Subject: Re: Matlab Syntax
Posted by David Fanning on Thu, 20 Nov 2003 20:38:48 GMT
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Folks,

I need more Matlab help. Here is the line I am
struggling with:

```
invAI = inv(A + gamma * diag(ones(1,N)));
```

A is a matrix and gamma is the scalar 1.0.

Here is the output from Matlab when I print
A and invAI:

```
A =
     8    -5     1     1    -5
    -5     8    -5     1     1
     1    -5     8    -5     1
     1     1    -5     8    -5
    -5     1     1    -5     8

invAI =

    0.3158    0.2105    0.1316    0.1316    0.2105
    0.2105    0.3158    0.2105    0.1316    0.1316
    0.1316    0.2105    0.3158    0.2105    0.1316
    0.1316    0.1316    0.2105    0.3158    0.2105
    0.2105    0.1316    0.1316    0.2105    0.3158
```

I have the matrix A in my IDL session:

```
IDL> print, array
      8.00000     -5.00000      1.00000      1.00000     -5.00000
     -5.00000      8.00000     -5.00000      1.00000      1.00000
      1.00000     -5.00000      8.00000     -5.00000      1.00000
      1.00000      1.00000     -5.00000      8.00000     -5.00000
     -5.00000      1.00000      1.00000     -5.00000      8.00000
```

But I get the wrong answers when I invert. Here is
my translation of the Matlab inverse line:

```
invARRAY = Invert((ARRAY + gamma) ## Diag_Matrix(Replicate(1,npts)) )
```

Here is what I get:

```
    0.185455    0.0581818   -0.0509091   -0.0509091    0.0581818
```

```
 0.0581818   0.185455   0.0581818  -0.0509091  -0.0509091
-0.0509091   0.0581818  0.185455   0.0581818  -0.0509091
-0.0509091  -0.0509091  0.0581818  0.185455    0.0581818
 0.0581818  -0.0509091  -0.0509091 0.0581818   0.185455
```

I'm pulling my hair out here! Can someone help?

Cheers,

David

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