

Re: series expansion : a question

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tommy1729 a écrit :

In article
<33119411.1186861057132.JavaMail.jakarta@xxxxxxxxxxxxxxxxxxxx
forum.org> tommy1729 <tommy1729@xxxxxxxxxx> writes:
> considering series expansion ..
> > a power series is taylor
> an nth derivate series is taylor

You are doing things the wrong way. A Taylor series exists for a function that is analytical in a circle around the origin. In that case the Taylor series is convergent within that circle. When a Taylor series does exist we can get the n-th derivative of it by taking the n-th derivative of the terms, constructing a new Taylor series. And we can integrate the function by integrating the terms (where we have to insert suitable constant terms). A function for which the n-th derivative does not exist at $x = 0$ does not have a Taylor series expansion at all. (An example is $x^3|x|$, which has first, second, third and fourth derivatives, but for which the fifth derivative at $x = 0$ does not exist, so it is not analytical in $x = 0$ and so does not have a Taylor series expansion.)

> what is the analogue for an integral ??

wich series can be expressed in the nth integral

1 ??

See above. Although I do not understand the second question.

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once again i am misunderstood ...

once again, you obfuscated issues, then complained

i understand taylor series perfectly ...

Certainly not . You are a troll. Dont expect any further serious help for us now.

radius of convergeance too...

thats NOT the issue here !!!

If you say so...

considering $f(x+a) = f(a) + f'(a)x + \dots$

(taylor) it is clear that taylor is a power series (infinite polynomial of x)

and a series of nth derivates ($f^n(a)$)

i am looking for the analogue of nth integrals ...

tommy1729

Keep looking. Remember Taylor series are unique. Perhaps you are looking for something like Euler–MacLaurin smomation formula? But I strongly doubt it. You are just trolling as usual

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