

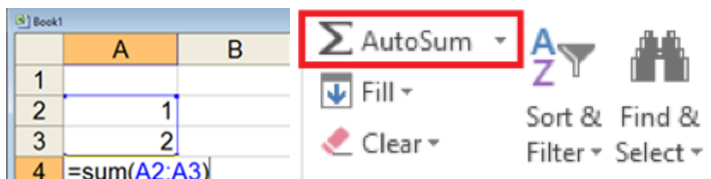


8 Formulas for Analyzing Data Using Spreadsheet Software

Below are 8 simple formulas that you can use within Microsoft Excel to help gain key information from your evaluation data.

1. =SUM

- Sum can only be used to add up numbers
- Adds up the numbers in a range
- You can also usually use the AutoSum button, but make sure it adds up the right numbers



2. =SUMIF()

The sumif function adds up the numbers in a range only if they meet a particular criteria.

EXAMPLE: Cells D3 to D6 are checked to see if they contain the letter 'M'

=SUM or SUMIF can be used to add together numbers and numbers based on a criteria

FOR EXAMPLE, we can add up the number of resources we used in programs this week, but we can also count based on the type of resource

	B	C	D
Name	Score	Gender	
Bob	102	M	
Joe	47	M	
Sue	22	F	
Lisa	121	F	

=SUMIF(D3:D6,"M",C3:C6)

3. =MIN OR =MAX

- =MIN will give us the smallest number from a range of numbers
- =MAX will return the largest number from a range
- **We can use =MIN to find:**
 - The age of youngest participant
 - The lowest score
 - Which day had the lowest attendance
- **We can use =MAX to find:**
 - What is the oldest age
 - The highest score
 - Which day had the highest attendance

4. =AVERAGE

- Will return the average (arithmetic mean) of the numbers in a range
- In this example, the A1:A4 range will return an average of 2.25

5. =AVERAGEIF (range, criteria, average range)

Will return the average of the numbers in a range if they meet the criteria

EXAMPLE: Cells D3 to D6 are checked to see if they contain the letter 'M'. If they do, the numbers in C3:C6 are added together

We can use this to determine:

- Average number of participants who attend a program weekly
- Average age of participants
- Average rating/score

	B	C	D
Name		Score	Gender
Bob		102	M
Joe		47	M
Sue		22	F
Lisa		121	F
=AVERAGEIF(D3:D6,"F",C3:C6)			

7. =COUNTIF

- Countif only counts the cell "if" a criteria is met
- In this example, we are only counting cells in the A1:A4 range which match the word pizza
- This formula would give us the result 1, as there is only one mention of pizza
- **Note: =COUNTIFS: counts using multiple criteria**
- **We could use this formula to**
 - Count males and females
 - Program site
 - Allergies
 - Yes/no questions
 - ...or anything else where we need to find a particular word or number

	A	B	C	D	E
1		1		1	
2	pizza		pizza		
3		3		3	
4	blue		blue		
5		1	=COUNTIF(C1:C4,"pizza")		
6					

6. =COUNT() AND =COUNTA()

- =Count only counts numbers
- =counta counts how many cells have something in them
- **This could be handy if we wanted to explore:**
 - Attendance
 - Case notes
 - Check marks
 - ...or anything else that would not be possible to mathematically calculate

	A	B	C	D
1				
2		Name	Score	Gender
3		Bob	102	M
4		Joe	47	M
5		Sue	22	F
6		Lisa	121	F
7				
8	Count		0	4
9	CountA		4	4

8. =IF(logical test, true, false)

- **The IF statement has three parts**
 1. The logical test
 2. What happens if the test is true
 3. What happens if the test is false
- **We could use this to:**
 - Check if a criteria is met, for example, have Excel write Pass or Fail based on a grade or write Yes or No based on attendance
 - Have Excel report using easy to understand language that make summaries easier to understand

=IF(E6>15,"Over 15","Under 15")				
B	C	D	E	F
Name	DOB	End of fiscal year	Age	Over 15?
Bob	1-May-01	31-Mar-19	17	Over 15
Joe	25-Dec-05	31-Mar-19	13	Under 15
Sue	4-Feb-06	31-Mar-19	13	Under 15
Lisa	17-Aug-03	31-Mar-19	15	=IF(E6>15,"Over 15","Under 15")