
Subject: Re: comparing numbers using WHERE doesn't work
Posted by [Martin Schultz](#) on Tue, 05 Jun 2001 13:18:45 GMT
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"Miklos Z. Kiss" <mzkiss@unity.ncsu.edu> writes:

> Hi folks:
> I have noticed a strange occurrence when I try to compare a number with
> all the elements of an array. I'll show my situation in an example.
> Consider the following array:
> a = .
> Let, x = 2.2000, y = 2.4000
> So, I want to find which elements of a match up with x and y.
> Naturally, I do the following:
>
>
> index0 = WHERE(a EQ x)
> index0 = index ; convert from 1-D array to single integer.
> index1 = WHERE(a EQ y)
> index1 = index
>
>
> So, when I execute, I may get the following:
> PRINT, index0
> 2
>
> PRINT, index1
> -1
>
> The output clearly tells me that x occurs at a and that y does not exist
> in a at all. By inspection, IDL should return the value 4. Does anyone
> have any idea why this happens? Thanks,
>
> Mik Kiss

You must have a strange computer system ;-). The above should normally work, if (1) you are positively sure that all number are single precision or all numbers are double, (2) you didn't get 2.4000 as a result of some computation but explicitly wrote it into the vector.

But these 2 conditions show you exactly why you shouldn't use an EQ comparison on floating point numbers.

Cheers,

Martin

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