

P1.

```
DATA SEGMENT
ORG 1000H
NUM1 DB 89H
NUM2 DB 7CH
RES DW ?
DATA ENDS
CODE SEGMENT
ASSUME CS: CODE, DS: DATA
START:
MOV AX, DATA
MOV DS, AX
MOV AH, 0
MOV AL, NUM1
ADD AL, NUM2
ADC AH, 0
MOV RES, AX
INT 3
CODE ENDS
END START
```

P2.

```
model small
stack 20
data
org 1000H
num1 DB 80H
num2 DB 86H
res DW ?
code
start:
mov ax, @data
mov ds, ax
mov ah, 0
mov al, num1
add al, num2
adc ah, 0
mov res, ax
int 3
end start
```

P3.

```
DATA SEGMENT
ORG 1000H
NUM1 DB 89H
NUM2 DB 78H
RES DW ?
DATA ENDS
CODE SEGMENT
ASSUME CS: CODE, DS: DATA
START:
MOV AX, DATA
MOV DS, AX
MOV AH, 0
MOV AL, NUM1
ADD AL, NUM2
DAA
ADC AH, 0
MOV RES, AX
INT 3
CODE ENDS
END START
```

P4.

```
DATA SEGMENT
ORG 1000H
NUM1 DB 89
NUM2 DB 78
RES DW ?
DATA ENDS
CODE SEGMENT
ASSUME CS: CODE, DS: DATA
START:
MOV AX, DATA
MOV DS, AX
MOV AH, 0
MOV AL, NUM1
ADD AL, NUM2
DAA
ADC AH, 0
MOV RES, AX
INT 3
CODE ENDS
END START
```

P1

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[-] CPU 80486 ds:0000 = 00 1=[↑][↓]

|         |          |     |            |    |      |     |
|---------|----------|-----|------------|----|------|-----|
| cs:0000 | B8AD48   | mov | ax,48AD    | ax | 0105 | c=0 |
| cs:0003 | 8ED8     | mov | ds,ax      | bx | 0000 | z=0 |
| cs:0005 | B400     | mov | ah,00      | cx | 0000 | s=0 |
| cs:0007 | A00010   | mov | al,[1000]  | dx | 0000 | o=0 |
| cs:000A | 02060110 | add | al,[1001]  | si | 0000 | p=0 |
| cs:000E | 80D400   | adc | ah,00      | di | 0000 | a=0 |
| cs:0011 | A30210   | mov | [1002],ax  | bp | 0000 | i=1 |
| cs:0014 | CC       | int | 03         | sp | 0000 | d=0 |
| cs:0015 | 0000     | add | [bx+si],al | ds | 48AD |     |
| cs:0017 | 0000     | add | [bx+si],al | es | 489D |     |
| cs:0019 | 0000     | add | [bx+si],al | ss | 48AC |     |
| cs:001B | 0000     | add | [bx+si],al | cs | 49AE |     |
| cs:001D | 0000     | add | [bx+si],al | ip | 0015 |     |

ds:1000 89 7C 05 01 00 00 00 00 e!x

ds:1008 00 00 00 00 00 00 00 00

ds:1010 B8 AD 48 8E 08 B4 00 A0 7HÄ+| á

ds:1018 00 10 02 06 01 10 80 D4 8+EÇ

ss:0002 6474

ss:0000 0000

Lower Byte Higher Byte

F1-Help F2-Bkpt F3-Mod F4-Here F5-Zoom F6-Next F7-Trace F8-Step F9-Run F10-Menu

P2

File Edit View Run Breakpoints Data Options Window Help

[-] CPU 80486 ds:0000 = 00 1=[↑][↓]

|         |          |     |            |    |      |     |
|---------|----------|-----|------------|----|------|-----|
| cs:0000 | B8AE48   | mov | ax,48AE    | ax | 0106 | c=0 |
| cs:0003 | 8ED8     | mov | ds,ax      | bx | 0000 | z=0 |
| cs:0005 | B400     | mov | ah,00      | cx | 0000 | s=0 |
| cs:0007 | A00610   | mov | al,[1006]  | dx | 0000 | o=0 |
| cs:000A | 02060710 | add | al,[1007]  | si | 0000 | p=0 |
| cs:000E | 80D400   | adc | ah,00      | di | 0000 | a=0 |
| cs:0011 | A30810   | mov | [1008],ax  | bp | 0000 | i=1 |
| cs:0014 | CC       | int | 03         | sp | 0014 | d=0 |
| cs:0015 | 0000     | add | [bx+si],al | ds | 48AE |     |
| cs:0017 | 0000     | add | [bx+si],al | es | 489D |     |
| cs:0019 | 0000     | add | [bx+si],al | ss | 49AF |     |
| cs:001B | 0000     | add | [bx+si],al | cs | 48AD |     |
| cs:001D | 0000     | add | [bx+si],al | ip | 0015 |     |

ds:1000 00 00 00 00 00 00 80 86 Çã

ds:1008 06 01 02 06 01 10 80 D4 8+EÇ

ds:1010 02 01 00 00 00 00 AE 48 8E <H

ds:1018 06 01 02 06 01 10 80 D4 8+EÇ

ss:0016 0000

ss:0014 0000

Lower Byte Higher Byte

F1-Help F2-Bkpt F3-Mod F4-Here F5-Zoom F6-Next F7-Trace F8-Step F9-Run F10-Menu



P3

File Edit View Run Breakpoints Data Options Window Help READY

[-] CPU 80486 1-[+] [ ]

|                  |       |           |         |     |
|------------------|-------|-----------|---------|-----|
| cs:0000 B8AD4B   | mov   | ax,4B4D   | ax 0167 | c=0 |
| cs:0003 B8ED8    | mov   | ds,ax     | bx 0000 | z=0 |
| cs:0005 B400     | mov   | ah,00     | cx 0000 | s=0 |
| cs:0007 A00010   | mov   | al,[1000] | dx 0000 | o=0 |
| cs:000A 02060110 | add   | al,[1001] | si 0000 | p=0 |
| cs:000E 27       | daa   |           | di 0000 | a=0 |
| cs:000F 80D400   | adc   | ah,00     | bp 0000 | i=1 |
| cs:0012 A30210   | mov   | [1002],ax | sp 0000 | d=0 |
| cs:0015 CC       | int   | 03        | ds 4B4D |     |
| cs:0016 AE       | scasb |           | es 4B4D |     |
| cs:0017 4B       | dec   | ax        | ss 4B4C |     |
| cs:0018 D6       | db    | D6        | cs 49AE |     |
| cs:0019          | add   | bp,ax     | ip 0016 |     |

ds:1000 B9 78 67 01 00 00 00 00 exy

ds:1008 00 00 00 00 00 00 00 00

ds:1010 B8 AD 4B 8E D8 B4 00 A0 7 HÄ+| á

ds:1018 00 10 02 06 01 10 27 80 B+E'G

ss:0002 6474

ss:0000 0000

Lower Byte Higher Byte

F1-Help F2-Bkpt F3-Mod F4-Here F5-Zoom F6-Next F7-Trace F8-Step F9-Run F10-Menu

P4

File Edit View Run Breakpoints Data Options Window Help READY

[-] CPU 80486 1-[+] [ ]

|                  |       |           |         |     |
|------------------|-------|-----------|---------|-----|
| cs:0000 B8AD4B   | mov   | ax,4B4D   | ax 010D | c=0 |
| cs:0003 B8ED8    | mov   | ds,ax     | bx 0000 | z=0 |
| cs:0005 B400     | mov   | ah,00     | cx 0000 | s=0 |
| cs:0007 A00010   | mov   | al,[1000] | dx 0000 | o=0 |
| cs:000A 02060110 | add   | al,[1001] | si 0000 | p=0 |
| cs:000E 27       | daa   |           | di 0000 | a=0 |
| cs:000F 80D400   | adc   | ah,00     | bp 0000 | i=1 |
| cs:0012 A30210   | mov   | [1002],ax | sp 0000 | d=0 |
| cs:0015 CC       | int   | 03        | ds 4B4D |     |
| cs:0016 AE       | scasb |           | es 4B4D |     |
| cs:0017 4B       | dec   | ax        | ss 4B4C |     |
| cs:0018 D6       | db    | D6        | cs 49AE |     |
| cs:0019 01C5     | add   | bp,ax     | ip 0016 |     |

ds:1000 59 4E 0D 01 00 00 00 00 YNJ

ds:1008 00 00 00 00 00 00 00 00

ds:1010 B8 AD 4B 8E D8 B4 00 A0 7 HÄ+| á

ds:1018 00 10 02 06 01 10 27 80 B+E'G

ss:0002 6474

ss:0000 0000

Lower Byte Higher Byte

F1-Help F2-Bkpt F3-Mod F4-Here F5-Zoom F6-Next F7-Trace F8-Step F9-Run F10-Menu