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Subject: !pi: Stored as a float

Posted by [Andy Loughe](#) on Wed, 12 Dec 2001 20:22:37 GMT

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Being stored as a float, the !pi system variable is accurate to about the 6th decimal place.

```
IDL> print, !pi, format='(f25.23)'  
3.14159274101257324218750
```

```
IDL> print, atan(1.0)*4.0, format='(f25.23)'  
3.14159274101257324218750
```

```
IDL> print, size(!pi, /type)  ;; 4 = Floating point  
4
```

This would be better:

```
IDL> DEFSYSV, '!mypi', atan(1D)*4D, 1
```

```
IDL> print, size(!mypi, /type)  ;; 5 = Double Precision  
5
```

```
IDL> print, !mypi, format='(f25.23)'  
3.14159265358979311599796  
3.14159265358979323846264338327950288419716939937510 <- joyofpi.com
```

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