

Re: logarithmic scale starting with 0

Source: <http://sci.tech-archive.net/Archive/sci.math/2007-01/msg04224.html>

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 - *Date:* 20 Jan 2007 06:23:43 -0800
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different wrote:

I'm trying to interpolate between two numbers using the logarithm function.

I divided the interval between the numbers in 20 parts and use the equation in:

http://www.mpip-mainz.mpg.de/~deserno/science_notes/log_interpol/log...

to compute the value at each step.

My problem is that my interval begins with 0.

I've already been suggested to shift the graph by 1. In this way the equation becomes:

$$x = (x_2 + 1)^f * (x_1 + 1)^{(1-f)} - 1$$

But it doesn't work. If I use \log_{10} on the interval $[0;100]$ and f , the position of the point of which I need the interpolated value, is $1/2 x$ should be 10, but the equation gives another number.

Any suggestions?

I don't really understand what you are trying to do (and, btw, the link seems to be broken). Given some number x , it seems that you want to find some other number, y , that is the logarithmically interpolated value, or translated value, or whatever you want to call it. To construct a logarithmic mapping you need to fix exactly two pairs of values. In other words, you need to stipulate that when $x = x_1$, $y = y_1$, and when $x = x_2$, $y = y_2$, for some stated x_1 , y_1 , x_2 , y_2 . What are your x_1 , y_1 , x_2 , y_2 ? (It's also necessary to know which "way round" the interpolation is supposed to work – that is, whether it is logarithmic or exponential – but hopefully that will be apparent from the values you supply.)