Subject: Re: matrix division Posted by Paul Van Delst[1] on Thu, 22 May 2008 16:19:57 GMT

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David Fanning wrote:
> jameskuyper@verizon.net writes:
>
>> For the integer case:
>>
>> ratio = numerator/denominator
>> bad = WHERE(denominator eq 0, count)
>> IF count gt 0 THEN ratio[bad] = replacement value
>>
>> replacement_value needs to be carefully chose for the context of your
>> problem. You might want to give different replacement values depending
>> upon whether the numerator is positive, negative, or 0. There's
>> probably a more elegant approach, but three different WHERE's would
>> certainly be sufficient to cover those cases.
>>
>> For the floating point case, IDL fills in the relevant elements of
>> ratio with -Inf, Nan, or Inf, depending upon the sign of the
>> numerator, and I can't think of any better way of handling it than to
>> use precisely those value. If you need to use your result for further
>> computations where those values would be unacceptable, replace them.
>> with logic similar to the above, but using the FINITE() function.
>
> Shoot. I was hoping for an elegant solution. :-(
For something like this, the Fortran WHERE construct is teeny bit more elegant, e.g.
 real, dimension(100,100):: ratio, numerator, denominator
 where (abs(denominator) > 0.0)
  ratio = numerator/denominator
 elsewhere
   ratio = -999.9
 end where
I like the fact that I don't have to explicitly use any indices indicated where good or
bad values are.
Anyway....
cheers,
paulv
```