Subject: Re: fix(4.70*100) is... 469
Posted by mmeron on Thu, 19 Apr 2007 00:14:31 GMT
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In article <f06ane$21t$1@news.ucalgary.ca>, "Jean H."
<jghasban@DELTHIS.ucalgary.ANDTHIS.ca> writes:
>> Hooboy! Haven't had one of these in awhile. :-)
>>
>> http://www.dfanning.com/math_tips/sky_is_falling.html
>>
>> Cheers,
>>
>> David
>
> It seems a bit weirder though...
>
> IDL> print, 470.0 - (4.70*100)
> 3.05176e-005
>
> which is bigger than the smallest float
>
> IDL> print, (machar()).eps
> 1.19209e-007
>
> .... so how can it be the float accuracy problem if the difference
> between the expected and the real value is 256 times bigger than the
> float error?
>
Careful here. The smallest float provides relative accuracy, meaning
the difference between exact and stored value X doesn't exceed
X*(machar()).eps. This is well satisfied here.

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