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Subject: Re: Integration qpint

Posted by [Helder Marchetto](#) on Mon, 13 Aug 2012 09:01:51 GMT

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On Sunday, August 12, 2012 7:42:57 PM UTC+2, Gompie wrote:

```
> Hi
>
> Can anyone help. I am using qpint1d to integrate but i get
>
> "Program caused arithmetic error: Floating overflow:"
>
>
>
> The code is
>
> C1 = 1.1910427E-12
>
> c2=1.43883
>
> T=300
>
> c=c1*(c2^(-4))*T^4
>
> llimit=c2*2380/T
>
> ulimit=c2*2940/T
>
> print,"X=",llimit,ulimit
>
> lin= c*qpint1d('x^3/(EXP(X)-1)', llimit, +inf, /expr)
>
> rin=c*qpint1d('x^3/(EXP(X)-1)', ulimit, +inf, /expr)
>
> print,abs(lin-rin)
>
> end
>
>
>
> This outputs a number ( i am not sure if it is correct) but it also says floating point error.
>
> Thanks in advance
>
> Gompie
```

Hi Gompie,

I didn't go through the whole of your code, but you define T as an integer.

Try rerunning your code substituting this to the line where you define T:

$T=300.0$

Doing this, the value of  $c$  changes from  $3.48598e-009$  ( $T$  is integer) to  $0.00225099$  ( $T$  is floating point).

Maybe also change the definitions of  $llimit$  and  $ulimit$  to:

$llimit=c2*2380.0/T$

$ulimit=c2*2940.0/T$

This might help. But I have not tried the integration.

Cheers,

h

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