
Subject: Check if coordinate is in array

Posted by [Thomas Gutzler](#) on Thu, 20 Feb 2003 03:34:03 GMT

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Hi again.

Here is the daily riddle:

Is there a faster way to check, if a coordinate (2-element array) is element of an array of coordinates (2,n-element array) than this:

```
FUNCTION is_element_of_2D, x, arr
  xidx = WHERE(arr[0,*] EQ x[0], c1)
  yidx = WHERE(arr[1,*] EQ x[1], c2)
  IF (c1 + c2 GT 0) THEN tmp = WHERE(MATRIX_MULTIPLY(xidx, $
    1./TRANSPOSE(yidx)) EQ 1, c3) ELSE c3 = 0
  RETURN, c3 NE 0
END
```

Example:

```
arr = [[1,2], [3,4], [3,2]]
```

```
x = [3,4]
```

```
y = [2,3]
```

```
print, is_element_of_2D(x, arr)
```

```
print, is_element_of_2D(y, arr)
```

Tom
