed

**Average for Student A = $\sum w_i X_i / \sum w_i$ Weighed Average
for Student A = $(2*60 + 5*90 + 70*3) / (2+5+3)$ Weighed
Average for Student A = 78**

**This matches the value that we calculated using the
formula in Excel.**

Additional Resources

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

ARABPSYCHOLOGY.COM