
Subject: (more) Efficient way to generate an array whose elements are the distance from the center

Posted by [Mike F.](#) on Fri, 06 Jul 2012 20:37:35 GMT

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Hello all.

I'm new to IDL (and coding in general), and I'm looking to find a more efficient way to generate an $n \times n$ array where each element is the distance from the center of the array.

3 x 3 Ex: 1.4 1 1.4
 1 0 1
 1.4 1 1.4

All I can think of on my own is a nested FOR loop as such:

```
FOR i = 0!, (n - 1) DO BEGIN
  FOR j = 0!, (n - 1) DO BEGIN

    plane[i,j] = SQRT( (i-n/2.)^2 + (j - n/2.)^2 )

  ENDFOR
ENDFOR
```

From what I've read on IDL forums, nested FOR loops are the pinnacle of sin, and I'd like to be a bit more pious if possible.

Any tips would be appreciated!
