

```
; Q 9>
; a> Determine the range of signed numbers the uP can handle
SW      2000h
        [2000h]    =    (ans)        ; Minimum signed number
        [2002h]    =    (ans)        ; Maximum signed number
        .
```

A

```
1000h
mov     cl, 04h
mov     ax, 0008h
loop_min:
or      ax, ax
js      num_min
shl     ax, cl
jmp     loop_min
num_min:
mov     [2000h], ax
not     ax
mov     [2002h], ax
hlt
        .
```

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

```
SW      2000h                                ; ans = 8000h => -32768
SW      2002h                                ; ans = 7FFFh => 32767
        .
```

```
; b> Determine the range of unsigned numbers the uP can handle
SW      2000h
        [2000h]    =    (ans)        ; Minimum unsigned number
        [2002h]    =    (ans)        ; Maximum unsigned number
        .
```

A

```
1000h
mov     ax, 0000h
mov     [2000h], ax
not     ax
mov     [2002h], ax
hlt
        .
```

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

```
SW      2000h                                ; ans = 00000h => 0
SW      2002h                                ; ans = 0FFFFh => 65535
        .
```