
Subject: Re: comparing numbers using WHERE doesn't work
Posted by [Paul Woodford](#) on Sat, 02 Jun 2001 21:10:59 GMT
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In article <9fbduu\$ojm\$1@uni00nw.unity.ncsu.edu>,
"Miklos Z. Kiss" <mzkiss@unity.ncsu.edu> wrote:

> 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 = [2.0000, 2.1000, 2.2000, 2.3000, 2.4000, 2.5000, 2.6000].
> 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)

I don't know if this is the problem, but using EQ to compare floating point numbers is generally not a good idea. A better way to compare would be WHERE(abs(a-x) LT 2*epsilon), where epsilon is the floating point precision returned by machar().

Paul

Subject: Re: comparing numbers using WHERE doesn't work
Posted by [Ken Mankoff](#) on Sat, 02 Jun 2001 22:19:56 GMT
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On Sat, 2 Jun 2001, Miklos Z. Kiss wrote:

> 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:
> [snip]
> index0 = WHERE(a EQ x)
> index0 = index[0] ; convert from 1-D array to single integer.
> index1 = WHERE(a EQ y)
> index1 = index[0]

I'm not sure why this is happening to you. It works correctly on my machine. But you can simplify your WHERE query and subsequent array-to-integer like this:

```
index0 = ( WHERE(a EQ x) )[0]
```

-k.

--

Ken Mankoff

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