
Subject: Re: findgen anomaly?

Posted by [David Fanning](#) on Fri, 10 Jul 2009 21:52:21 GMT

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Chris Chronopoulos writes:

> this morning i decided to write up a short function that would return
> a list of values given a min, max and increment (like Mathematica's
> Range[] function) but it was giving me some problems. i narrowed it
> down to an oddity in findgen, which can be described by the following
> example:

```
>  
> IDL> min=5.5  
> IDL> max=6.2  
> IDL> increment=0.1  
> IDL> print, (max-min)/increment+1  
> 8.00000  
> IDL> print, findgen(8.00000)  
> 0.00000 1.00000 2.00000 3.00000 4.00000  
> 5.00000  
> 6.00000 7.00000  
> IDL> print, findgen((max-min)/increment+1)  
> 0.00000 1.00000 2.00000 3.00000 4.00000  
> 5.00000  
> 6.00000
```

> now, by any reasonable system of logic, shouldn't the last two lines
> produce the same result? the correct result, of course, is the first
> on that goes all the way up to 7.00000. the weird thing is that if you
> change max from 6.2 to 6.3, it works fine. it seems there are certain
> values that give it problems, while others work fine.

>
> what is going on here?

Golly, it has been several weeks since we had to pull
this article out:

http://www.dfanning.com/math_tips/sky_is_falling.html

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.

Subject: Re: findgen anomaly?

Posted by [Chris Chronopoulos](#) on Fri, 10 Jul 2009 22:11:13 GMT

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On Jul 10, 2:52 pm, David Fanning <n...@dfanning.com> wrote:

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> Cheers,

>
> David

>
> --

- > David Fanning, Ph.D.
- > Fanning Software Consulting, Inc.
- > Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
- > Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Thanks, David. That makes sense - I guess FINDGEN floors its input instead of rounding it. I stuck a ROUND in there, and it works like I want it to.

Subject: Re: findgen anomaly?

Posted by [Kenneth P. Bowman](#) on Sat, 11 Jul 2009 12:07:23 GMT

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In article

<70fcb4fd-047f-43d5-a67a-2e2a5ccefa62@h8g2000yqm.googlegroups.com>, Chris Chronopoulos <chronopoulos.chris@gmail.com> wrote:

- > Thanks, David. That makes sense - I guess FINDGEN floors its input
- > instead of rounding it. I stuck a ROUND in there, and it works like I
- > want it to.

Strictly speaking, I think it LONGs the argument (rounds toward zero by truncating the fractional part). Because a negative argument would generate an error, the difference is moot.

Ken Bowman
