
Subject: DOUBLE precision no precise??

Posted by [David Williams](#) on Tue, 05 Mar 2002 11:54:53 GMT

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I've always had heaps of help from the inhabitants of this newsgroup -- for which I am eternally grateful -- despite my often stupid questions. So, when a mate of mine came across this `quirk' yesterday, and I wasn't sure how to help him out, I thought I'd ask this group.

He has an array of numbers that he wants to apply a user-defined function to, but we're both a little disturbed by the fact that if you do the calculations with a pocket calculator, you get different numbers than if you perform the same calculation in IDL.

To try and find where the problem is, we tried the following lines...

```
IDL> a = DOUBLE(42766.080001)
IDL> print,a,FORMAT='(F24.17)'
```

```
42766.078125000000000000
```

As you see, the number we get out isn't the same as the number we entered. I'm guessing it's to do with the way IDL stores numbers in memory, but my understanding of low-level computational processes isn't great.

Can anybody help me understand what's going on, and/or if there's a way around? I'd really appreciate whatever help is on offer, so thanks in advance.

Dave

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