
Subject: Re: math

Posted by [Ammar Yusuf](#) on Mon, 22 Nov 2010 19:13:00 GMT

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On Nov 22, 7:04 am, MC <morefl...@gmail.com> wrote:

> There are several routines, search the online help for "differential
> equation"

>

> Here's one from the help:

>

> PRO LSODETEST

>

> ; Define the step size:

> H = 0.5

> ; Define an initial X value:

> X = 0.0

> ; Define initial Y values:

> Y = [4.0, 6.0]

> ; Integrate over the interval (0, 0.5):

> result = LSODE(Y, X, H, 'differential')

>

> ; Print the result:

> PRINT, result

> END

> FUNCTION differential, X, Y

> RETURN, [-0.5 * Y[0], 4.0 - 0.3 * Y[1] - 0.1 * Y[0]]

> END

>

> Note that function can have more parameters passed that can control

> its behaviour, which may be what you are asking for in Q3. I can't

> understand your 2nd and 4th Q's

>

> Cheers MC

>

> On Nov 22, 9:58 am, amin farhang <farhang.a...@gmail.com> wrote:

>

>> dear readers,

>> i have some questions about IDL

>> 1. how can i solve differential equations in IDL? i know that the RK4

>> function do it but it is very obscure, may you introduce a simple

>> method to solve all differential equations?

>> 2. what is the simplest way for taking the integrals directly

>> (specially 1D integrals) without write a function?

>> 3. How do I define a function that its parameters could be changed in

>> every calling (for example in every step of FOR-DO loop, function

>> return a new value)?

>> 4. does functions could return a paramedical equations? if OK how?

>> thank you so much and sorry for my many questions

>> best regards,
>
>

For this

2. what is the simplest way for taking the integrals directly
(specially 1D integrals) without write a function?

You can probably use the total function. I'm pretty sure that
would be the easiest.
