
Subject: Re: format questions

Posted by [David Fanning](#) on Fri, 01 Dec 2006 19:10:34 GMT

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lee writes:

```
> ## Question : print out is different from the original file!!!!!!,  
> why?????  
> IDL> print, mx  
>    598594.  
> IDL> print, double(mx)  
>    598594.38  
> IDL> print, double(my)  
>    6738650.0
```

Because you are not using a FORMAT that delivers enough accuracy. See the following article, about in the middle:

http://www.dfanning.com/math_tips/sky_is_falling.html

Something like:

```
IDL> Print, mx, FORMAT='(D20.10)'
```

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: format questions

Posted by [lee](#) on Fri, 01 Dec 2006 19:25:30 GMT

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Thank you very much for your quick response, David. Even I added format, the number changed a little bit (see below). How to get it exactly right? Your website is so helpful and thank you very much!

```
> print, mx, FORMAT='(D20.10)'  
    598594.3750000000  
(the original number is 598594.35000000)
```

David Fanning wrote:

```
> lee writes:
```

```
>
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>> why?????
>> IDL> print, mx
>>    598594.
>> IDL> print, double(mx)
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> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
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Subject: Re: format questions

Posted by [David Fanning](#) on Fri, 01 Dec 2006 19:30:37 GMT

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lee writes:

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> Thank you very much for your quick response, David. Even I added
> format, the number changed a little bit (see below). How to get it
> exactly right? Your website is so helpful and thank you very much!
>
>> print, mx, FORMAT='(D20.10)'
>    598594.3750000000
> (the original number is 598594.35000000)
```

Well, I think maybe you want to read that article one more time, a little more carefully than you did the last time!

MX is a float in your code. The best precision you can expect is seven significant figures. These two numbers

are identical to that level of precision. :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: format questions

Posted by [Foldy Lajos](#) on Fri, 01 Dec 2006 19:34:34 GMT

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On Fri, 1 Dec 2006, lee wrote:

> Thank you very much for your quick response, David. Even I added
> format, the number changed a little bit (see below). How to get it
> exactly right? Your website is so helpful and thank you very much!

>

>> print, mx, FORMAT='(D20.10)'

> 598594.3750000000

> (the original number is 598594.35000000)

>

mx should be double, use mx=0.0d (instead of mx=0.0).

regards,
lajos
