Paolo wrote:
> Paolo wrote:
>> David Fanning wrote:
>>> Folks,
>>>
>>> If you've already had a beer, you may want to work
>>> on this one. Should we be concerned? Or is this just
>>> one more example for the Sky is Falling article?
>>> I've voiced my opinion, but it didn't satisfy the
>>> complainant. What say you?
>>>
>>> curly=[-1.912,-1.852,-1.386,-0.818,-0.343,-0.343,-1.233]
>>> larry=[-1.912,-1.852,-1.386,-0.818,-0.343,-0.343,-1.233]
>>> curly = curly*!PI/180.
>>> larry *= !PI/180.
>>
>> I'd argue that you are multiplying curly bi pi and dividing the result
>> by 180
>> in the first line, and dividing pi by 180 first and multiplying larry
>> by the result
>> in the second line. Therefore, you are performing two different set of
>> floating
>> point operations, therefore I am not surprised they give slightly
>> different results.
>
> In other words, (a*b)/c is different than a*(b/c) with floats

IDL> a=0.32
IDL> b=!Pi
IDL> c=180.0
IDL> print,(a*b)/c-a*(b/c)
  4.65661e-10

It seems I can't resist to comment on my own posts today :)

Paolo

>
> Paolo
>
>>
>> Ciao,
>> Paolo
>>

```
>>> diff=curly-larry
>>> print,diff
>>>
>>> curly=[-1.912,-1.852,-1.386,-0.818,-0.343,-0.343,-1.233]
>>> larry=[-1.912,-1.852,-1.386,-0.818,-0.343,-0.343,-1.233]
>>> curly = curly*!PI/180.
>>> larry  = larry*!PI/180.
>>> diff=curly-larry
>>> print,diff
>>>
>>> curly=[-1.912,-1.852,-1.386,-0.818,-0.343,-0.343,-1.233]
>>> larry=[-1.912,-1.852,-1.386,-0.818,-0.343,-0.343,-1.233]
>>> curly *= !PI/180.
>>> larry *= !PI/180.
>>> diff=curly-larry
>>> print,diff
>>>
>>> The results:
>>>
>>> -3.72529e-009    0.000000    0.000000-9.31323e-010    0.000000
>>> 0.000000    0.000000
>>>     0.000000    0.000000    0.000000    0.000000    0.000000
>>> 0.000000    0.000000
>>>     0.000000    0.000000    0.000000    0.000000    0.000000
>>> 0.000000    0.000000
>>>
>>>
>>> Why aren't the first set of differences (where the assignment
>>> is made with the *= operator) *exactly* zero?
>>>
>>> Cheers,
>>>
>>> David
>>>
>>>
>>> --
>>> David Fanning, Ph.D.
>>> Fanning Software Consulting, Inc.
>>> Coyote's Guide to IDL Programming: http://www.dfanning.com/
>>> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
```