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Subject: Differentiation in IDL

Posted by [David Fanning](#) on Mon, 16 Oct 2006 13:49:21 GMT

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Folks,

OK, I'm missing something crucial here.

Suppose I have a sine function:

```
x = Findgen(360)
data = Sin(x * !dtr)
Plot, data
```

I know that  $d/dx(\sin(x)) = \cos(x)$ . So, I would expect a cosine looking curve if I differentiate the data above.

```
dx = DERIV(data)
OPlot, dx, Linestyle=2
```

The differentiated curve is almost a straight line! One could argue that it might have the correct cosine *shape* (squint your eyes a little bit), but the scale is vastly different. How come?

Cheers,

David

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

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