Subject: Re: IDL is not accurate enough!
Posted by pgrigis on Thu, 11 Sep 2008 14:44:44 GMT
View Forum Message <> Reply to Message

pgri...@gmail.com wrote:
> noahh.schwa...@gmail.com wrote:

>>> On Thu, 28 Aug 2008, noahh.schwa...@gmail.com wrote:
>>>> Hi,
>>>
>>>> I've been having problems with IDL accuracy. I'm trying to perform
>>>> calculations using the gamma function. The problem is that it grows
>>>> VERY fast! Performing this calculation in double (namely gamma(x)/
>>>> gamma(y) with x and y big) yields the result: NaN...
>>>> Would it be possible to use a program like 'Mathematica' (or any
>>>> other) and to plug it in my ILD program? Some kind of CALL_EXTERNAL
>>>> that is to say. If it is possible, how can I do it and what is the
>>>> best program to use?
>>>
>>>> Thanks,
>>>> Noah
>>>
>>> gamma(x)/gamma(y) => exp(lngamma(x)-lngamma(y))
>>>
>>> regards,
>>> lajos
>>
>>
>> lngamma works fine for my propose! Would you know if an equivalent
>> function exists for the beselk function? Something like lnbeselk?
>> beselk(x) for x>709 doesn't seen to work.
>
> Isn't 0 a good enough approximation?

If not, log(K(x,n))~ln(sqrt(!pi/(2*x)))-x for large x

Paolo

>
> Paolo
>
>
>> If not, I guess that I'll have to wait for the DLMs that add arbitrary
>> precision floating point...
>>
>> cheers,
>> Noah