
Subject: Re: SIGN function: signof(num or array of num)
Posted by [Foldy Lajos](#) on Tue, 16 Mar 2010 13:31:24 GMT
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On Tue, 16 Mar 2010, Ding wrote:

> Dear IDL users,
>
> I cannot find the SIGN function in IDL procedures, but one in
> Solarsoft ssw/maths/ SIGN which occupy the name, but different
> purpose(sign(a)*b). so I wrote the SIGNOF() function which is to get
> the sign of a number or array,
>
> Hopefully I am not repeating someone' work! you are welcome to
> comments!
>

> return, fix(abs(input)/input)

```
IDL> input=0 & help, fix(abs(input)/input)
<Expression> INT = 0
% Program caused arithmetic error: Integer divide by 0
```

I think SIGNOF() should not cause an arithmetic error for finite numbers.

regards,
lajos

Subject: Re: SIGN function: signof(num or array of num)
Posted by [Carsten Lechte](#) on Tue, 16 Mar 2010 13:57:36 GMT
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Fiç½LDY Lajos wrote:

> I think SIGNOF() should not cause an arithmetic error for finite numbers.

I use the expression

```
(x GT 0) -1* (x LT 0)
```

to get the sign of e.g.

```
x = [ -2e4, 5, 0, 1d/0, -1d/0, 0d/0 ]
```

but it uses 2 comparisons and even a multiplication. Does anyone have a simpler/faster version? Furthermore, what should the sign of NaN be?

chl

Subject: Re: SIGN function: signof(num or array of num)
Posted by [Kenneth P. Bowman](#) on Tue, 16 Mar 2010 14:01:19 GMT
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In article <809h2gFboaU1@mid.individual.net>,
Carsten Lechte <chl@toppoint.de> wrote:

>> I think SIGNOF() should not cause an arithmetic error for finite numbers.
>
> I use the expression
>
> (x GT 0) -1* (x LT 0)
>
> to get the sign of e.g.
>
> x = [-2e4, 5, 0, 1d/0, -1d/0, 0d/0]
>
> but it uses 2 comparisons and even a multiplication. Does anyone have
> a simpler/faster version? Furthermore, what should the sign of NaN be?
>
>
> chl

ITTVIS really needs to provide a fully vectorized, tested, SIGNUM
function that can handle all the various input types.

Ken Bowman
