
Subject: Re: prob. w/ subtracting scaler from an array
Posted by [davidf](#) on Wed, 05 Nov 1997 08:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Charlotte DeMott (demott@denali) uncovers an interesting feature of IDL when she writes:

```
> hi, i've come across a very strange problem with IDL 5.0 and was
> wondering if anyone can find what is hopefully an obvious mistake
> that i'm overlooking. here's the scenaio:
>
> IDL> print, raw(long,*,day)
>   -29.0149
>   -77.3963
> IDL> x = total(pwgttd(long,*,day),2)
> IDL> print, x
>    9.79075
> IDL> print, raw(long,*,day)- x
>   -38.8057
> IDL> print, raw(long,*,day)- 5
>   -34.0149
>   -82.3963
> i'm confused about why "raw(long,*,day) - x" returns a scalar (what
> i want is the 1D array) while "raw(long,*,day) - 5" correctly returns
> the 1D array. any ideas? thanks.
```

The reason for this is that x is not a scaler. It is an array with one element in it. (Try `HELP, x` instead of `PRINT, x`). When IDL subtracts one array from another the result is always an array of the same size as the **smallest** array. For example,

```
a = [3,5,2,6,9]
b = [4,1]
c = a - b
Help, c
```

C is a two-element array.

To make x a scaler, of course, you can subscript it, like this:

```
IDL> x = total(pwgttd(long,*,day),2)
IDL> x = x[0]
```

Cheers,

David

David Fanning, Ph.D.
Fanning Software Consulting
E-Mail: davidf@dfanning.com
Phone: 970-221-0438
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
