
Subject: Re: crazy loops

Posted by [Robert Stockwell](#) on Wed, 13 Feb 2002 17:14:03 GMT

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M Carmen wrote:

```
> Hello,  
>  
> I have a question related with loops.....can someone tell me why  
>  
> if i do a loop that goes to a maximum of 0.6:  
> for r=0.0, 0.6, 0.1 do begin & print, r & endfor  
>  
> I get:  
> 0.000000  
> 0.100000  
> [.....]  
> 0.500000  
> 0.600000  
>  
> and if now i change the maximum value of the range to 0.7:  
> for r=0.0, 0.7, 0.1 do begin & print, r & endfor  
>  
> I get:  
> 0.000000  
> 0.100000  
> [.....]  
> 0.500000  
> 0.600000  
>  
> EXACTLY THE SAME!!!  
>  
> I have IDL Version 5.4  
>  
> Thanks :) !  
> M Carmen
```

One should exercise great care when comparing the results of floating point calculations:

(If these wrap around on your read, i apologize.)

run these lines:

IDL> limit = 0.7 & for r=0.0, limit, 0.1 do print, r,limit,r le limit,format='(f50.25,f50.25,f8.4)'

Cheers,
bob

PS to explain why you do not see the limit = 0.7 case, for that iteration
 $r = 0.7099999785423278808593750$ and the limit is 0.6999999880790710449218750.