
Subject: Re: Floating-point accuracy problem

Posted by [Michael Galloy](#) on Mon, 09 Aug 2010 16:09:53 GMT

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On 8/9/10 9:30 AM, Ramy wrote:

- > I have a problem related to float-point accuracy
- > If I type in: 50d - 1d-9, I get 50.000000
- >
- > And here lies my problem, I'm doing a numerical simulation where such
- > an arithmetic is common place, and as a result i get a lot or errors.
- >
- > I know for example, that if i simply type
- > print, 50d - 1d-9, format = '(f.20.10)' , i'll get:
- > 49.9999999990
- >
- > But how can I convince IDL to do it on its own during computations?
- >
- > Any suggestions will be massively welcomed!

You are confusing the computations with the printed output. IDL will do double precision arithmetic if one of the arguments is a double. When you print it out, you can choose the format you want to print it out in:

```
IDL> d = 50d - 1d-9
```

```
IDL> print, d
```

```
50.000000
```

```
IDL> print, d, format='(F20.10)'
```

```
49.9999999990
```

Mike

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www.michaelgalloy.com
Research Mathematician
Tech-X Corporation
