

---

Subject: Yet again, The Sky is Falling!  
Posted by [yp](#) on Thu, 08 Mar 2007 18:12:12 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

This is yet another floating point mystery, and I am unable to figure out which is the right way to deal:

I wrote this program ("Operation") in which I made sure that all calculations are done in double precision. The program accepts 6 mandatory arguments and returns the output to "result".

Syntax: Operation, A, B, C, D, E, F, result

I get variable results (after 3rd decimal point) when I pass some of the arguments as numbers and when I pass the same arguments as pre-defined variables.

Case#1:

```
IDL> Operation, A, B, 0.0D, 0.0D, 0.0D, F, result
```

```
IDL> help, result
```

```
RESULT          DOUBLE   = Array[7]
```

```
IDL> print, result
```

1.0247013	1.0279051	1.0365066	1.0447064
1.0477210	1.0543893	1.0569390	

Case#2:

```
IDL> C = (D = (E = 0.0D))
```

```
IDL> Operation, A, B, C, D, E, F, result
```

```
IDL> help, result
```

```
RESULT          DOUBLE   = Array[7]
```

```
IDL> print, result
```

1.0250284	1.0281385	1.0367149	1.0450368
1.0480349	1.0547703	1.0573193	

Why is such discrepancy? In my problem the accuracy after 3rd decimal point is not so important, however, after seeing the results I lose confidence on IDL's capability on Real number arithmetic!

May be I am missing something?

Thanks,  
yas

---