
Subject: Re: fix(4.70*100) is... 469
Posted by [mmeron](#) on Thu, 19 Apr 2007 17:00:07 GMT
[View Forum Message](#) <> [Reply to Message](#)

In article <1176993178.932710.145030@p77g2000hsh.googlegroups.com>, b_efremova@yahoo.com writes:

> Sorry Guys, I should have made myself clearer.
> I'm afraid David this is not actually the question you describe in
> your article.
> and I do not expect better accuracy than I provide.
>
> There is nothing wrong here with the floating point accuracy.
> print,4.700*100.00
> 470.000
>
> It is the conversion to integer (I imagine) which makes no sence.
>
> print,fix(4.700*100.00)
> 469
> also (which is what I really needed)
>
> print,string(4.700*100.00,format='(i3)')
> 469
>

Nah, it is a floating point accuracy issue. Remember, the output of print is **not** necessarily the number stored in memory, it is just said number rounded to some default number of decimal places (cost me many sleepless nights, this one). So, indeed

```
IDL> print, 4.7*100  
470.000
```

But, lets take a look at more decimal places

```
IDL> print, 4.7*100, format = '(f12.8)'  
469.99996948
```

Since FIX always picks the integer part throwing away the fraction (i.e. always rounds down) this becomes 469. You'll avoid this problem if you'll use ROUND instead of FIX.

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"
