

## Re: logarithmic scale starting with 0

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*Source:* <http://sci.tech-archive.net/Archive/sci.math/2007-01/msg04198.html>

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- *From:* "different" <[cinquequarti@xxxxxxxxxx](mailto:cinquequarti@xxxxxxxxxx)>
  - *Date:* 20 Jan 2007 03:24:10 -0800
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Sorry, the link was

[http://www.mpip-mainz.mpg.de/~deserno/science\\_notes/log\\_interpol/log\\_interpol.ps](http://www.mpip-mainz.mpg.de/~deserno/science_notes/log_interpol/log_interpol.ps)

On 20 Jan, 12:16, "different" <[cinquequarti@xxxxxxxxxx](mailto:cinquequarti@xxxxxxxxxx)> 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\\_interpol.ps](http://www.mpip-mainz.mpg.de/~deserno/science_notes/log_interpol/log_interpol.ps)...

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 log10 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?