1) Program to add two numbers in Assembly Language

```
.model small
.data
a db 10
b db 20
c db ?
.code
    mov ax, @data
    mov ds, ax
    mov al, a
    add al, b
    mov c, al
    mov ah, 4ch
    int 21h
    end
```

2) Program to add two numbers using dw structure.

```
.model small
.data
a dw 1234
b db 25
c dw ?
.code
```

```
mov ax, @data
mov ds, ax
mov ax, a
mov bx, b
add ax, bx
mov c, ax
mov ah, 4ch
int 21h
end
```

(3) to multiply two nos. for dw (directive).

```
.model small
.data
a dw 1345h
b dw 4521h
c dw ?
d dw ?
.code
        mov ax, @data
        mov ds, ax
        mov ax, a
        mov bx, b
        mul bx
        mov c, ax
        mov d, dx
```

```
        mov  ah, 4ch
        int  21h
        end
```

④ Program to multiply two nos. (db directive)

```
.model small
.data
a  db  10h
b  db  15h
c  dw  ?
.code
        mov  ax, @data
        mov  ds, ax
        mov  al, a
        mul  b
        mov  c, al
        mov  ah, 4ch
        int  21h
        end
```

⑤ Program to solve (a+b) - d
where a = 2345, b = 4521, d = 1256

```
.model small
.data
a  dw  2345h
```

```
.b dw 4521h
.d dw 1256h
.c dw ?
.s dw ?
.code
        mov ax, @data
        mov ds, ax
        mov ax, a
        mov bx, b
        add bx, ax
        mov ax, d
        sub bx, ax
        mov c, bx
        mov ah, 4ch
        int 21h
        end
```

(6) to subt. two numbers (db) (assembler directive)

```
.model small
.data
a db 30h
b db 25h
c db ?
.code
        mov ax, @data
```

```
mov ds, ax
mov al, a
mov bl, b
sub bl, al
mov c, bl
mov ah, 4ch
int 21h
end
```

② Program to solve : (a+b) * (c+d) / (b+d)
a = 245, b = 25, c = 34, d = 50

```
.model small
.data
a dw 245h
b dw 25h
c dw 34h
d dw 50h
r1 dw ?
r2 dw ?
r3 dw ?
quo db ?
rem db ?
.code
    mov ax, @data
    mov dx, ax
```

```
mov ax, a
mov bx, b
add ax, bx
mov x1, ax
mov ax, c
mov bx, d
add ax, bx
mov x2, ax
mov ax, b
mov bx, d
add ax, bx
mov x3, ax
mov ax, x1
mul x2
div x3
mov quo, al
mov rem, ah
mov ah, 4ch
int 21h
end
```