

```
; Q 7> Multiplication of 2 32bit signed numbers
SW      2000h
        [2000h]    =    05EE0h    ; A = -500000
        [2002h]    =    0FFF8h    ;
        [2004h]    =    04240h    ; B = 1000000
        [2006h]    =    0000Fh    ;
        [2008h]    =    (ans)      ; C = (A * B)
        [200Ah]    =    (ans)      ;
        [200Ch]    =    (ans)      ;
        [200Eh]    =    (ans)      ;
```

A

```
1000h
mov     ax, 0000h
mov     ax, [2000h]
mov     bx, [2004h]
imul    bx
mov     [2008h], ax
mov     [200Ah], dx
mov     cl, 08h
sar     dx, cl
mov     dl, dh
mov     [200Ch], dx
mov     [200Eh], dx
mov     ax, [2000h]
mov     bx, [2006h]
imul    bx
add     [200Ah], ax
adc     [200Ch], dx
sar     dx, cl
mov     dl, dh
adc     [200Eh], dx
mov     ax, [2002h]
mov     bx, [2004h]
imul    bx
add     [200Ah], ax
adc     [200Ch], dx
sar     dx, cl
mov     dl, dh
adc     [200Eh], dx
mov     ax, [2002h]
mov     bx, [2006h]
imul    bx
add     [200Ch], ax
adc     [200Eh], dx
hlt
```

```
GO      1000h
INT                                ;(try '.' here)
```

```
SW      2008h                                ; ans = 07800h
```

```
SW      200Ah      ; ans = 095ADh
SW      200Ch      ; ans = 0FF8Bh
SW      200Eh      ; ans = 0FFFFh
.        ; => -500000000000
```