
Subject: Re: SIGN function?

Posted by [agrap](#) on Wed, 03 Apr 1996 08:00:00 GMT

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llobet@elpp1.epfl.ch (Xavier Llobet i Sales EPFL-CRPP 1015 Lausanne CH) writes:

> Maybe today I am specially dumb, but I cannot find the IDL (version 3.6.1)
> function that gives the sign of a number (I suppose it exists!!!).

I don't know. I wrote my own, attached below. It works for a number of cases, but there are no guarantees.

Amara

```
-----  
  
function SIGN, num  
;+  
;NAME:  
; SIGN  
;  
;PURPOSE:  
; To compute the sign of a number. This function mimics  
; Matlab's sign function.  
;  
;CALLING SEQUENCE:  
; Result = SIGN(num)  
;  
;INPUTS:  
; Num: Any number or array  
;  
;OUTPUTS:  
; SIGN returns either 1, 0, or -1.  
;  
;MODIFICATION HISTORY:  
; Amara Graps, BAER, December 1994.  
; (c) copyright Amara Graps 1995, 1996.  
;-  
  
t = SIZE(num)  
testtype = t(0)  
  
IF testtype NE 0 THEN BEGIN  
;The value num is an array.. Find the sign of ALL of the elements  
;create same size and kind of array  
n_ele = N_ELEMENTS(t)  
CASE t(n_ele-2) OF  
2: sgn = num * 0 ;integer
```

```
3: sgn = num * 0L ;long integer
4: sgn = num * 0.0 ;floating
5: sgn = num * 0.0D0 ;double floating
ELSE: print, 'Not a good array type in sign!'
ENDCASE
copy_num= num
```

```
;neg values
indx = WHERE(copy_num LT 0)
;check for bad index
ts = SIZE(indx)
CASE 1 OF
  ts(0) EQ 0: ;no change
  ELSE: sgn(indx) = -1
ENDCASE
```

```
;positive values
indx = WHERE(copy_num GT 0)
;check for bad index
ts = SIZE(indx)
CASE 1 OF
  ts(0) EQ 0: ;no change
  ELSE: sgn(indx) = +1
ENDCASE
```

```
;zero values
indx = WHERE(copy_num EQ 0)
;check for bad index
ts = SIZE(indx)
CASE 1 OF
  ts(0) EQ 0: ;no change
  ELSE: sgn(indx) = 0
ENDCASE
```

```
ENDIF ELSE BEGIN
```

```
;t(0) = 0, scalar.. what we want
```

```
IF t(1) NE 6L then begin
;Not a complex scalar
```

```
CASE 1 OF
  num LT 0: sgn = -1
  num EQ 0: sgn = 0
  num GT 0: sgn = 1
  ELSE: print, 'Not a valid number!'
ENDCASE
```

```
ENDIF ELSE BEGIN
;This is a complex scalar
sgn = num / abs(num)
END ;END
END
```

```
RETURN, sgn
```

```
END
```

```
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```

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*****
```

```
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```

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*****
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```
"Picture a massless particle." --A Koan of Modern Physics
```
