
Subject: Re: MOD operator

Posted by [Theo Brauers](#) on Wed, 18 Oct 2000 07:00:00 GMT

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Thanks for your help. In the meantime I found (with help from Franz Rohrer and Markus Fuehrer) that there is a difference between

$a \text{ MOD } b = a - \text{INT}(a/b) * b$

and

$\text{modulo}(a,b) = a - \text{FLOOR}(a/b) * b$

I wrote an function calc_modulo

```
FUNCTION calc_modulo, a, b
```

```
  RETURN, a - FLOOR(a/b)*b
```

```
END
```

which works fine for me.

Cheers Theo

>

> Theo Brauers wrote:

>>

>> I was wondering if the result of the MOD operator in IDL changed

>> from previous versions (4.x, 5.0) to the current version (5.3.1).

>> Now the output is:

>>

>> IDL> PRINT, (FINDGEN(8)-4.) MOD 3

>> -1.00000 0.000000 -2.00000 -1.00000 0.000000

>> 1.00000 2.00000 0.000000

>>

>> When I programmed a function long ago I used the MOD operator

>> expecting the output

>>

>> IDL> PRINT, (FINDGEN(8)-4.) MOD 3

>> 2.00000 0.000000 1.00000 2.00000 0.000000

>> 1.00000 2.00000 0.000000

>>

>

> To the best of my knowledge, this is always the way IDL (and most other
> languages providing a MOD operator) has worked. If you wish to take the
> mod of a negative number , the result will be a negative number between
> -(n+1) and 0. A positive input yields a positive result. So when we're
> trying to limit a value to between 0 and 2*pi, we often end up with code
> that looks something like:

>

> x = ((y mod (2*pi)) + 2*pi) mod (2*pi)

>

> Hope this helps.

>

> Phillip

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