Subject: Re: How can I integrate? (not so easy?)
Posted by bdb112 on Mon, 25 Mar 1991 20:18:41 GMT
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In article <1991Mar20.233728.1@csc.anu.edu.au>, bdb112@csc.anu.edu.au writes:
> How can I efficiently do a running sum of a vector (integrate)? The explicitly
> coded version (IDL v2)
> for i=1,n-1 x(i)=x(i) + x(i-1) achieves the desired effect, but takes (VS3100)
> 1 second for a 2000 element array compared to .01 sec for z=x+x, a similar
> number of operations. This is such an obvious thing to do that I must be
> missing something obvious - I can't find it in the userlib either (just
> deriv).

Two respondents have suggested
sum_x = total(x(0:i))   ; where i is the maximum idex of the array
When I try this, I get a scalar result, rather like a definite integral, when
what I want is a vector which is a running total, like an indefinite integral.

e.g. x = [1,1,2]   sum_x = [1,2,4]
Of course, the next step would be to allow an optional vector which contained
the abscissae, if not equally spaced, or the spacing if equally spaced, but I
would be happy with the simple result.