

# + and - operators

**What:** Addition and Subtraction of Vectors

**Why:** Detailed computations

**Time To Complete:** 2 hours



+

```
//+ addition ;  
  
v1 = {a,2,c}+{1,b,3};  
  
show v1;  
  
save as addition;
```

Output:

```
"v1" → {1 + a, 2 + b, 3 + c}
```

'//': **Comment Operator** instructing the Grammarian to ignore its sentence

'v1': identifier for a variable or **variable name**

'=': **Assignment Operator** copying the **Right Hand Side** to **Left Hand Side**

'{ }': curly brackets, **enclosing** the list of elements in between

'a,2,c': **Elements** of the vector enclosed in '{ }' brackets

';': **Delimiter** called semicolon indicating the end of a Free Form sentence, **separating** sentences

'show': textually displays the followed variables

'save as': instructs the Grammarian to save the Free Form script and all its interim computations in cloud objects

-

```
//- subtraction ;  
  
v1 = {a,2,c}-{1,b,3};  
  
show v1;  
  
save as subtraction;
```

Output:

```
"v1" → {-1 + a, 2 - b, -3 + c}
```

## Properties

### 0-vector

```
//+ 0 ;  
  
v1 = {a,b,c} + {0, 0, 0};  
  
show v1;  
  
save as subtraction;
```

Output:

```
"v1" → {a, b, c}
```

```
//- 0 ;  
  
v1 = {a,b,c} - {0, 0, 0};  
  
show v1;  
  
save as subtraction;
```

Output:

```
"v1" → {a, b, c}
```

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Revision #23

Created 2026-02-08 21:11:59 UTC by Dara

Updated 2026-05-09 03:23:27 UTC by Dara