
Subject: Re: Friday Afternoon Puzzler
Posted by [pgrigis](#) on Fri, 12 Jun 2009 21:07:38 GMT
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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 by 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.

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.")
