Subject: Re: generating symmetric array from function?
Posted by Nick Bower on Mon, 11 Dec 2000 16:02:03 GMT
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ahh. my mind was stuck on generating a 2D array instead using 1D Z/X/Y arrays and letting IDL do the messy stuff .

this solves the plotting problem of course, but just to be pedantic, how do you generate the 2D version of Z? Is it possible?

"Liam E. Gumley" wrote:

> Nick Bower wrote:
>>
>> how do I generate symmetric 2D array from a function of one variable?
>>
>> eg. say i want the sinc function in 3 dimensions - how do i generate
>> this symmetrically in both x and y dimensions?
>>
>> presumably, the last step would be a shift by N/2 in both x and y
>> directions to move the origin to the centre of the array, but i'm just
>> not sure what comes before this and how to do it without nested loops
>> over the array elements.
>
> v = findgen(41) * 0.5 - 10.0
> x = rebin(v, 41, 41, /sample)
> y = rebin(reform(v, 1, 41), 41, 41, /sample)
> r = sqrt(x^2 + y^2) + 1.0e-6
> z = sin(r) / r
> surface, z, x, y
>
> Cheers,
> Liam.
> http://cimss.ssec.wisc.edu/~gumley