Subject: 0=1 (Double precision/Long64)
Posted by wlandsman on Thu, 25 Feb 2010 16:56:21 GMT
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I had a program recently fail because I did not realize that adding 1
to a number does not necessarily change its value ;-)

```
IDL> a = 4611686018427387947
IDL> b = double(a)
IDL> help,a,b
A               LONG64    =    4611686018427387947
B               DOUBLE    =    4.6116860e+18
IDL> print,a EQ b
   1
IDL> print,a+1
   4611686018427387948
IDL> print,(a+1) EQ b
   1
```

So b is equal to both a and a+1. My guess is that the values are
getting converted to double precision prior to the equality test.
But the LONG64 variable has more precision than a double precision
variable, and that precision is lost during the conversion.

I'm not sure that there a good general solution for comparing between
different data types. But one needs to be careful when comparing
LONG64 and double variables.

--Wayne