Subject: Re: Need a function to multiply the elements of an array
Posted by dan on Wed, 26 Apr 1995 07:00:00 GMT

In article <3nm2uk$qqq@pinot.umd.edu>, barsam@Glue.umd.edu (Barsam Marasli) writes:
|>
|> Hi,
|>
|> I am looking for a routine to multiply the elements of an array.
|> Is there a faster way of doing it than the following?
|>
|>
|> function prod, x
|> n = n_elements(x)-1
|> z = 1.d0
|> for i = 0, n do z = z * x(i)
|> return, z
|> end
|>
|>
|>
|> BM
|>

How about

z = exp(total(alog(x)))

 Which only works if all x's greater than zero.
--
 ** ***
** Dan Bergmann   dbergmann@llnl.gov **
** Global Climate Research   fax   (510) 422-5844 **
** Lawrence Livermore National Lab   human (510) 423-6765 **

Subject: Re: Need a function to multiply the elements of an array
Posted by barsam on Thu, 27 Apr 1995 07:00:00 GMT

In article <3nm2uk$qqq@pinot.umd.edu>,
I wrote:
>
> Hi,
>
> I am looking for a routine to multiply the elements of an array.
> Is there a faster way of doing it than the following?
>

```
>
> function prod, x
> n = n_elements(x)-1
> z = 1.d0
> for i = 0, n do z = z * x(i)
> return, z
> end
>
>
>
> BM
>
```

Thanks for the replies.

z = exp(total(alog(x))) gives me about 60% savings. Not terribly
fast but obviously better than the "for" loop.

BM

Subject: Re: Need a function to multiply the elements of an array
Posted by adorf on Thu, 27 Apr 1995 07:00:00 GMT
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In article <3nm2uk$qqq@pinot.umd.edu>, barsam@Glue.umd.edu (Barsam
Marasli) wrote:

```
>  Hi,
>
>  I am looking for a routine to multiply the elements of an array.
>  Is there a faster way of doing it than the following?
>
>
>  function prod, x
>  n = n_elements(x)-1
>  z = 1.d0
>  for i = 0, n do z = z * x(i)
>  return, z
>  end
>
>
>
>  BM
```

You can try

z = exp(total(alog(x)))

Whether it is faster than your function, I do not know. On my Sparcstation
2 it took 2 seconds to multiply 1 million numbers.

Regards
Hans-Martin

PS: I think that apart from the function 'total' (which might more
appropriately be called 'sum') there should be a native IDL function
'prod' doing what you do by hand.

--
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