Subject: IDL not interpreting numbers correctly?
Posted by Ashley Berg on Sat, 27 Aug 2011 00:37:17 GMT
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I'm having a strange problem with IDL. I have an array of numbers
that are supposed to all add up to 100. So to check, I say:

bad = where(array gt 100. or array lt 100.)

and it says it finds 4 numbers that meet this criteria. However, when
I say:

print, array(bad)

the numbers are all 100.000! So for some reason IDL says these
numbers are greater than or less than 100 when actually they are equal
to 100. Has anyone else ever had a problem like this?

Subject: Re: IDL not interpreting numbers correctly?
Posted by rogass on Wed, 31 Aug 2011 12:51:25 GMT
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On 27 Aug., 02:37, Ashley Berg <ashley.b...@gmail.com> wrote:
> I'm having a strange problem with IDL. I have an array of numbers
> that are supposed to all add up to 100. So to check, I say:
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> numbers are greater than or less than 100 when actually they are equal
> to 100. Has anyone else ever had a problem like this?

Hi,
we have all the same problem :)

Maybe you can use this:

```
function cr_c,a,b,type,prec=prec
 szt  = size(a,/type)+size(b,/type)
 small = (szt eq 10 or szt eq 14 or szt eq 18)? $
    (machar(/double)).eps : (machar()).eps
 prec = ~n_elements(prec)? $
```

```
   make_array(1,type=size(small,/type),value=1) : $
   make_array(1,type=size(small,/type),value=prec)
 small *=  prec
 type = ~n_elements(type)? 'eq' : type
 case type of
 'eq' : return, (abs(a-b) lt small)[0]
 'ne' : return, (abs(a-b) gt small)[0]
 'lt' : return, ((b-a) gt small)[0]
 'le' : return, ((b-a) ge small)[0]
 'gt' : return, ((a-b) gt small)[0]
 'ge' : return, ((a-b) ge small)[0]
 endcase
end

IDL> help,(4.70*100.) eq 470.0
<Expression>    BYTE      =    0
IDL> help,cr_c(4.70*100.,470.0,'eq')
<Expression>    BYTE      =    0
IDL> help,cr_c(4.70*100.,470.0,'eq',prec=1000)
<Expression>    BYTE      =    1

Cheers

CR
```
