Subject: Re: generating symmetric array from function?
Posted by Liam E. Gumley on Mon, 11 Dec 2000 15:32:53 GMT
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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

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:

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> http://cimss.ssec.wisc.edu/~gumley

Subject: Re: generating symmetric array from function?
Posted by Pavel A. Romashkin on Mon, 11 Dec 2000 17:15:09 GMT
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When I try Liam's code, X, Y, Z are all FLTARR(41, 41) on my machine. Is it not 2D on yours? All of the parameters Liam sends to SURFACE are 2D. That's what REBIN was used for.

Cheers,
Pavel

Nick Bower wrote:
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Subject: Re: generating symmetric array from function?
Posted by Nick Bower on Tue, 12 Dec 2000 03:35:48 GMT
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i'm such a dummy sometimes.

(it was 2am when i posted if that gets me off the hook).

"Pavel A. Romashkin" wrote:

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