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Subject: Re: BUG in IDL 4.0a PowerMac  
Posted by [Tim Patterson](#) on Fri, 05 Apr 1996 08:00:00 GMT  
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Paritosh Dhawale wrote:

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>  
> Hello,  
>  
> I get this dangerous bug rather randomly running  
> IDL 4.0a on a PowerMac 7500. Any one with similar  
> problems? IDL fails to return the correct answer  
> in statement 4.  
>  
> IDL> help,yy  
> YY          FLOAT    =    35.0000  
> IDL> help,last_row  
> LAST_ROW     FLOAT    =    89.0000  
> IDL> print,last_row-yy  
>    54.0000  
> IDL> print,fix(last_row-yy)  
>    53  
> IDL> print,fix(last_row)-fix(yy)  
>    54  
>  
> Would appreciate any insight.  
>  
> Paritosh
```

It may be because FIX truncates rather than rounds  
to get an integer, so FIX(4.9) returns 4 and not 5.

So, as an example, if yy is actually 35.0000000001 and  
last\_row is 89.0000000000, when you subtract  
them and then FIX you get FIX( 53.9999999999) which  
is 53. If you FIX them first, you get 89 - 53 which  
gives 54.

So the answer may differ depending on how accurately  
your machine stores float variables. I think this  
is a problem in other languages besides IDL. Try  
using ROUND instead of FIX, as this rounds to the nearest  
integer, and it should solve the problem.

Tim

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