

## Location Counter

### Segment data

```
a db 17, -2, 0ffh, 'xyz',...  
db ....  
db....
```

**;lga db \$-a (mov [lga],...); ok** //pointer arithmetic – subtracting 2 pointers = scalar value (numerical constant) – lga = memory variable (mov [lga],...)

**;lga dw \$-\$\$ ; the same correct length, but ONLY IF a is the first element allocated in the data segment !!!!**

**;lga EQU \$-a ; ok ! but mov [lga],... will issue a syntax error !!! because lga is NOT an allocated variable... so it doesn't have a memory address to be deref.**

**;lga dw \$-data ; correct in TASM/MASM, INCORRECT in NASM on 32 bits !!! syntax error – “Expression is not simple or relocatable”**

**;lga dw lga-a !!!! ok !**

**b EQU 27 ; b is NOT an offset !!!!**

**c dd 12345678h**

**;lga dw b-a ; syntax error !!!!! b is NOT an address !!!**

**;lga dw c-a ; ok !!!!**

**lga dw \$-a-4 ; ok !!!**

**lg dw \$-a ; length (a) + 4 !!!**

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If no section directive is explicitly used, the symbol \$\$ will be implicitly evaluated to the offset of the beginning of the current segment.

“.” is mandatory when we define code labels (ex: “start:”) but must not be present when we define a data label (ex: a variable definition “a db 17”)