
Subject: Re: Adding or deduct values in a ARRAY
Posted by [Wox](#) on Fri, 19 Jan 2007 13:19:14 GMT
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On 19 Jan 2007 05:08:03 -0800, "Erik" <janssen.e@gmail.com> wrote:

> Hi Folks,
>
> I have a (assumable) simple question. I have an array like this:
>
> ARR1 FLOAT = Array[3, 4]
> 93.0000 118.000 0.000000
> 93.0000 73.0000 0.000000
> 151.000 73.0000 0.000000
> 151.000 118.000 0.000000
>
> The array contain's four [x,y,z] coordinates. Now I want all the X
> coordinates lowered by 10. The result should be:
>
> ARR1 FLOAT = Array[3, 4]
> 83.0000 118.000 0.000000
> 83.0000 73.0000 0.000000
> 141.000 73.0000 0.000000
> 141.000 118.000 0.000000
>
> I've tried ARR1-10 but then all the values are deducted by 10.
> When I try ARR1[*,*] - 10, then I've get an array with all the X/Y/Z
> values lowered.
> When I try ARR1[* ,0,0] - 10, then I've get an array with with only 3
> dimensions float[3]
>
>
> How can I select a specific dimension to edit so I can get the result
> which is described above.
>
> Thanks in advance!!
>
> Erik

arr1[0,*]-=10

Subject: Re: Adding or deduct values in a ARRAY
Posted by [Erik\[1\]](#) on Fri, 19 Jan 2007 13:32:26 GMT
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Hey Wox,

Thanks for your reply.

I've tried `ARR1[0,*] -10` and `ARR1[0,*,*] -10` (both the same)

Then I got a float array with dimensions [1, 4]

83.0000
83.0000
141.000
141.000

These are the good values, however as stated before I want the array to stay a [3,4] array with the old Y and Z values still stored in it.

regards,
Erik

Subject: Re: Adding or deduct values in a ARRAY
Posted by [btt](#) on Fri, 19 Jan 2007 13:45:03 GMT
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Erik wrote:

> Hey Wox,
>
> Thanks for your reply.
>
> I've tried `ARR1[0,*] -10` and `ARR1[0,*,*] -10` (both the same)
>
> Then I got a float array with dimensions [1, 4]
>
> 83.0000
> 83.0000
> 141.000
> 141.000
>
> These are the good values, however as stated before I want the array to
> stay a [3,4] array with the old Y and Z values still stored in it.
>

Hello Erik,

I think you might have missed the subtle syntax that Wox posted. It both reduced the first column by 10 AND assigned the result to the original column.

```
IDL> arr1 = FINDGEN(3,4)
```

```
IDL> print, arr1
  0.00000  1.00000  2.00000
  3.00000  4.00000  5.00000
  6.00000  7.00000  8.00000
  9.00000 10.0000 11.0000
```

the following is the assignment that reduces the first column by 10,
this is the "traditional" way to do it and it is pretty clear

```
IDL> arr1[0,*] = arr1[0,*] - 10
IDL> print, arr1
 -10.0000  1.00000  2.00000
  -7.0000  4.00000  5.00000
  -4.0000  7.00000  8.00000
  -1.0000 10.0000 11.0000
```

and the following syntax does the same thing (note the "-=") even though
it is a little less obvious until you get used to it

```
IDL> arr1[0,*] -= 10
IDL> print, arr1
 -20.0000  1.00000  2.00000
 -17.0000  4.00000  5.00000
 -14.0000  7.00000  8.00000
 -11.0000 10.0000 11.0000
```

most likely you have been assigning the result of the subtraction to a
new variable which assigns the new variable the (changed) value of the
first column

```
IDL> arr2 = arr1[0,*] - 10
IDL> print, arr2
 -30.0000
 -27.0000
 -24.0000
 -21.0000
```

Does the help?
Ben

Subject: Re: Adding or deduct values in a ARRAY
Posted by [Erik\[1\]](#) on Fri, 19 Jan 2007 14:01:30 GMT
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Hey Ben and Wox,

You are right, I overlooked the '-=' operator. Thanks for your help!!

Subject: Re: Adding or deduct values in a ARRAY
Posted by [Wox](#) on Fri, 19 Jan 2007 16:36:43 GMT
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On 19 Jan 2007 05:32:26 -0800, "Erik" <janssen.e@gmail.com> wrote:

> These are the good values, however as stated before I want the array to
> stay a [3,4] array with the old Y and Z values still stored in it.

```
IDL> arr1=indgen(3,4)
IDL> print,arr1
    0    1    2
    3    4    5
    6    7    8
    9   10   11
IDL> arr1[0,*]-=10
IDL> print,arr1
   -10    1    2
    -7    4    5
    -4    7    8
    -1   10   11
```

Subject: Re: Adding or deduct values in a ARRAY
Posted by [Wox](#) on Fri, 19 Jan 2007 16:37:57 GMT
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On Fri, 19 Jan 2007 17:36:43 +0100, Wox <nomail@hotmail.com> wrote:

> On 19 Jan 2007 05:32:26 -0800, "Erik" <janssen.e@gmail.com> wrote:
>
>> These are the good values, however as stated before I want the array to
>> stay a [3,4] array with the old Y and Z values still stored in it.
>
>
> IDL> arr1=indgen(3,4)
> IDL> print,arr1
> 0 1 2
> 3 4 5
> 6 7 8
> 9 10 11
> IDL> arr1[0,*]-=10
> IDL> print,arr1
> -10 1 2
> -7 4 5
> -4 7 8
> -1 10 11

OK, you got it :-)
