
Subject: Re: Divide By Zero error

Posted by [Paul Manusiu](#) on Wed, 14 Nov 2001 01:57:26 GMT

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<!doctype html public "-//w3c//dtd html 4.0 transitional//en">

<html>

<body bgcolor="#FFFFFF">

Yes, it was a rhetorical question. The reason why you can't take the log of zero is simple. Best described by an example.

given,

 $y = 10^x$

<p>than,

log_base_10 both sides gives

<p>log(y) = x

<p>if x = 0, then, in the first equation y = 1,

<p>if y = 0, x is not defined. (i.e. there is no power of 10 that can give you y = 0)

<p>Therefore, log (0) does not exist.

<p>As for what you do with zeros, I usually set a limit on my arrays.

<p>If array[i] less than limit,

than array[i] equal limit.

<p>Usually I set limit equal to 10^{-6} . But it depends on your array values.

Best thing to do is normalize array before setting limit, then scale back to original values.

<p>You can use the "where" function for quick search of array.

<p>Cheers

Paul M.

<p>Logan Lindquist wrote:

<blockquote TYPE=CITE></style></blockquote>

Paul, As far as I know :) The log[base 10] of zero and the log[base 0] do not exist.

I am not qualified to give you an mathematical rule or proof that proves the reason behind this. I think of it as another of those rules in mathematics that are just because. I do think that it has something to do with how logs [plural of the mathematical term and not the wooden kind] describe the curve of lines occurring in a coordinate system. Thus a zero would indicate that no line exists. If you question was meant to make me aware of the reason behind my error in IDL, I thank you. I figured this out last week and now I am working on a solution to solve it. Any suggestions to what I should do with the zero's in my array would be helpful! Regards, Logan

</blockquote>

style="PADDING-RIGHT: 0px; PADDING-LEFT: 5px; MARGIN-LEFT: 5px; BORDER-LEFT: #000000 2px solid; MARGIN-RIGHT: 0px">"Paul

Manusiu" <

href="mailto:phpvm@alinga.newcastle.edu.au">phpvm@alinga.newcastle.edu.au>

