
Subject: Re: fix(4.70*100) is... 469
Posted by [James Kuyper](#) on Fri, 20 Apr 2007 16:31:20 GMT
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Paolo Grigis wrote:

> David Fanning wrote:

>> Jean H. writes:

>>

>>> What is being displayed is a bit different than what is being stored..

>>> IDL> print, 470.0 - (4.70*100)

>>> 3.05176e-005

>>

>> I guess I would argue that what is being displayed is EXACTLY

>> what is being stored:

>

> Is it?

> I always wondered if the garbage after the 16th digit does

> correspond indeed to the exact decimal representation of the

> double stored in memory in binary format, or is just a meaningless

> side product of the binary to decimal conversion...

>

> IDL> print,!DPi,format='(f68.64)'

> 3.1415926535897931159979634685441851615905761718750000000000 000000

The fractional part of a floating point number represented in binary
format can always be written as

>

>

> Ciao,

> Paolo

>

>

>>

>> IDL> print, 470, format='(f18.14)'

>> 470.00000000000000

>> IDL> print, 4.70*100, format='(f18.14)'

>> 469.99996948242187

>> IDL> print, 470.00000000000000D - 469.99996948242187D, format='(f18.14)'

>> 0.00003051757813

>>

>> Cheers,

>>

>> David
