Subject: Re: how to draw three-dimension graph using IDL
Posted by Paolo Grigis on Tue, 19 Apr 2005 14:51:19 GMT
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for a surface, you could try:

x=4*!pi*findgen(101)/100
y=4*!pi*findgen(101)/100

xx=rebin(x,n_elements(x),n_elements(y))
yy=rebin(transpose(y),n_elements(x),n_elements(y))

shade_surf,sin(xx)*sin(yy),xx,yy

--Paolo

lixiaoyao wrote:
> hello all
> for example,how to draw z=sin(x)*sin(y)
> also,if you have a three column file,and how draw three dimension
> graph from the data.
> Thanks a lot
>

Subject: Re: how to draw three-dimension graph using IDL
Posted by lixiaoyao on Tue, 19 Apr 2005 15:11:59 GMT
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thank you so much,you are so powerful.
Paolo Grigis wrote:
> for a surface, you could try:
>
> x=4*!pi*findgen(101)/100
> y=4*!pi*findgen(101)/100
>
> xx=rebin(x,n_elements(x),n_elements(y))
> yy=rebin(transpose(y),n_elements(x),n_elements(y))
why does there need to transpose? I am a little bit confuse.
>
> shade_surf,sin(xx)*sin(yy),xx,yy
also,how to draw thw contour and how to change the view angel?
Thanks a billion!
>
> --Paolo
>
> lixiaoyao wrote:
>> hello all

>> for example,how to draw z=sin(x)*sin(y)
>> also,if you have a three column file,and how draw three dimension
>> graph from the data.
>> Thanks a lot
>>

Subject: Re: how to draw three-dimension graph using IDL
Posted by Paolo Grigis on Tue, 19 Apr 2005 15:54:15 GMT
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lixiaoyao wrote:
> thank you so much,you are so powerful.
> Paolo Grigis wrote:
>
>> for a surface, you could try:
>>
>> x=4*!pi*findgen(101)/100
>> y=4*!pi*findgen(101)/100
>>
>> xx=rebin(x,n_elements(x),n_elements(y))
>> yy=rebin(transpose(y),n_elements(x),n_elements(y))
>
> why does there need to transpose? I am a little bit confuse.
Well, of course you have to try to understand the code
for yourself, the best way to do it is to try out with
a simple example:

```
x=[1,2,3]
y=[1,2,3]

xx=rebin(x,n_elements(x),n_elements(y))
yy=rebin(transpose(y),n_elements(x),n_elements(y))

IDL> print,xx
       1       2       3
       1       2       3
       1       2       3
IDL> print,yy
       1       1       1
       2       2       2
       3       3       3
```
(you see why I had to transpose to get yy?)

```
IDL> z=xx+yy
IDL> print,z
       2       3       4
       3       4       5
```

4 5 6

Now z[i,j] is equal to x[i]+y[j], and the "rebin" call
was used to inflate the x and y array in order to avoid
the need of writing two nested for loops over i and j
to fill out the values of z[i,j]=x[i]+y[j].

Paolo

>
>> shade_surf,sin(xx)*sin(yy),xx,yy

Subject: Re: how to draw three-dimension graph using IDL
Posted by Dick Jackson on Tue, 19 Apr 2005 19:23:27 GMT
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... or for even more fun, as your last command, use this:

iSurface, sin(xx)*sin(yy),xx,yy

or

iSurface, sin(xx)*sin(yy),xx,yy, /Isotropic
(for isotropic or equally-scaled X, Y and Z axes)

Cheers,
--
-Dick

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D-Jackson Software Consulting / http://www.d-jackson.com
Calgary, Alberta, Canada / +1-403-242-7398 / Fax: 241-7392

"Paolo Grigis" <pgrigis@astro.phys.ethz.ch> wrote in message
news:42651ae7$1@news1.ethz.ch...
> for a surface, you could try:
>
> x=4*!pi*findgen(101)/100
> y=4*!pi*findgen(101)/100
>
> xx=rebin(x,n_elements(x),n_elements(y))
> yy=rebin(transpose(y),n_elements(x),n_elements(y))
>
> shade_surf,sin(xx)*sin(yy),xx,yy
>

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>
> lixiaoyao wrote:
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>>

Subject: Re: how to draw three-dimension graph using IDL
Posted by lixiaoyao on Tue, 19 Apr 2005 21:42:14 GMT
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how to set the contour to a wanted point? for example contour =0.1
thanks

Subject: Re: how to draw three-dimension graph using IDL
Posted by Dick Jackson on Wed, 20 Apr 2005 06:14:05 GMT
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"lixiaoyao" <lixiaoyao5880@yahoo.com> wrote in message
news:1113946934.318245.263170@l41g2000cwc.googlegroups.com.. .
> how to set the contour to a wanted point? for example contour =0.1

Online Help for "ISURFACE procedure" gives this:

Insert a contour onto the surface by clicking the Surface Contour button on
the toolbar, then clicking and dragging on the surface to position the
contour at the desired height.

But I found that I couldn't get any contours with:
iSurface, sin(xx)*sin(yy),xx,yy
... I had to just use:
iSurface, sin(xx)*sin(yy)

I think that if you look in Online Help:Using IDL iTools:Working with
Surfaces (or Contours) you will find more of what you are looking for.

Cheers,
--
-Dick

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