→ DIRECT

1) ADD

```
.model small
.data
   X db 30H
   Y db 20H
   RESULT_ADD db ?
.code
start:
   MOV AX, @data
   MOV DS, AX

   MOV AL, X
   ADD AL, Y
   MOV RESULT_ADD, AL

   ; Add code for program termination
   MOV AH, 4CH
   INT 21H

end start
```

2)SUB

```
.model small
.data
   X db 30H
   Y db 20H
   RESULT db ?
.code
start:
   MOV AX, @data
   MOV DS, AX

   MOV AL, X
   SUB AL, Y
   MOV RESULT, AL

   ; Add code for program termination
   MOV AH, 4CH
   INT 21H

end start
```

3)MULTI

```
.model small
.data
   X db 3H
   Y db 2H
   RESULT_MUL db ?
.code
start:
   MOV AX, @data
   MOV DS, AX

   ; 8-bit Multiplication
   MOV AL, X
   IMUL Y   ; AX = AL * Y
   MOV RESULT_MUL, AL

   ; Add code for program termination
   MOV AH, 4CH
   INT 21H

end start
```

ALL INCUDES 16 bit

```
.model small
.data
   X dw 1234H
   Y dw 5678H
   RESULT_ADD dw ?
   RESULT_SUB dw ?
   RESULT_MUL dw ?
.code
start:
   MOV AX, @data
   MOV DS, AX

   ; 16-bit Addition
   MOV AX, X
   ADD AX, Y
   MOV RESULT_ADD, AX

   ; 16-bit Subtraction
   MOV AX, X
   SUB AX, Y
   MOV RESULT_SUB, AX

   ; 16-bit Multiplication
   MOV AX, X
   MOV BX, Y
   IMUL BX        ; DX:AX = AX * BX
   MOV RESULT_MUL, AX  ; Store low-order bits in RESULT_MUL

   ; Add code for program termination
   MOV AH, 4CH
   INT 21H

end start
```

➔ **INDIRECT**

1)ADD

```
.model small
.data
   X db 30H
   Y db 20H
   RESULT_ADD db ?
.code
start:
   MOV AX, @data
   MOV DS, AX

   ; 8-bit Immediate Addition
   MOV AL, X
   ADD AL, 20H   ; Add immediate value 20H
   MOV RESULT_ADD, AL

   ; Add code for program termination
   MOV AH, 4CH
   INT 21H

end start
```

2)SUB

```
.model small
.data
   X db 30H
   Y db 20H
   RESULT_SUB db ?
.code
start:
   MOV AX, @data
   MOV DS, AX

   ; 8-bit Immediate Subtraction
   MOV AL, X
   SUB AL, 20H   ; Subtract immediate value 20H
   MOV RESULT_SUB, AL

   ; Add code for program termination
   MOV AH, 4CH
   INT 21H

end start
```

3)

```
.model small
.data
   X db 30H
   Y db 20H
   RESULT_MUL db ?
.code
start:
   MOV AX, @data
   MOV DS, AX

   ; 8-bit Immediate Multiplication
   MOV AL, X
   IMUL AL, 20H   ; Multiply by immediate value 20H
   MOV RESULT_MUL, AL

   ; Add code for program termination
   MOV AH, 4CH
   INT 21H

end start
```

16 BIT all CODES

```
.model small
.data
   X dw 1234H
   Y dw 5678H
   RESULT_ADD dw ?
   RESULT_SUB dw ?
   RESULT_MUL dw ?
.code
start:
   MOV AX, @data
   MOV DS, AX

   ; 16-bit Immediate Addition
   MOV AX, X
   ADD AX, 5678H   ; Add immediate value 5678H
   MOV RESULT_ADD, AX

   ; 16-bit Immediate Subtraction
   MOV AX, X
   SUB AX, 5678H   ; Subtract immediate value 5678H
```

```
    MOV RESULT_SUB, AX

    ; 16-bit Immediate Multiplication
    MOV AX, X
    MOV BX, 5678H   ; Immediate value 5678H
    IMUL BX         ; DX:AX = AX * BX
    MOV RESULT_MUL, AX

    ; Add code for program termination
    MOV AH, 4CH
    INT 21H

end start
```