
Subject: Re: Incomplete gamma function With real but negative x
Posted by [mmeron](#) on Mon, 13 Oct 2003 19:48:55 GMT

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In article <162586e3.0310130746.5997d5bf@posting.google.com>,
biomedthesis2002@yahoo.com (New2IDL) writes:

> Hi,

>

> I need help with the incomplete gamma function with real but negative
> fraction value of x. I found the M_lgamma(x,a) in Meron
> Library(<http://www.astro.washington.edu/deutsch/idl/htmlhelp/slibrar y23.html>)
> which works for both real and complex x. However, I notice that
> M_lgamma(x,a), for a real but negative fraction value of x, give
> only the real part. If any body knows how to deal with this problem
> please help me. You might use the following arguments: x=-0.069, a=
> 2.2. Thank you very much for your help in advance.

Well, I can actually help you on this one. First, though, I suggest
you use the updated version of the routine (called lgamma_mm), you can
find it in my library on the RSI users contribution page.

Now, as for your question, lgamma_mm returns an output which is of the
same numerical type as x (no lower than float, though). So, if x is real,
so will be the output. If you want a full complex output, you need
complex input. See below:

```
IDL> print, igamma_mm(-0.069,2.2)
0.000976233
IDL> print, igamma_mm(complex(-0.069),2.2)
( 0.000976233, 0.000709275)
```

Hope this helps.

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"
