

# How can I use the RANDARRAY function in Excel to generate an array of random numbers?

Authored by  
**stats writer**

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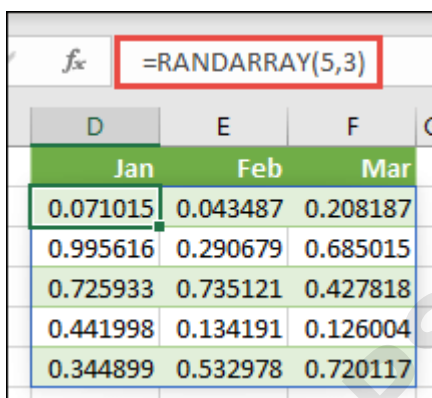
## RECOMMENDED CITATION

stats writer (2024). *How can I use the RANDARRAY function in Excel to generate an array of random numbers?*. PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=162950>

The RANDARRAY function in Excel is a useful tool for generating an array of random numbers. By using this function, you can easily create a set of random values within a specific range or size. This can be beneficial in various scenarios, such as creating random data for testing or simulations, generating unique IDs, or selecting random samples from a larger dataset. With the ability to customize the range and size of the array, the RANDARRAY function provides a convenient and efficient way to incorporate randomness into your Excel spreadsheets.

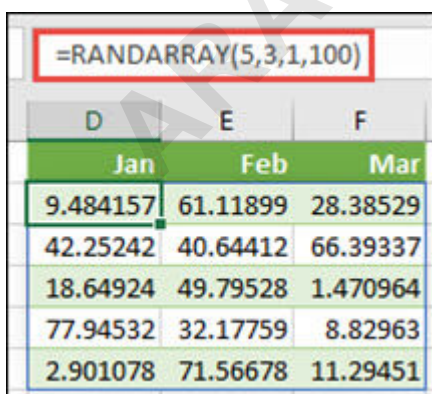
The **RANDARRAY** function returns an array of random numbers. You can specify the number of rows and columns to fill, minimum and maximum values, and whether to return whole numbers or decimal values.

In the following examples, we created an array that's 5 rows tall by 3 columns wide. The first returns a random set of values between 0 and 1, which is RANDARRAY's default behavior. The next returns a series of random decimal values between 1 and 100. Finally, the third example returns a series of random whole numbers between 1 and 100.



The screenshot shows the Excel formula bar with the formula `=RANDARRAY(5,3)` highlighted in red. Below the formula bar, a 5x3 grid of random decimal values is displayed, with columns labeled Jan, Feb, and Mar. The values are:

	Jan	Feb	Mar
1	0.071015	0.043487	0.208187
2	0.995616	0.290679	0.685015
3	0.725933	0.735121	0.427818
4	0.441998	0.134191	0.126004
5	0.344899	0.532978	0.720117



The screenshot shows the Excel formula bar with the formula `=RANDARRAY(5,3,1,100)` highlighted in red. Below the formula bar, a 5x3 grid of random decimal values is displayed, with columns labeled Jan, Feb, and Mar. The values are:

	Jan	Feb	Mar
1	9.484157	61.11899	28.38529
2	42.25242	40.64412	66.39337
3	18.64924	49.79528	1.470964
4	77.94532	32.17759	8.82963
5	2.901078	71.56678	11.29451

<b>=RANDARRAY(5,3,1,100,TRUE)</b>		
D	E	F
Jan	Feb	Mar
65	56	87
61	11	97
3	91	2
65	62	17
58	67	93

## Syntax

**=RANDARRAY(,,,)**

Argument	Description
Optional	The number of rows to be returned
Optional	The number of columns to be returned
Optional	The minimum number you would like returned
Optional	The maximum number you would like returned
Optional	Return a whole number or a decimal value TRUE for a whole number FALSE for a decimal number.

### Notes:

If you don't input a row or column argument, RANDARRAY will return a single value between 0 and 1.

If you don't input a minimum or maximum value argument, RANDARRAY will default to 0 and 1 respectively.

The minimum number argument must be less than the maximum number, otherwise RANDARRAY will return a #VALUE! error.

If you don't input a whole\_number argument, RANDARRAY will default to FALSE, or decimal value.

The RANDARRAY function will return an array, which will spill if it's the final result of a formula. This means that Excel will dynamically create the appropriate sized array range when you press **ENTER**. If your supporting data is in an Excel table, then the array will automatically resize as you

add or remove data from your array range if you're using [structured references](#). For more details, see this article on [spilled array behavior](#).

RANDARRAY is different from the [RAND](#) function in that RAND does not return an array, so RAND would need to be copied to the entire range.

An array can be thought of as a row of values, a column of values, or a combination of rows and columns of values. In the example above, the array for our RANDARRAY formula is range D2:F6, or 5 rows by 3 columns.

Excel has limited support for dynamic arrays between workbooks, and this scenario is only supported when **both** workbooks are open. If you close the source workbook, any linked dynamic array formulas will return a [#REF! error](#) when they are refreshed.

## Need more help?

You can always ask an expert in the [Excel Tech Community](#) or get support in [Communities](#).

## See Also

[FILTER function](#)

[SEQUENCE function](#)

[SORT function](#)

[SORTBY function](#)

[UNIQUE function](#)

[#SPILL! errors in Excel](#)

[Dynamic arrays and spilled array behavior](#)

[Implicit intersection operator: @](#)