How do I generate a normal distribution in Excel?

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May 2, 2024

To generate a normal distribution in Excel, you can use the built-in function "NORM.DIST". This function allows you to input the mean, standard deviation, and desired x-value to calculate the probability of that value occurring in a normal distribution. You can also use the "NORM.INV" function to generate random numbers from a normal distribution based on the given mean and standard deviation. These functions can be found in the "Statistical" category under the "Formulas" tab in Excel. By using these functions, you can easily generate a normal distribution in Excel for data analysis or statistical calculations.

Generate a Normal Distribution in Excel

To generate a in Excel, you can use the following formula:

=NORMINV(RAND(), MEAN, STANDARD_DEVIATION)

You can then copy this formula down to as many cells in Excel as you'd like, depending on how large you'd like the dataset to be.

The following step-by-step example shows how to use this formula to generate a normal distribution in Excel.

Step 1: Choose a Mean & Standard Deviation

First, let's choose a mean and a standard deviation that we'd like for our normal distribution.

For simplicity, we'll choose 0 for the mean and 1 for the standard deviation:

	A	B	C	D	E	F	G	H
1	**Mean**	0						
2	**Std. Dev**	1						
3								
4								
5								
6								
7								
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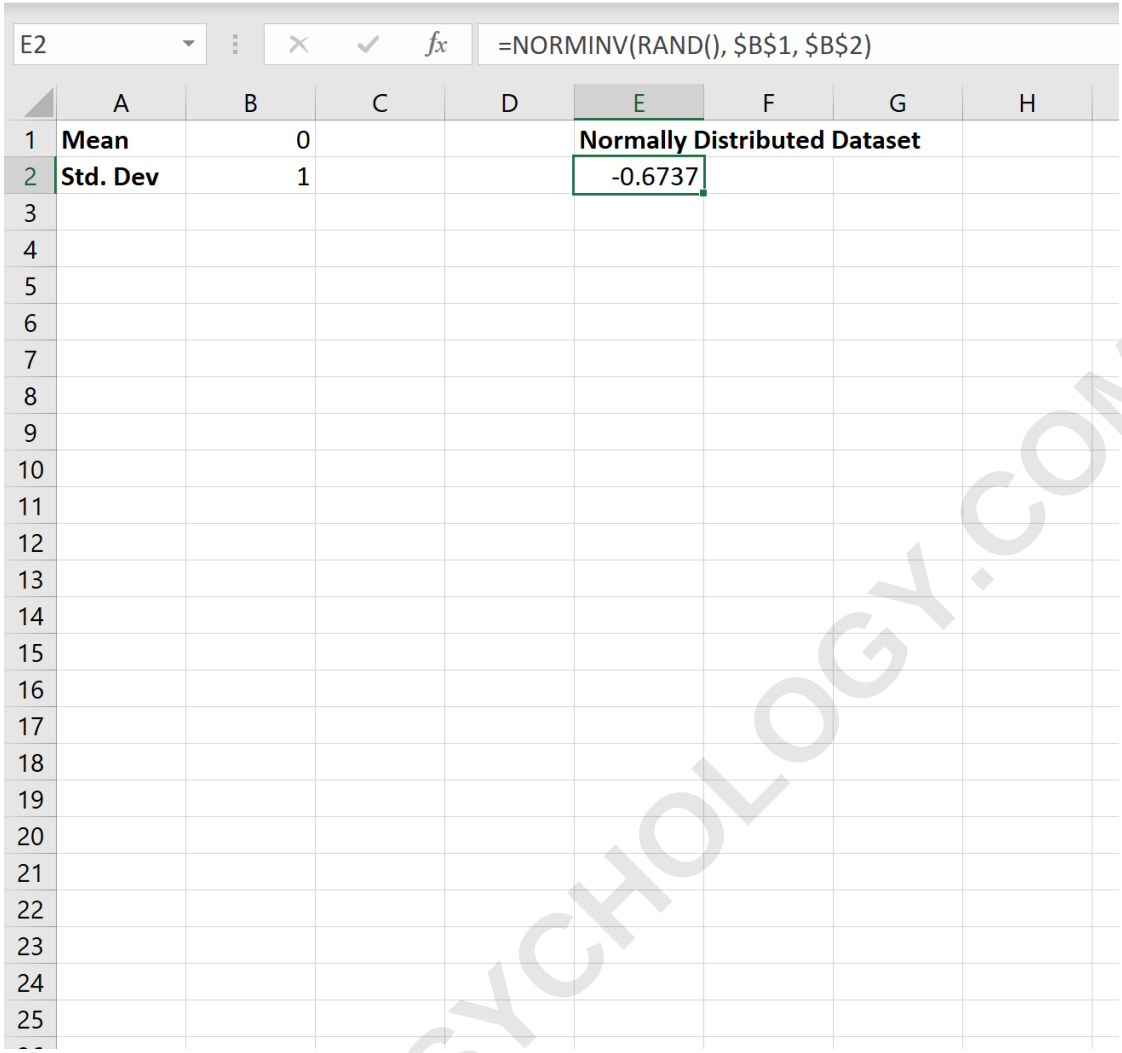
Step 2: Generate a Normally Distributed Random Variable

Next, we'll use the following formula to generate a single normally distributed random variable:

=NORMINV(RAND(), B1, B2)

The following screenshot shows how to do so:



Step 3: Choose a Sample Size for the Normal Distribution

Next, we can simply copy and paste this formula down to as many cells as we'd like.

For example, we may copy and paste this formula to a total of 20 cells:

	A	B	C	D	E	F	G	H
1	**Mean**	0			**Normally Distributed Dataset**			
2	**Std. Dev**	1			-0.74379			
3					0.124899			
4					0.764478			
5					1.699814			
6					0.608704			
7					0.461125			
8					-1.54327			
9					-0.02622			
10					0.487573			
11					-0.01297			
12					-2.11422			
13					-1.03085			
14					0.062516			
15					0.863051			
16					-0.27439			
17					1.787227			
18					0.859574			
19					-2.11224			
20					-0.16158			
21					-0.44665			
22								
23								

Note: You can quickly generate a brand new dataset that follows a normal distribution by simply double clicking on any cell and pressing Enter.