How do I find the antilog of values in Excel?

Authored by

stats writer

April 30, 2024

The process of finding the antilog of values in Excel involves using the "power" function to raise a given base value to a specific power. This can be achieved by entering the formula "=POWER(base, power)" in a cell, where "base" represents the given value and "power" represents the exponent. The resulting value will be the antilog of the initial value. This method can be useful for solving equations involving logarithms or for converting logarithmic values back to their original form. Additionally, the "antilog" function can also be used in Excel, which automatically calculates the antilog of a given value without the need for using the "power" function.

Find the Antilog of Values in Excel

The antilog of a number is the inverse of the log of a number.

So, if you calculate the log of a number you can then use the antilog to get back the original number.

For example, suppose we start with the number 7. If we take the log (base 10) of 7 then we would get .845:

log10(7) = .845

The antilog (base 10) of the value 0.845 can be found by taking 10 raised to the power of 0.845:

10.845 = 7

The antilog allowed us to get back the original number.

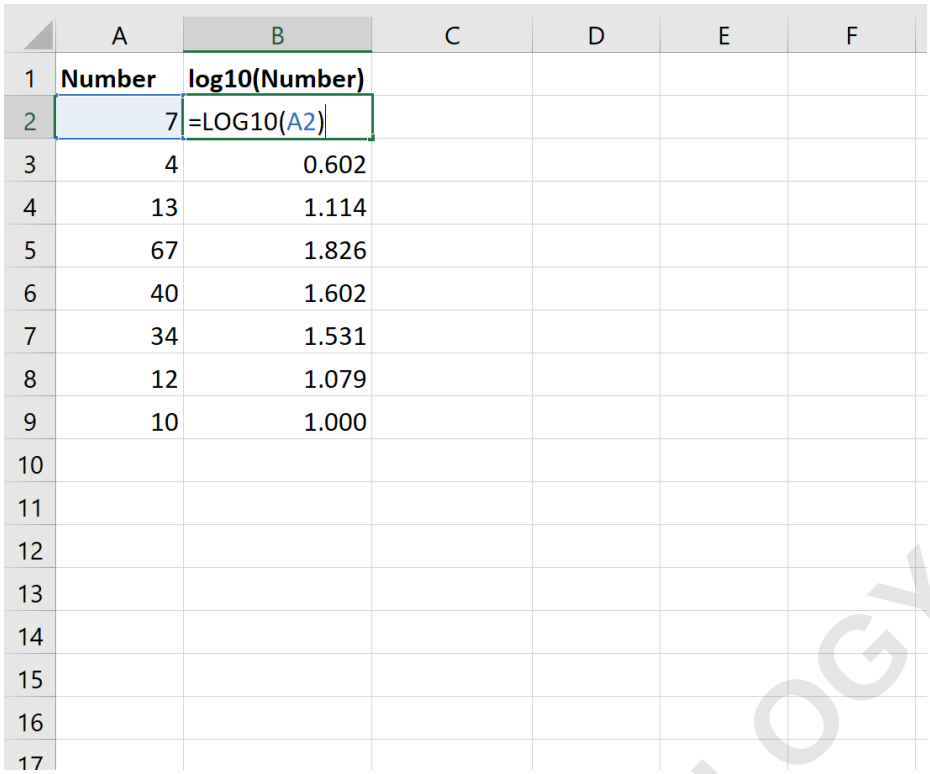
The following table shows how to calculate the antilog of values in Excel according to their base:

Base	Number	Log	Antilog
x	y	=LOG(y, x)	=x^y
e	y	=LN(y)	=exp(y)
10	y	=LOG10(y)	=10^y

The following examples show how to calculate the antilog of values in Excel using different values for the base.

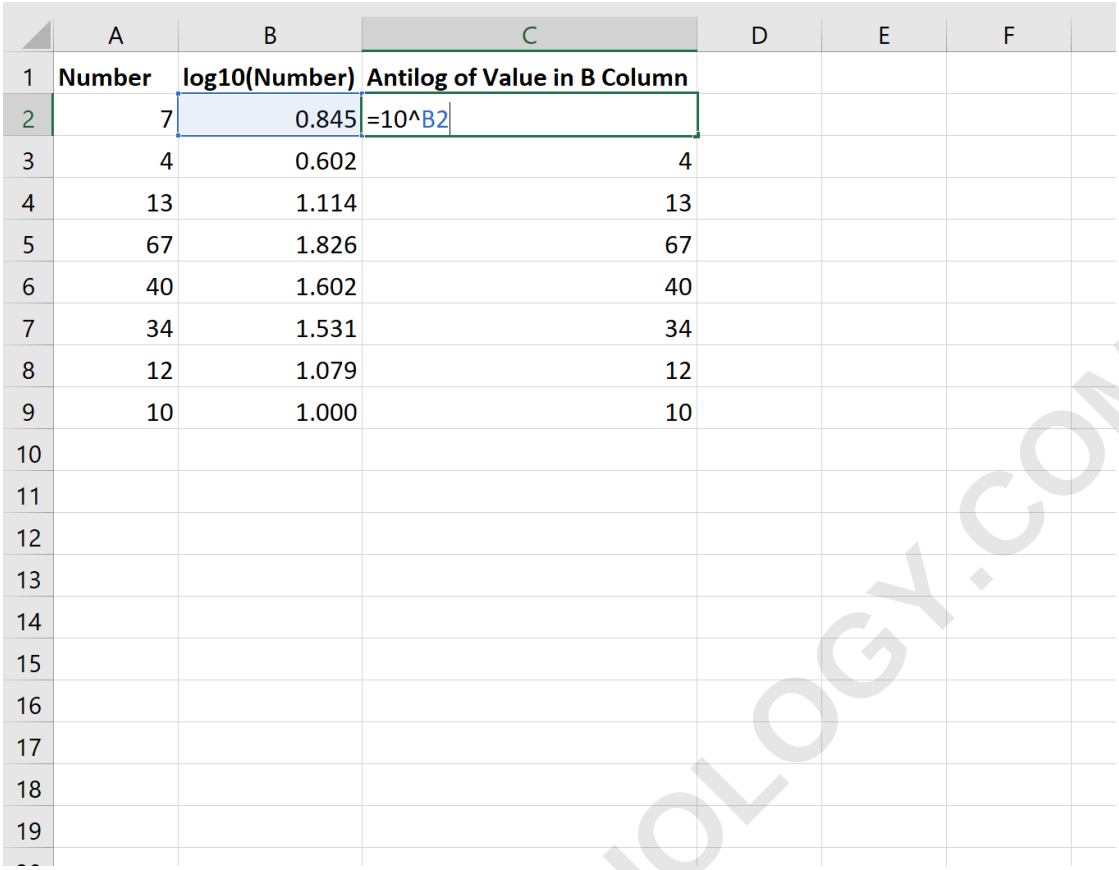
Example 1: Calculating the Antilog of Base 10

The following screenshot shows how to calculate the log base 10 of a list of values in Excel:



	A	B	C	D	E	F
1	**Number**	**log10(Number)**				
2	7	=LOG10(A2)				
3	4	0.602				
4	13	1.114				
5	67	1.826				
6	40	1.602				
7	34	1.531				
8	12	1.079				
9	10	1.000				
10						
11						
12						
13						
14						
15						
16						
17						

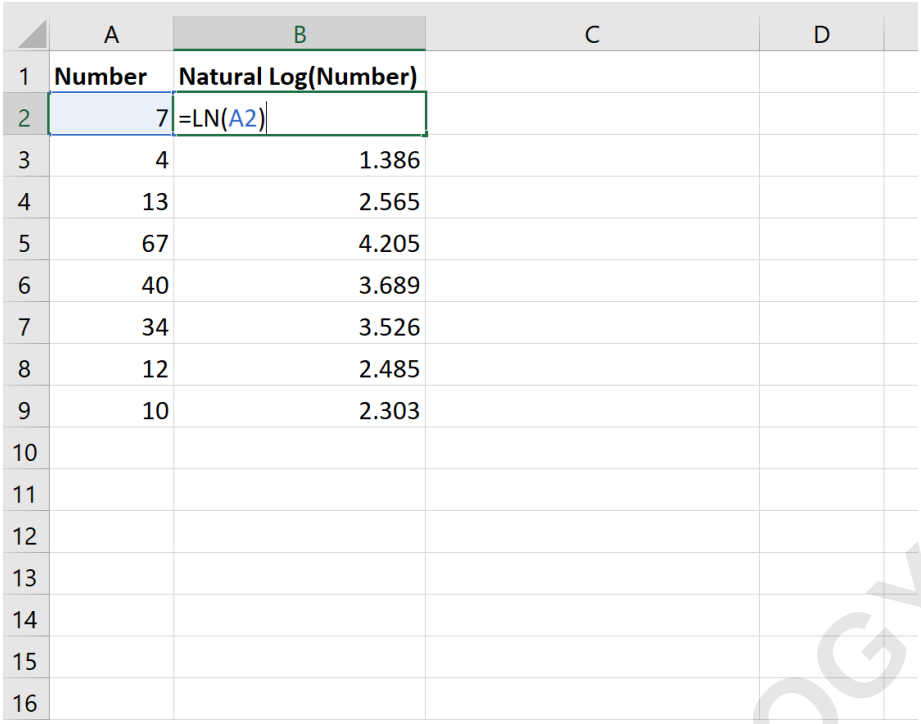
To obtain the antilog of the values in column B, we simply need to use the formula =10^value in column C:



	A	B	C	D	E	F
1	Number	log10(Number)	Antilog of Value in B Column			
2	7	0.845	=10^B2			
3	4	0.602	4			
4	13	1.114	13			
5	67	1.826	67			
6	40	1.602	40			
7	34	1.531	34			
8	12	1.079	12			
9	10	1.000	10			
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						

By taking the antilog of the values in column B, we were able to obtain all of the original values.

Example 2: Calculating the Antilog of a Natural Log



	A	B	C	D
1	**Number**	**Natural Log(Number)**		
2	7	=LN(A2)		
3	4	1.386		
4	13	2.565		
5	67	4.205		
6	40	3.689		
7	34	3.526		
8	12	2.485		
9	10	2.303		
10				
11				
12				
13				
14				
15				
16				

To obtain the antilog of the values in column B, we can use the formula =exp(value) in column C:

	A	B	C	D	E
1	**Number**	**Natural Log(Number)**	**Antilog of Value in B Column**		
2	7	1.946	=EXP(B2)		
3	4	1.386	4		
4	13	2.565	13		
5	67	4.205	67		
6	40	3.689	40		
7	34	3.526	34		
8	12	2.485	12		
9	10	2.303	10		
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

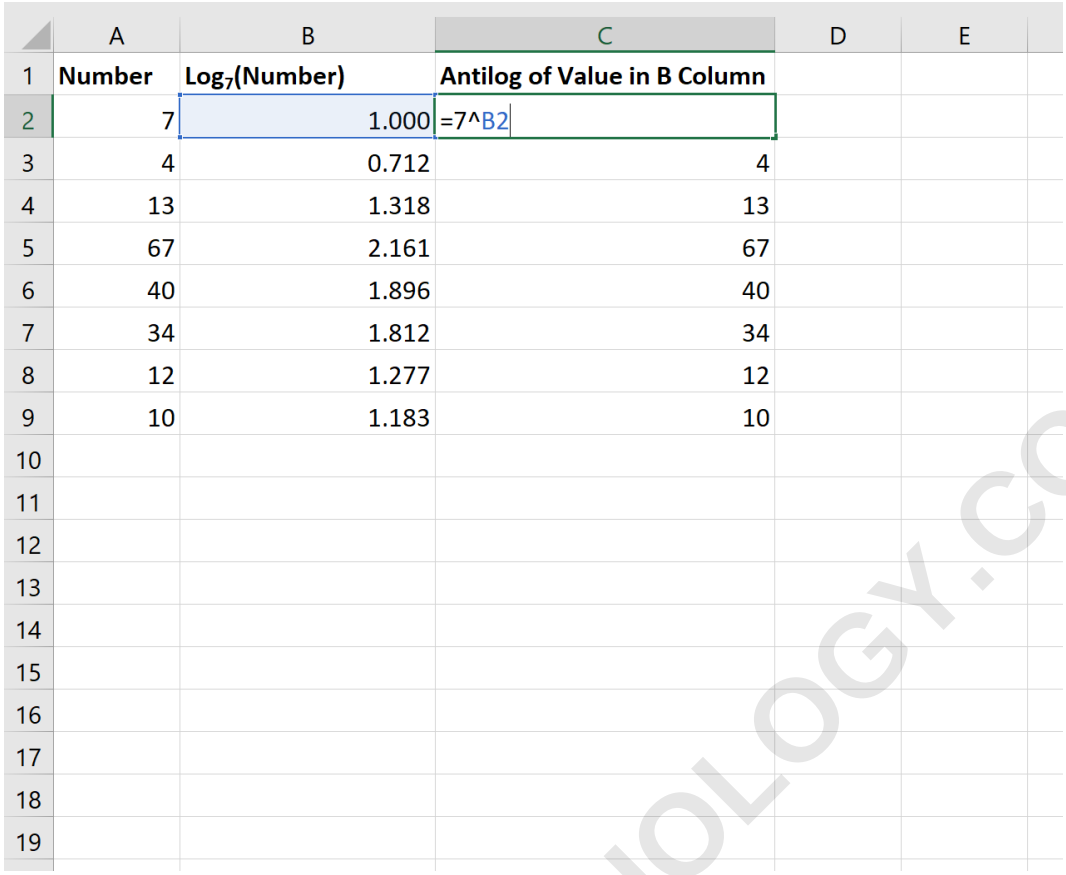
By taking the antilog of the values in column B, we were able to obtain all of the original values.

Example 3: Calculating the Antilog of Base x

The following screenshot shows how to calculate the log base 7 of a list of values in Excel:

	A	B	C	D	E	F
1	**Number**	**Log_7(Number)**				
2	7	=LOG(A2, 7)				
3	4	0.712				
4	13	1.318				
5	67	2.161				
6	40	1.896				
7	34	1.812				
8	12	1.277				
9	10	1.183				
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

To obtain the antilog of the values in column B, we can use the formula =7^value in column C:



	A	B	C	D	E
1	**Number**	**Log_7(Number)**	**Antilog of Value in B Column**		
2	7	1.000	=7^B2		
3	4	0.712	4		
4	13	1.318	13		
5	67	2.161	67		
6	40	1.896	40		
7	34	1.812	34		
8	12	1.277	12		
9	10	1.183	10		
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

By taking the antilog of the values in column B, we were able to obtain all of the original values.