
Subject: strange "eq" behaviour
Posted by [rogass](#) on Mon, 15 Feb 2010 15:27:44 GMT
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Hi folks,
sometimes it's hard to understand IDL interprets, e.g.:

```
IDL> print,maxx
      1.00000
IDL> help,maxx
MAXX      FLOAT    =    1.00000
IDL> if maxx eq 1. then print, 'true' else print, 'wrong'
wrong
IDL> if maxx eq 1 then print, 'true' else print, 'wrong'
wrong
IDL> if maxx eq float(1) then print, 'true' else print, 'wrong'
wrong
IDL> if maxx eq maxx then print, 'true' else print, 'wrong'
true
IDL> if maxx[0] eq 1 then print, 'true' else print, 'wrong'
wrong
IDL> if maxx[0] eq 1. then print, 'true' else print, 'wrong'
wrong
IDL> if 5 eq 5. then print, 'true' else print, 'wrong'
true
```

What's going wrong here? Has somebody an idea? Is this a bug or a feature ;)
I use IDL 6.4.1 within Windows 7 x64 Pro

Thanks and regards

Chris

Subject: Re: strange "eq" behaviour
Posted by [Spon](#) on Mon, 15 Feb 2010 16:18:44 GMT
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On Feb 15, 3:54 pm, chris <rog...@googlemail.com> wrote:
> Hi David,
> maxx is the correlation coefficient of some data series. It should be
> exactly 1 if two data vectors are equal - but it isn't - so now I run
> into bigger problems with the inbuilt correlate function . Anyway,
> thanks for your hint.
>
> CR

Hi David,

'It should be exactly one' is a tricky statement in floating point arithmetic.

Looks like a good time to trot out this old line again:

http://www.dfanning.com/math_tips/sky_is_falling.html

Your specific problem (or something very similar) is dealt with this article:

http://www.dfanning.com/code_tips/comparearray.html

You might have more success comparing floats using this program:

http://www.dfanning.com/programs/floats_equal.pro

Regards,
Chris

Subject: Re: strange "eq" behaviour

Posted by [rogass](#) on Mon, 15 Feb 2010 17:21:50 GMT

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On 15 Feb., 17:18, Spon <christoph.b...@gmail.com> wrote:

> On Feb 15, 3:54 pm, chris <rog...@googlemail.com> wrote:

>

>> Hi David,

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>> exactly 1 if two data vectors are equal - but it isn't - so now I run

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program:http://www.dfanning.com/programs/floats_equal.pro

>

> Regards,

> Chris

Thank you for enlightening me. MMaybe I have to do it in this way:
round(value1*(10^(((pp=precision<lowest_precision_of_both_types))))))
operator round(value1*pp) or I have to use the floats_equal.pro

Thanks and regards

CR
