University of Duhok

College of Science

Department of Computer Science

Computer Skills (Applications)

Module Lecturer

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2021-2022

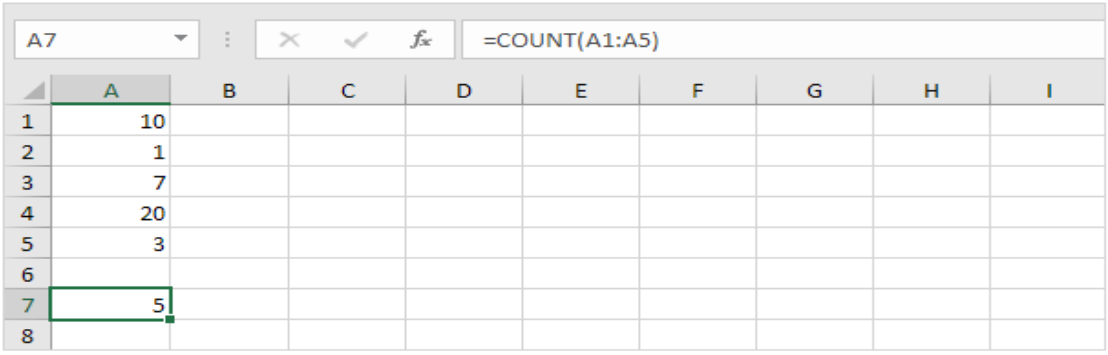

Excel

Excel Functions

1. Count and Sum Functions

Count

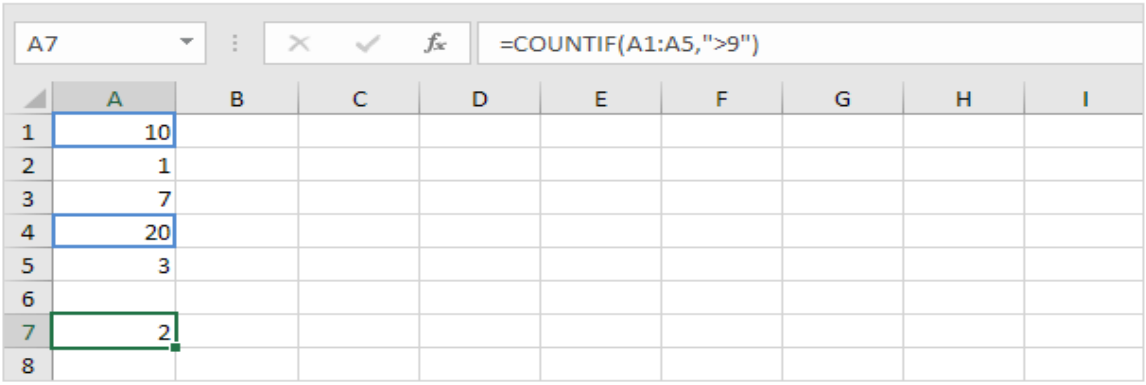
To count the number of cells that contain numbers, use the COUNT function.



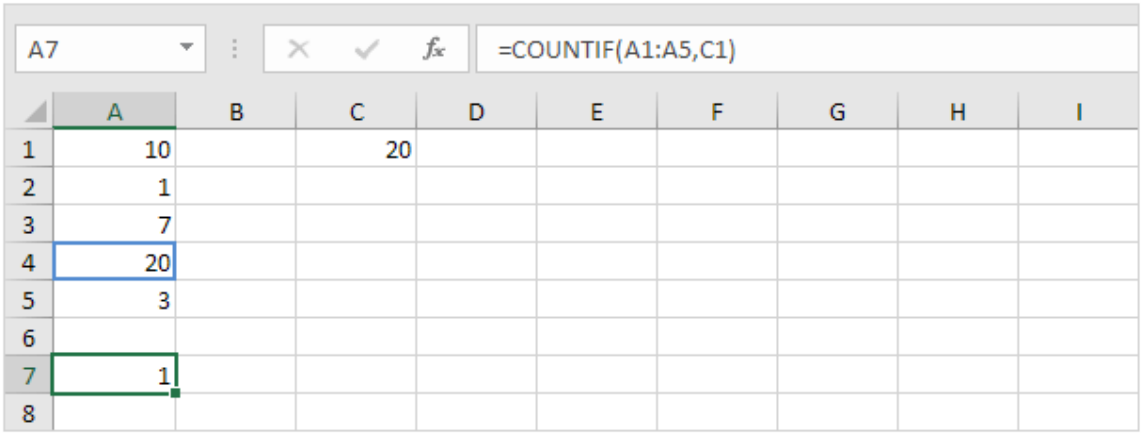
Countif

To count cells based on one criteria (for example, greater than 9), use the following COUNTIF function.

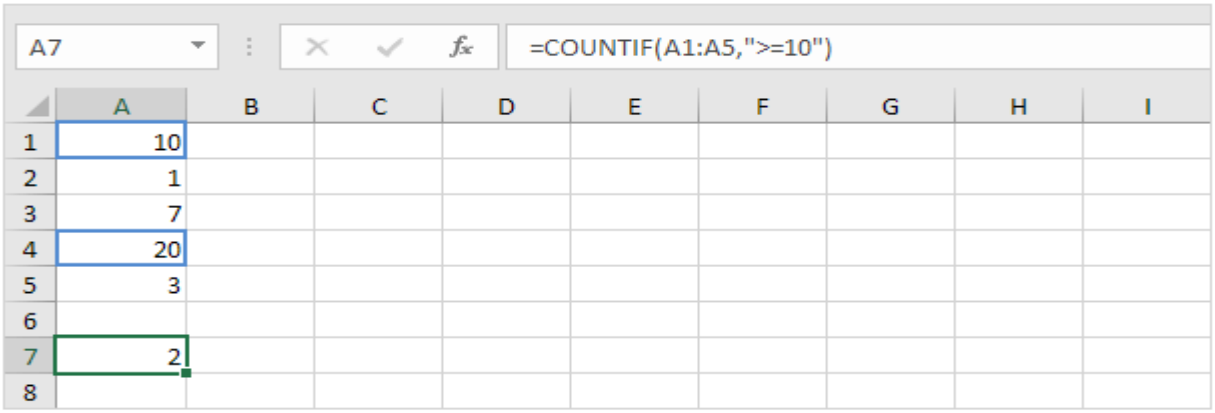
1. For example, the COUNTIF function below counts the number of cells that contain the value 20



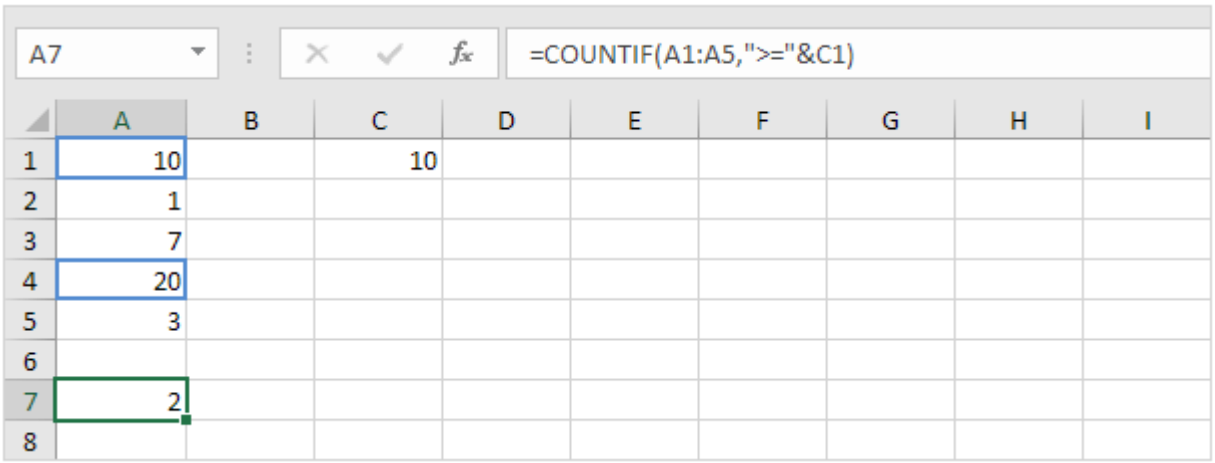
2. The following COUNTIF function gives the exact same result. It counts the number of cells that are equal to the value in cell C1.



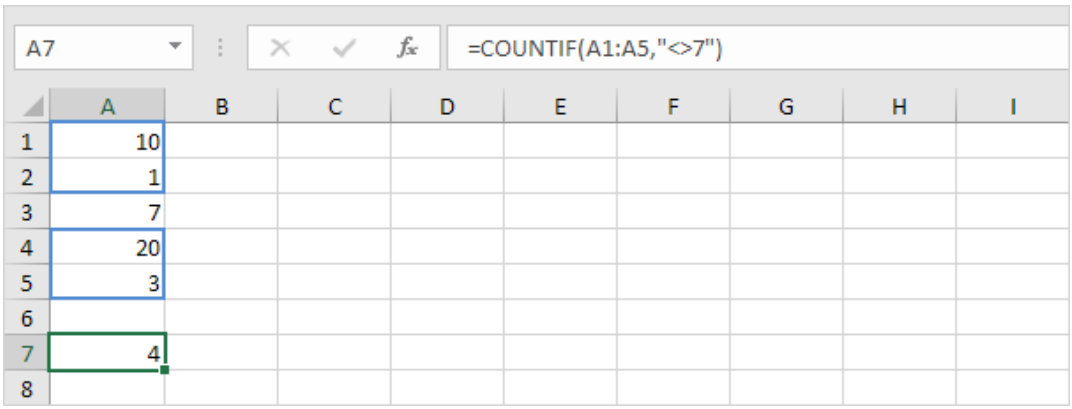
3. The COUNTIF function below counts the number of cells that are greater than or equal to 10.



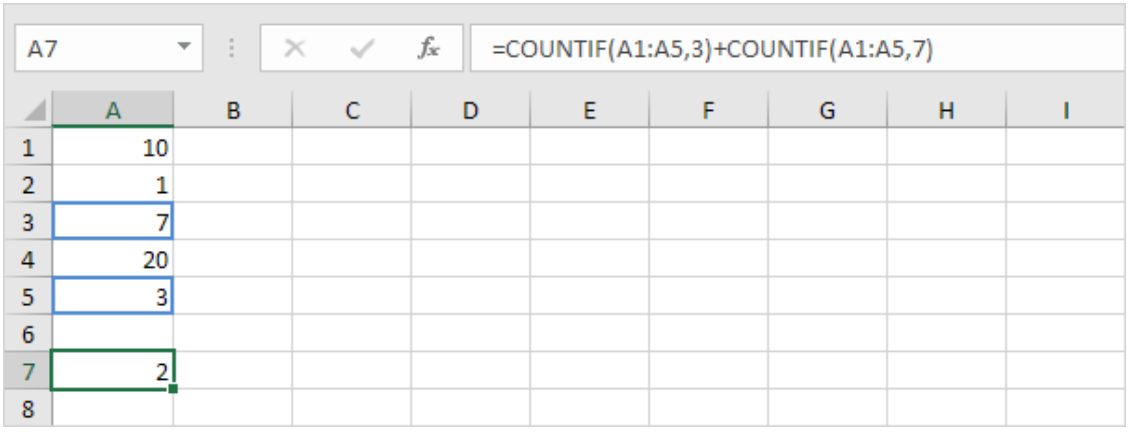
4. The following COUNTIF function gives the exact same result. It uses the & operator to join the 'greater than or equal to' symbol and the value in cell C1.



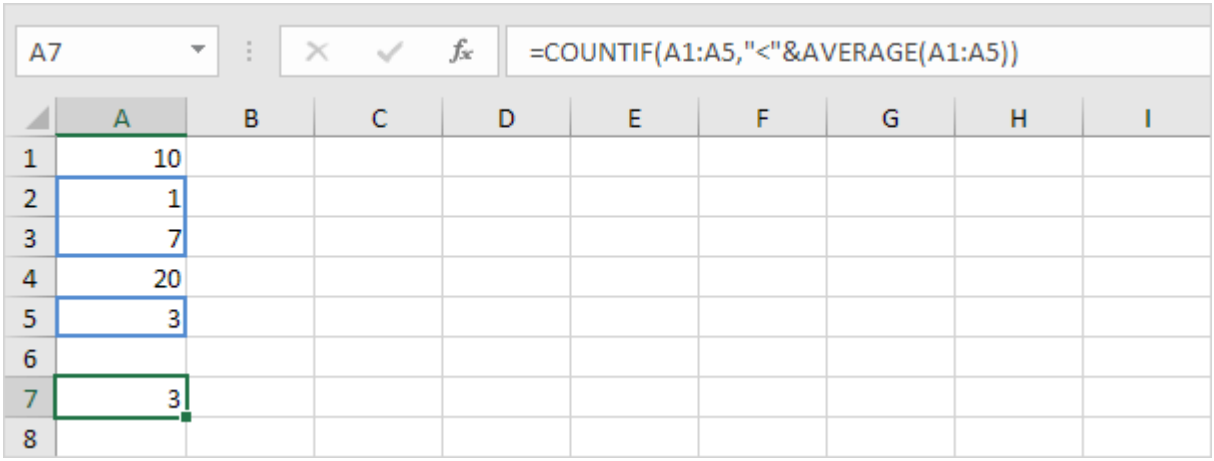
5. The COUNTIF function below counts the number of cells that are not equal to 7.



6. The COUNTIF functions below count the number of cells that are equal to 3 or 7.

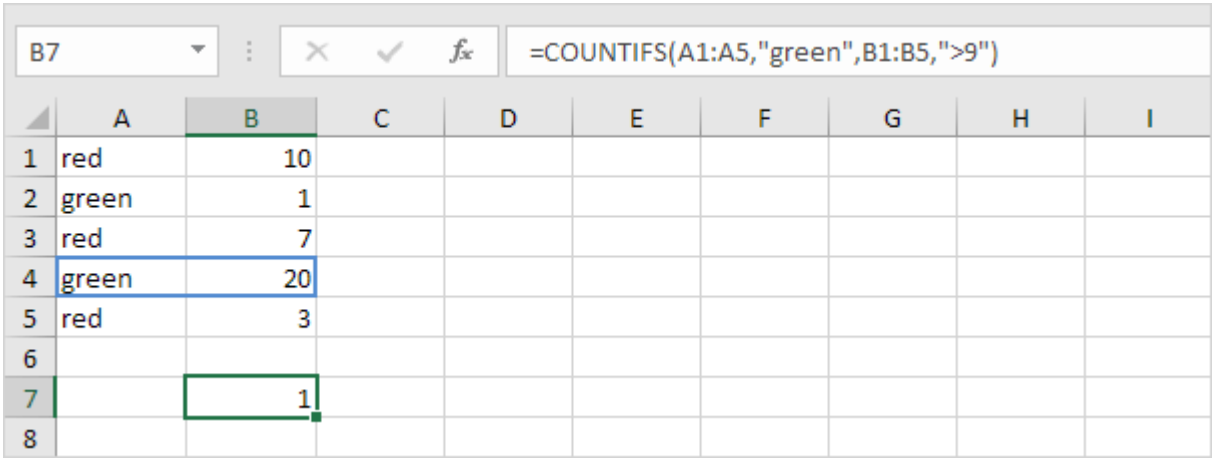


7. The COUNTIF function below counts the number of cells that are less than the average of the values (8.2).



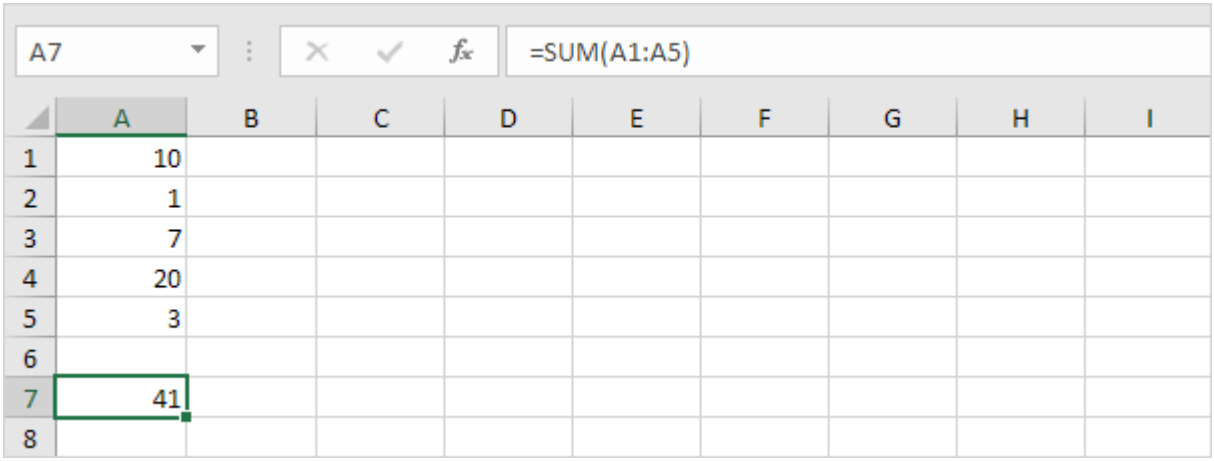
Countifs

To count cells based on multiple criteria (for example, green and greater than 9), use the following COUNTIFS function.



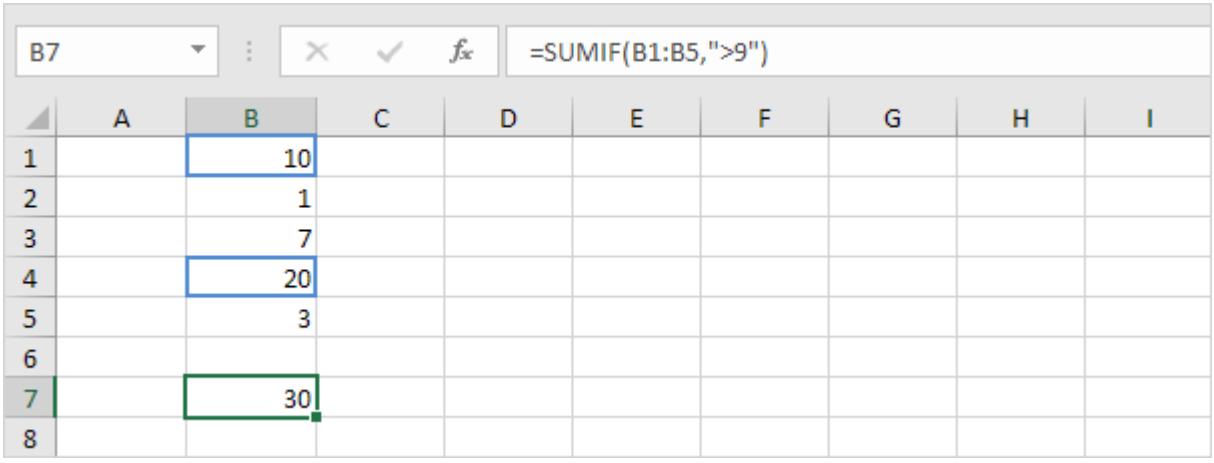
Sum

To sum a range of cells, use the SUM function.

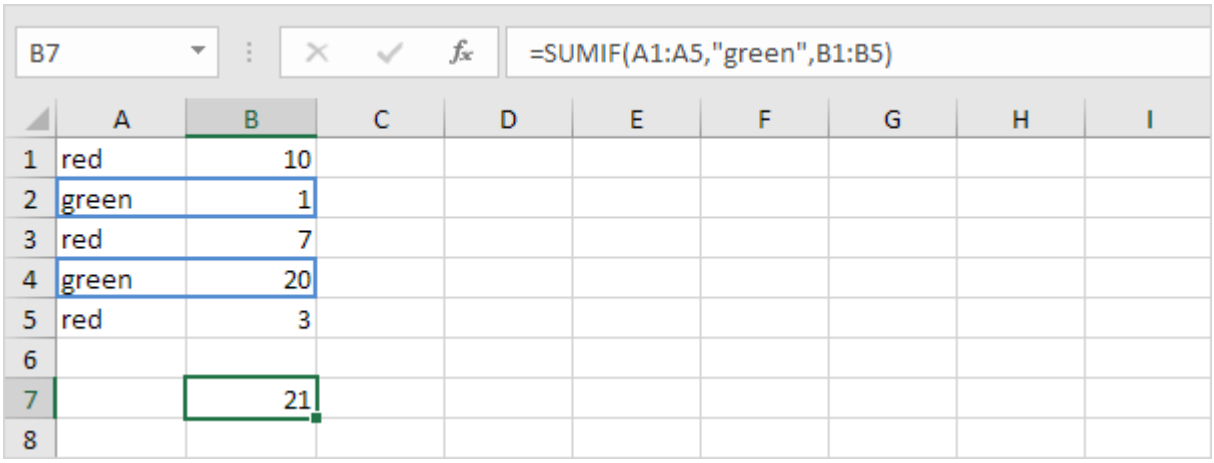


Sumif

To sum cells based on one criteria (for example, greater than 9), use the following SUMIF function (two arguments).

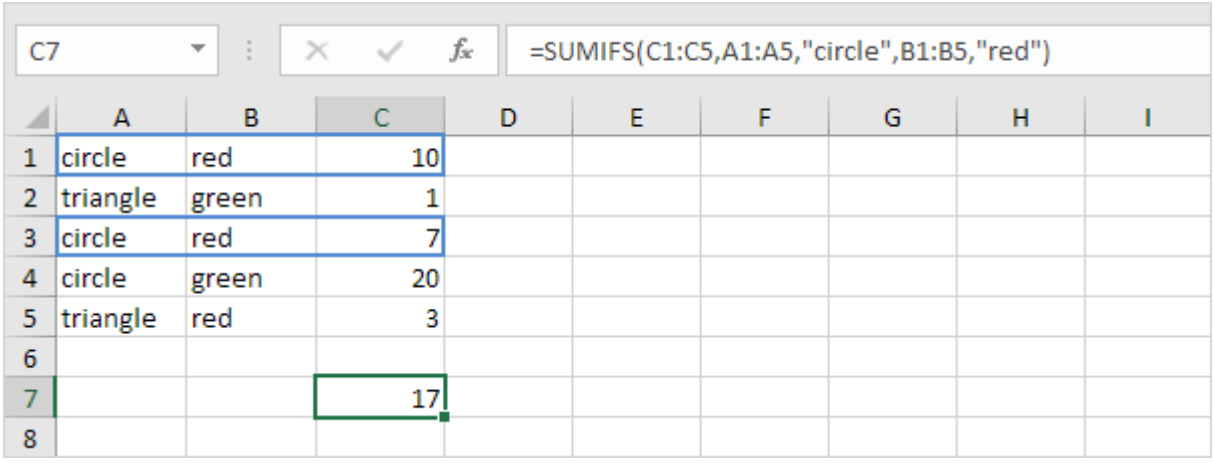


To sum cells based on one criteria (for example, green), use the following SUMIF function (three arguments, last argument is the range to sum).

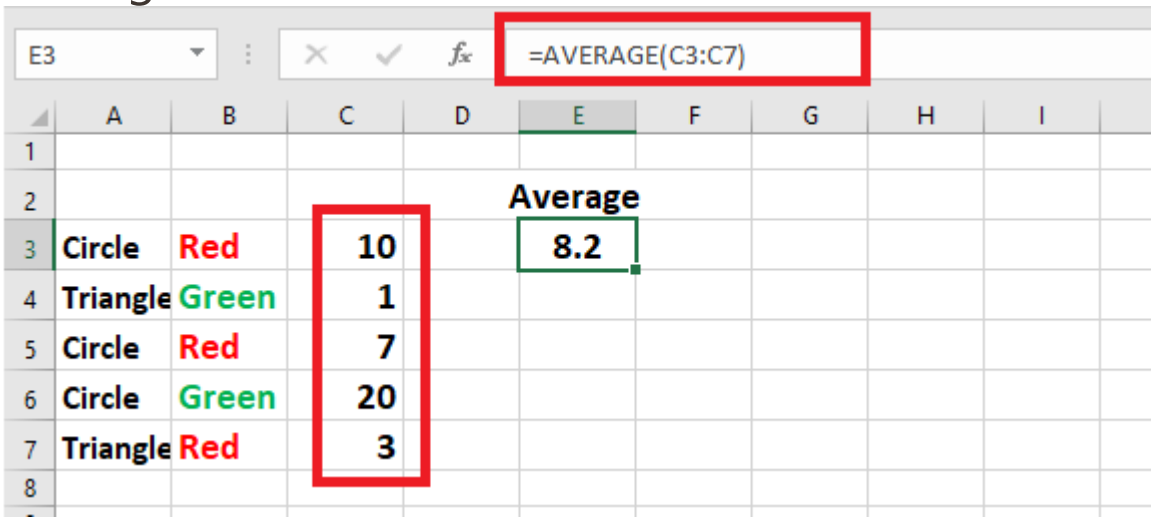


Sumifs

To sum cells based on multiple criteria (for example, circle and red), use the following SUMIFS function (first argument is the range to sum).

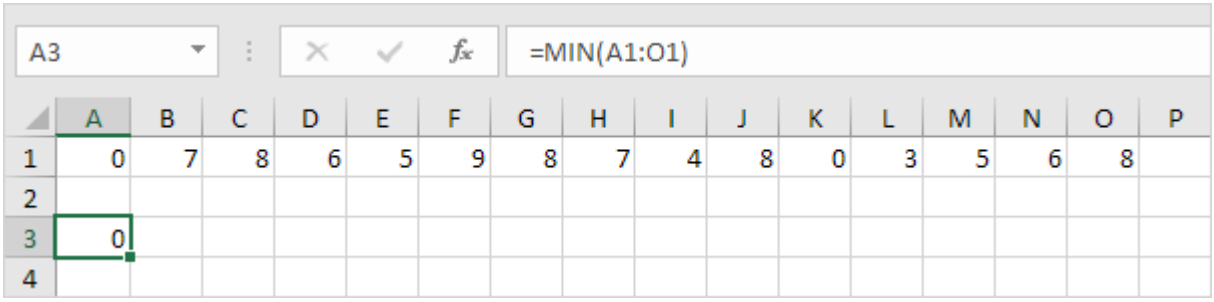


Average



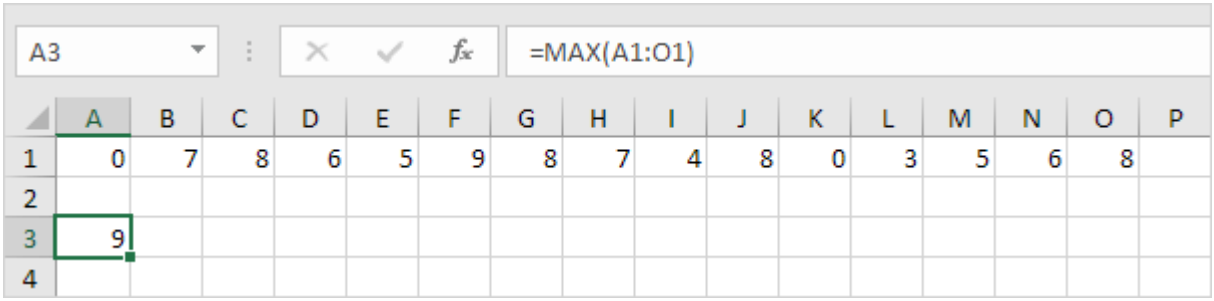
Min

To find the minimum value, use the MIN function.



Max

To find the maximum value, use the MAX function.



2. Logical Functions

If | And | Or | Not

Learn how to use Excel's logical functions such as the IF, AND, OR and NOT function.

If

The IF function checks whether a condition is met, and returns one value if true and another value if false.

1. For example, take a look at the IF function in cell C2 below.

C2 | =IF(B2>=60,"Pass","Fail")

	A	B	C	D	E	F	G	H	I
1	**Name**	**Score**	**Result**						
2	Richard	93	Pass						
3	Jennifer	60	Pass						
4	James	58	Fail						
5	Lisa	79	Pass						
6	Sharon	41	Fail						
7									

And

The AND Function returns TRUE if all conditions are true and returns FALSE if any of the conditions are false.

1. For example, take a look at the AND function in cell D2 below.

D2 | =AND(B2>=60,C2>=90)

	A	B	C	D	E	F	G	H	I
1	**Name**	**Score 1**	**Score 2**	**Result**					
2	Richard	93	80	FALSE					
3	Jennifer	60	91	TRUE					
4	James	58	75	FALSE					
5	Lisa	79	94	TRUE					
6	Sharon	41	33	FALSE					
7									

Explanation: the AND function returns TRUE if the first score is greater than or equal to 60 and the second score is greater than or equal to 90, else it returns FALSE.

Or

The OR function returns TRUE if any of the conditions are TRUE and returns FALSE if all conditions are false.

1. For example, take a look at the OR function in cell D2 below.

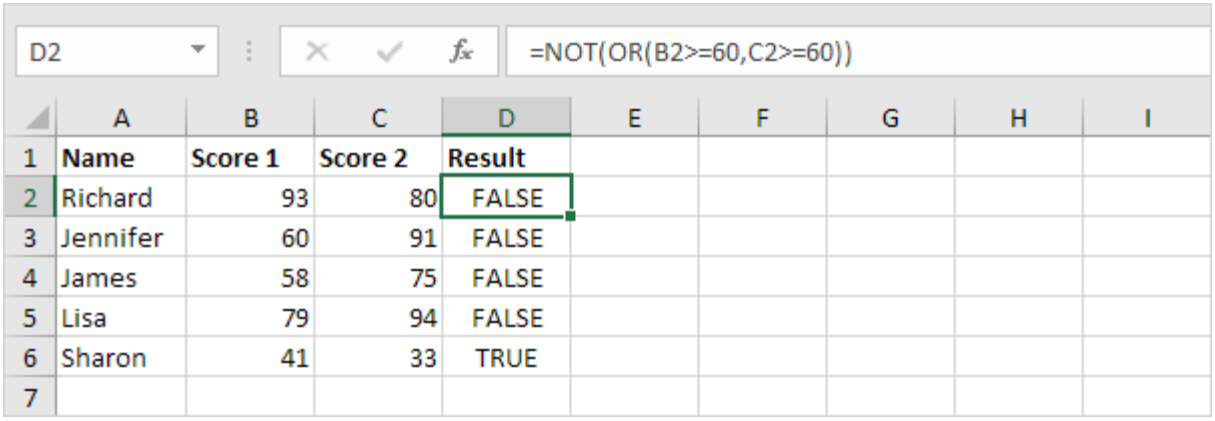
D2 | =OR(B2>=60,C2>=60)

	A	B	C	D	E	F	G	H	I
1	**Name**	**Score 1**	**Score 2**	**Result**					
2	Richard	93	80	TRUE					
3	Jennifer	60	91	TRUE					
4	James	58	75	TRUE					
5	Lisa	79	94	TRUE					
6	Sharon	41	33	FALSE					
7									

Not

The NOT function changes TRUE to FALSE, and FALSE to TRUE.

1. For example, take a look at the NOT function in cell D2 below.

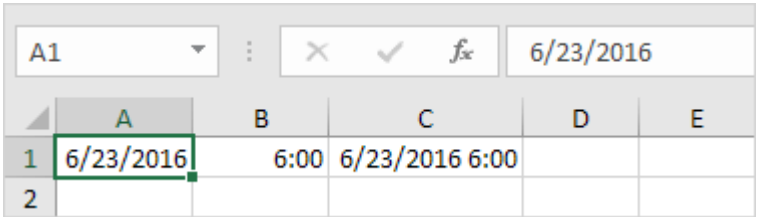


	A	B	C	D	E	F	G	H	I
1	**Name**	**Score 1**	**Score 2**	**Result**					
2	Richard	93	80	FALSE					
3	Jennifer	60	91	FALSE					
4	James	58	75	FALSE					
5	Lisa	79	94	FALSE					
6	Sharon	41	33	TRUE					
7									

3. Date & Time Functions

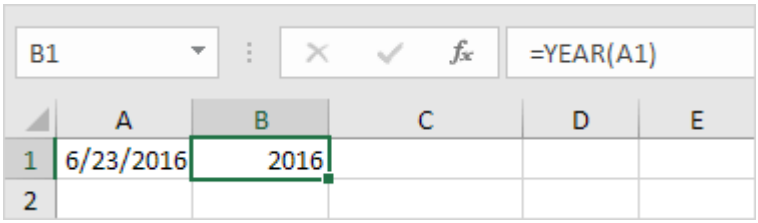
Year, Month, Day | Date Function | Current Date & Time | Hour, Minute, Second | Time Function

To enter a date in Excel, use the "/" or "-" characters. To enter a time, use the ":" (colon). You can also enter a date and a time in one cell.



Year, Month, Day

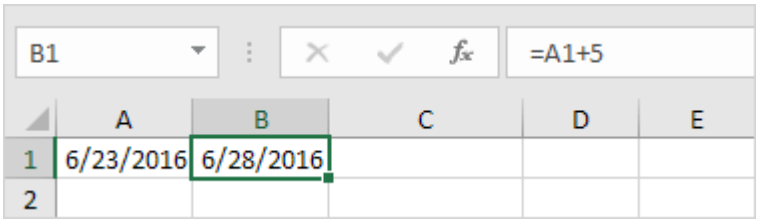
To get the year of a date, use the YEAR function.



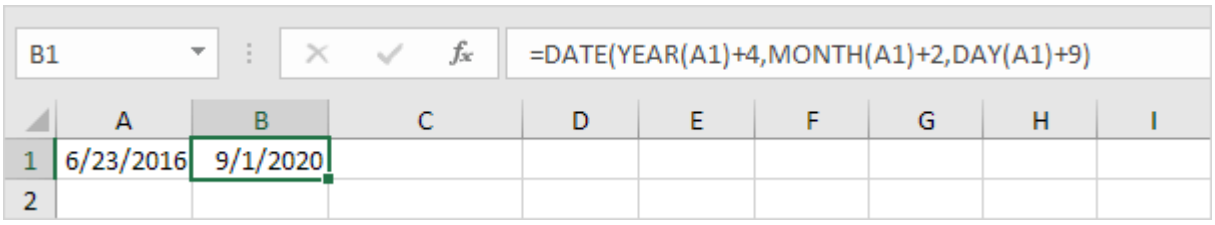
Note: use the MONTH and DAY function to get the month and day of a date.

Date Function

1. To add a number of days to a date, use the following simple formula.



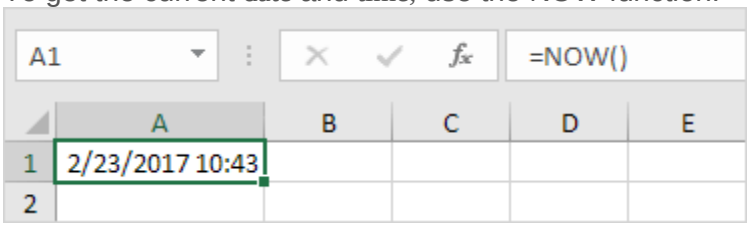
2. To add a number of years, months and/or days, use the DATE function.



Note: the DATE function accepts three arguments: year, month and day. Excel knows that 6 + 2 = 8 = August has 31 days and rolls over to the next month (23 August + 9 days = 1 September).

Current Date & Time

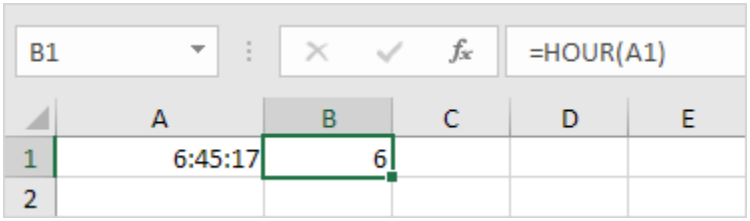
To get the current date and time, use the NOW function.



Note: use the TODAY function to enter today's date in Excel.

Hour, Minute, Second

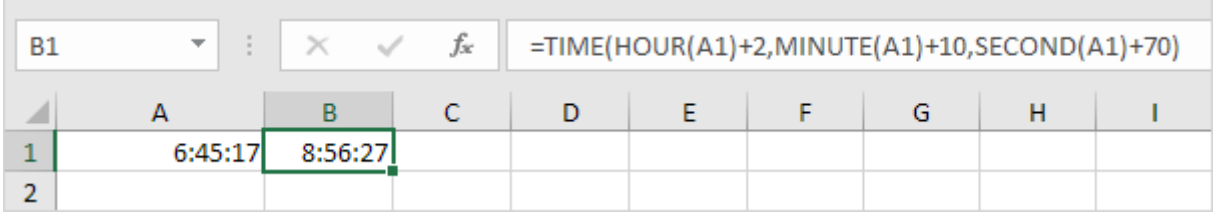
To return the hour, use the HOUR function.



Note: use the MINUTE and SECOND function to return the minute and second.

Time Function

To add a number of hours, minutes and/or seconds, use the TIME function.



Note: Excel adds 2 hours, 10 + 1 = 11 minutes and 70 - 60 = 10 seconds.