
Subject: GDL weirdness (bug?) with modulo command

Posted by [rjp23](#) on Tue, 15 Apr 2014 14:44:33 GMT

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I'm not sure if this is a bug or if I'm missing something and I know there's a fair few GDL users here.

I was using the mod command to get the remainder from a value and then fixing it to be an integer and I noticed that some of the values were wrong.

I looked into it a bit more and think I can summarise the issue as:

```
GDL> print, 200.0 mod 12
```

```
7.99999
```

```
GDL> print, 200D mod 12
```

```
8.0000000
```

i.e. if the variable is a float, the mod command doesn't return the integer that you expect it to. If it's a double then you get the expected answer.

Am I missing some subtlety here or is this a bug?

Subject: Re: GDL weirdness (bug?) with modulo command

Posted by [Craig Markwardt](#) on Tue, 15 Apr 2014 18:50:22 GMT

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On Tuesday, April 15, 2014 10:44:33 AM UTC-4, [rj...@le.ac.uk](#) wrote:

> I'm not sure if this is a bug or if I'm missing something and I know there's a fair few GDL users here.

>

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> I was using the mod command to get the remainder from a value and then fixing it to be an integer and I noticed that some of the values were wrong.

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>
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>
> Am I missing some subtlety here or is this a bug?

This is probably the issue...

https://www.idlcoyote.com/math_tips/sky_is_falling.html

Subject: Re: GDL weirdness (bug?) with modulo command

Posted by [rjp23](#) on Wed, 16 Apr 2014 07:55:15 GMT

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Yeah, that's why I posted here rather than submitting a GDL bug report. I thought it might be some subtlety like that which wasn't actually a bug. However, mod behaves as I'd expect in IDL and it's only GDL with this issue.

I think that points to a bug or dodgy implementation in GDL...?

Cheers

On Tuesday, April 15, 2014 7:50:22 PM UTC+1, Craig Markwardt wrote:

>
> This is probably the issue...
>
> https://www.idlcoyote.com/math_tips/sky_is_falling.html

Subject: Re: GDL weirdness (bug?) with modulo command

Posted by [rjp23](#) on Wed, 16 Apr 2014 10:32:18 GMT

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I forgot to say that it works as expected in IDL so if it is a precision thing then it's due to a different implementation in GDL. Not sure if that's down to a bug or not though..?

On Tuesday, April 15, 2014 7:50:22 PM UTC+1, Craig Markwardt wrote:

> On Tuesday, April 15, 2014 10:44:33 AM UTC-4, rj...@le.ac.uk wrote:
>
> This is probably the issue...
>

> https://www.idlcoyote.com/math_tips/sky_is_falling.html

Subject: Re: GDL weirdness (bug?) with modulo command
Posted by [Craig Markwardt](#) on Wed, 16 Apr 2014 19:14:48 GMT
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On Wednesday, April 16, 2014 3:55:15 AM UTC-4, [rj...@le.ac.uk](#) wrote:

> Yeah, that's why I posted here rather than submitting a GDL bug report. I thought it might be some subtlety like that which wasn't actually a bug. However, mod behaves as I'd expect in IDL and it's only GDL with this issue.

>

>

>

> I think that points to a bug or dodgy implementation in GDL...?

Let's use your example.

```
print, (200.0 MOD 12) - 8.0
```

On IDL the result is 0.0. I agree, that's the expected value, because floating point should be able to calculate this exactly. But I would also argue that any value within 0 +/- EPS is consistent with 0.

Craig

```
EPS = (machar()).eps
```

Subject: Re: GDL weirdness (bug?) with modulo command
Posted by [Alain Coulais](#) on Tue, 29 Apr 2014 09:17:21 GMT
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> Am I missing some subtlety here or is this a bug?

Thank you for reporting it, it is now solved in the CVS.

Please report bugs also to GDL bugs tracker:

<https://sourceforge.net/p/gnudatalanguage/bugs/>

(sorry but anonymous report is deactivated due to spams ...)

Alain

Subject: Re: GDL weirdness (bug?) with modulo command
Posted by [rjp23](#) on Thu, 08 May 2014 20:36:09 GMT

On Tuesday, April 29, 2014 10:17:21 AM UTC+1, alai...@gmail.com wrote:

>
>
> Thank you for reporting it, it is now solved in the CVS.
>
>
>
> Please report bugs also to GDL bugs tracker:
>
> <https://sourceforge.net/p/gnudatalanguage/bugs/>
>
> (sorry but anonymous report is deactivated due to spams ...)
>
>
>
> Alain

That's excellent, thanks.

I didn't realise that the bug-tracker was being so actively monitored.

I've also reported another bug (I think?) which we found with INTERPOL.
