
Subject: REPLICATE with arrays

Posted by [Vince Hradil](#) on Fri, 11 Feb 2000 08:00:00 GMT

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I often have the need to replicate an array, but IDL's replicate only works with scalars. Does anyone have any tips on the most efficient, simplest, clearest (you choose) way to do this?

e.g.

I have:

```
help, x
```

```
  INT  = Array[3, 3]
```

```
print, x
```

```
  2  4  10
```

```
  3  7   5
```

```
  3  9   2
```

and would like to do:

```
x2 = replicate(x,2)
```

```
help, x2
```

```
  INT  = Array[3, 3, 2]
```

```
print, x2
```

```
  2  4  10
```

```
  3  7   5
```

```
  3  9   2
```

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  3  9   2
```

I've figured out some trick for 1 and 2 dimensional arrays, but I'm looking for a more general strategy to use on higher dim arrays.

Thanks,

Vince

Subject: Re: REPLICATE with arrays

Posted by [Jeremy Faden](#) on Tue, 15 Feb 2000 08:00:00 GMT

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Vince Hradil wrote:

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> works with scalars. Does anyone have any tips on the most efficient,
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```

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> x2 = replicate(x,2)
> help, x2
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> print, x2
>   2  4 10
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>
> I've figured out some trick for 1 and 2 dimensional arrays, but I'm
> looking for a more general strategy to use on higher dim arrays.
>
> Thanks,
>
> Vince

```

Vince,

Here is a somewhat simpler solution which works at least
for your example. It should also handle arrays of any dimension.

Jeremy

----- begin code -----

```

function replicate_array, A, n_rep
;+
; NAME: replicate_array
; PURPOSE: replicates an array into many copies.
; CALLING SEQUENCE: AAA= replicate_array( A,n_copy )
; INPUTS:
;   A, an array of any dimension. Cannot be a scalar.
;   n_copy, the number of copies to make.
; OUTPUTS:
;   AAA, an array with the same dimensions of A, and an additional
;   dimension that indexes the copy number.

```

```

; RESTRICTIONS: If input array is an int, a long is returned.
Otherwise, type
;   is preserved. Input array can not be a scalar. Input type must
;   be a number (i.e. int, long, float, double, complex).
; EXAMPLE:
;   x= [[2,4,10],[3,7,5],[3,9,2]]
;   print, x
;   x2= replicate_array( x, 2 )
;   help, x2
;   print, x2
;
; MODIFICATION HISTORY:
;   written, Jeremy Faden, University of Iowa, February 15, 2000.
;-

```

```

    new_dim= [ size(A,/dimensions), n_rep ]
    new_star= A(*) # make_array(value=1,n_rep)
    return, reform( new_star,new_dim )
end
----- end code -----

```

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