Subject: Re: Matrix algebra and index order, A # B vs A ## B
Posted by Kenneth P. Bowman on Thu, 05 Apr 2012 16:48:02 GMT
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In article <MPG.29e766a33cd1eb35989a43@news.giganews.com>,
 David Fanning <news@idlcoyote.com> wrote:


>
>>  I'm writing some code where matrix algebra is at the heart of things so I
>>  really wanted to understand the conventions and convince myself that I can
>>  use them in a consistent way.

The "Manipulating Arrays" section of the documentation is some help.

As is so often the case with IDL, the ultimate solution to understanding
how it actually works is to create a trivial example and make sure
that you understand it.

This is easier than trying to figure out row-major, column-major, etc.

Such as

```
IDL> a = FINDGEN(3,3)
IDL> x = REPLICATE(1.0, 3)
IDL> print, x
      1.00000      1.00000      1.00000
IDL> print, TRANSPOSE(a)
      0.00000      3.00000      6.00000
      1.00000      4.00000      7.00000
      2.00000      5.00000      8.00000
IDL> print, a#x
      9.00000      12.0000      15.0000
IDL> print, a
      0.00000      1.00000      2.00000
      3.00000      4.00000      5.00000
      6.00000      7.00000      8.00000
IDL> print, a##x
      3.00000
      12.0000
      21.0000
```


Ken Bowman