1. mov

```
.data
 var1 BYTE  100
 var2 BYTE  ?
 var3 WORD  2
 var4  DWORD  5

.code          ; True/False
 mov ds, 45  ;
 mov esi, var3  ;
 mov eip, var4  ;
 mov 25, var2  ;
 mov var1, var2  ;
```

2. xchg

Write a program that rearranges the values of three doubleword values in the following array as: 3, 1, 2.

Definition:

```
.data
 array DWORD 1, 2, 3
```

3. INC/DEC

```
.data
        myByte BYTE 0FFh, 0
.code
         mov al,myByte          ; AL =
         mov ah,[myByte+1]    ; AH =
         dec ah                 ; AH =
         inc al                 ; AL =
         dec ax                 ; AX =
```

4. flag

```
mov al,-128
neg al      ; CF =     OF =

mov ax,8000h
add ax,2   ; CF =      OF =

mov ax,0
sub ax,2   ; CF =      OF =

mov al,-5
sub al,+125;           OF =
```

5. PTR

```
 .data
varB BYTE 65h,31h,02h,05h
varW WORD 6543h,1202h
varD DWORD 12345678h

.code
mov ax,WORD PTR [varB+2]    ; a=
mov bl,BYTE PTR varD            ; b=
mov bl,BYTE PTR [varW+2]    ; c=
mov ax,WORD PTR [varD+2]   ; d=
mov eax,DWORD PTR varW     ; e=
```

6. LOOP

What will be the final value in AX?

```
        mov ax,6
        mov ecx,4
L1:
        inc ax
        loop L1
```

7. OFFSET

Please finish the program below for an array sum.

```
.386
.model flat,stdcall
.stack 4096
ExitProcess proto,dwExitCode:dword

.data
array WORD 100h, 200h, 300h

.code

_____; address of array

_____; obtain the first value in ax

_____; move to next value in array

_____; addition

_____; move to next value in array

_____; addition
```