3.3 试编写 10 个字(16 位二进制数)之和的程序。

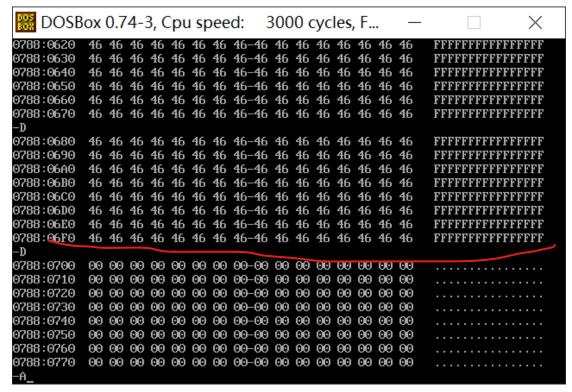
```
t1.asm
data segment
    myadd dw <u>eee1h_eee2h_eee3h,</u>eee3h,eee4h,eee5h,eee6h,eee7h,eee8h,eee9h,eeeAh
     cont dw 9
data ends
code segment
assume cs:code,ds:data
     mov ax,data
     mov si,offset myadd
        di,offset myadd+2
         cx,cont
         ax,[si]
process1: a
             dc ax,[di]
    inc di
inc di
        p process1
code ends
    end process
```

```
BB DOSBox 0.74-3, Cpu speed:
                                     3000 cycles, F...
                                    SP=0000 BP=0000 SI=0000 DI=0012
AX=0037 BX=0000 CX=0001 DX=0000
DS=0788 ES=0778 SS=0787 CS=078A
                                              NU UP EI PL NZ AC PO NC
                                    IP=0015
078A:0015 47
                        INC
                                DΙ
-T
AX=0037 BX=0000 CX=0001 DX=0000
DS=0788 ES=0778 SS=0787 CS=078A
                                    SP=0000 BP=0000 SI=0000 DI=0013
                                    IP=0016
                                              NV UP EI PL NZ NA PO NC
                        INC
078A:0016 47
                                DΙ
-Т
AX=0037 BX=0000 CX=0001 DX=0000
                                    SP=0000
                                             BP=0000 SI=0000 DI=0014
DS=0788 ES=0778
                                              NU UP EI PL NZ NA PE NC
                  SS=0787 CS=078A IP=0017
078A:0017 E2FA
                       LOOP
                                0013
-T
AX=9037
        BX=0000
                                             BP=0000 SI=0000 DI=0014
                 CX=0000
                          DX=0000
                                    SP=0000
DS=0788 ES=0778 SS=0787 CS=078A IP=0019
                                              NU UP EI PL NZ NA PE NC
078A:0019 B44C
                        MOV
                                AH,4C
 ·T
```

3.2 若 1KB 的数据存放在 TABLE 为首地址的主存区域,试编程序将该数据块搬到以 NEXT 为首地址的主存区域中。

₩ DOS	SBox 0.7	4-3, Cpu	speed:	3000 c	ycles, F	_		×
−Q								
C:\WORK> -T	DEBUG T2.	EXE						
AX=0788 DS=0778 0808:000 -T	BX=0000 ES=0778 3 8ED8	CX=0819 SS=0787 MD	DX=0000 CS=0808 V DS,	SP=0000 IP=0003 AX		SI=0000 IPLNZN	DI=0000 A PO NC	
AX=0788 DS=0788 0808:000 -T	BX=0000 ES=0778 5 FC	CX=0819 SS=0787 CL	DX=0000 DX=0000			SI=0000 IPLNZN	DI=0000 A PO NC	
AX=0788 DS=0788 0808:000 -T	BX=0000 ES=0778 6 BE0000	CX=0819 SS=0787 MO	DX=0000 CS=0808 V SI,	SP=0000 IP=0006 0000	BP=0000 NV UP E	SI=0000 IPLNZN	DI=0000 A PO NC	
AX=0788 DS=0788 0808:000 -A	BX=0000 ES=0778 9 BF0004	CX=0819 SS=0787 MO	DX=0000 CS=0808 V DI,	SP=0000 IP=0009 0400	BP=0000 NV UP E	SI=0000 IPLNZN	DI=0000 A PO NC	

B DOSB	ох	0.7	4-	3, 0	Ĵρι	ısp	ee	d: 3	300	00 (ус	les,	F		_	\Box ×
0788:0320	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:0330	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:0340	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:0350	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:0360	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:0370	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
-D																
0788:0380	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:0390	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:03A0	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:03B0	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:03C0	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:03D0	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788:03E0	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
0788: <u>03F0</u>	46	46	46	46	46	46	46	46-46	46	46	46	46	46	46	46	FFFFFFFFFFFFFF
-D																
0788:0400	$\Theta\Theta$	$\Theta\Theta$	00	$\Theta\Theta$	$\Theta\Theta$	$\Theta\Theta$	$\Theta\Theta$	00-00	$\Theta\Theta$	00	00	$\Theta\Theta$	99	90	00	
0788:0410	$\Theta\Theta$	00	00	00	00	00	00	00-00	00	00	00	00	00	00	00	
0788:0420	00	00	00	00	00	00	00	00-00	00	∞	00	00	00	00	00	
0788:0430	00	00	00	00	00	00	00	00-00	00	∞	00	00	00	00	00	
0788:0440	00	00	00	00	00	00	00	00-00	00	00	00	00	00	00	00	
0788:0450	$\Theta\Theta$	$\Theta\Theta$	00	$\Theta\Theta$	00	00	00	00-00	00	00	00	$\Theta\Theta$	00	00	$\Theta\Theta$	
0788:0460	00	00	∞	00	00	00	00	00-00	00	∞	00	00	00	00	00	
0788:0470	00	00	00	00	00	00	00	00-00	00	00	00	00	90	00	00	
- _ _																

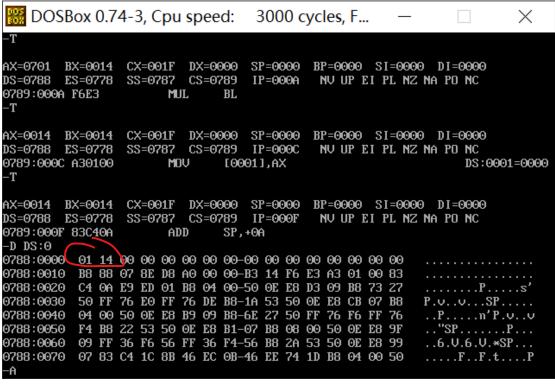


3.6 在以DATAI为百地址的王仔区域中顺序任成和以ASCII与农小的工程制十位数、现欲将其转换成二进制数,试编写程序实现之。

3.7 试编写程序,将 MOLT 存储单元中的一个 8 位二进制数乘以 20,乘积放在 ANS 存储单元及下一单元中(用 3 种方法完成)。

3.8 在以 DATA 为首地址的主存区域中存放 100 个无符号 8 位数, 试编写程序找出其

```
MOV BX,0
       MOV CX,20
     PROCESS: ADD BX, AX
       LOOP PROCESS
       MOV ANS, BX
    CODE ENDS
     END START
🞇 DOSBox 0.74-3, Cpu speed:
                               3000 cycles, F...
                                                               X
Libraries [.lib]:
Definitions File [nul.def]:
LINK : warning L4021: no stack segment
C:\WORK>DEBUG T3.EXE
-T
AX=0788 BX=0000 CX=001F DX=0000 SP=0000 BP=0000 SI=0000 DI=0000
DS=0778 ES=0778 SS=0787 CS=0789 IP=0003 NV UP EI PL NZ NA PO NC
0789:0003 8ED8
                    MOV
                           DS,AX
-T
AX=0788 BX=0000 CX=001F DX=0000 SP=0000 BP=0000 SI=0000 DI=0000
DS=0788 ES=0778 SS=0787 CS=0789 IP=0005 NV UP EI PL NZ NA PO NC
0789:0005 A00000
                    MOV
                           AL,[0000]
                                                         DS:0000=01
-D DS:0
......P....s'
0788:0020 C4 0A E9 ED 01 B8 04 00-50 0E E8 D3 09 B8 73 27
0788:0030
        50 FF 76 E0 FF
                     76 DE B8-1A 53 50 OE E8 CB O7 B8
                                                   P.v..v...SP.....
                                                   ..P....n'P.∪..∪
.."SP.....P...
0788:0050   F4  B8  22  53  50  0E  E8  B1-07  B8  08  00  50  0E  E8  9F
..6.V.6.V.*SP...
0788:0070 07 83 C4 1C 8B 46 EC 0B-46 EE 74 1D B8 04 00 50
                                                   .....F..F.t....P
.
```



	<
T	
AX=0010 BX=0004 CX=0002 DX=0000 SP=0000 BP=0000 SI=0000 DI=0000	
OS=0788 ES=0778 SS=0787 CS=0789 IP=0022 NV UP EI PL NZ AC PO NC 0789:0022 03C3 ADD AX,BX	
-T	
X=0014 BX=0004 CX=0002 DX=0000 SP=0000 BP=0000 SI=0000 DI=0000	
)S=0788 ES=0778 SS=0787 CS=0789 IP=0024 NU UP EI PL NZ NA PE NC	2000
0789:0024 A30100 MDV [0001],AX DS:0001=0 -T	0000
•	
X=0014 BX=0004 CX=000Z DX=0000 SP=0000 BP=0000 SI=0000 DI=0000	
OS=0788 ES=0778 SS=0787 CS=0789 IP=0027 NU UP EI PL NZ NA PE NC	
0789:0027 C70601000000 MDV WDRD PTR [0001],0000 DS:0001=0 -D DS:0	1014
-7 75.0 0788:0000	
9788:0010 B8 88 07 8E D8 A0 00 00-B3 14 F6 E3 A3 01 00 C7	
9788:0020 06 01 00 00 00 A0 00 00-B4 00 B1 02 D3 E0 8B D8	
9788:0030 D3 E0 03 C3 A3 01 00 C7-06 01 00 00 00 A0 00 00	
9788:0040 B4 00 BB 00 00 B9 14 00-03 D8 E2 FC 89 1E 01 00	
9788:0050	
0788:0070	
- 4	
	<
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — > > 0789:003C 891E0100 MDV [0001], BX DS:0001=0	`
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — > 789:003C 891E0100 MDV [0001], BX DS:0001=6	`
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — > 0789:003C 891E0100 MOU [0001], BX DS:0001=6 -D DS:0 0788:0000 01 00 00 00 00 00 00 00 00 00 00 00	`
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — > 7789:003C 891E0100 MDV [0001], BX DS:0001=6 D DS:0 7788:0000 01 00 00 00 00 00 00 00 00 00 00 00	`
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — > 0789:003C 891E0100 MOU [0001], BX DS:0001=6 -D DS:0 0788:0000 01 00 00 00 00 00 00 00 00 00 00 00	`
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — > D789:003C 891E0100 MOU [00011, BX DS:0001=6] D788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — > D789:003C 891E0100 MOV [00011, BX DS:0001=6] D788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MOV [00011, BX DS:0001=60788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MOV [00011,BX DS:0001=60788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MOV [00011, BX DS:0001=60788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MOV [00011, BX DS:0001=60788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MDV [00011, BX DS:0001=60788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MDU [0001], BX DS:0001=6 D788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — > 0789:003C 891E0100 MDV [0001], BX DS:0001=6 0788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MDU [0001], BX DS:0001=6 D788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MDV [0001], BX DS:0001=6 DDS:0 0788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F 3789:003C 891E0100 MOU [0001], BX DS:0001=6	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MDU [0001], BX DS:0001=6 D DS:0 D788:0000 01 00 00 00 00 00 00 00 00 00 00 00	0000
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MDU [0001], BX DS:0001=6 D DS:0 D788:0000 01 00 00 00 00 00 00 00 00 00 00 00	0000
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MDU [00011, BX] DS:00789:003C 891E0100 MDU [00011, BX] DS:0001=00788:0000 01 00 00 00 00 00 00 00 00 00 00 00	
DOSBox 0.74-3, Cpu speed: 3000 cycles, F — S789:003C 891E0100 MDU [0001], BX DS:0001=6 D DS:0 D788:0000 01 00 00 00 00 00 00 00 00 00 00 00	

```
3.10 在 BVFF 存储单元中有一个 BCD 数 A, 试编写程序计算 Y, 结果送 DES 存储平元。 其中:

Y = 

(3A, A≤20)

A-20, 20<A<60

80, A≥60

3.11 在当前数据段(由 DS 决定)中偏移地址为 DATAB 开始的顺序 80 个存储单元里,存放着某班 80 个同学某门考试的成绩。
```

文件(F) 编辑(E) 选择(S) 查找(I) 视图(V) 跳转(G) 工具(T) 项目(P) 首选项(N) 帮助(H)

```
◀▶
     DATA SEGMENT
         BVFF byte 21
         DES DB ?
     DATA ENDS
 6
     CODE SEGMENT
         ASSUME CS:CODE, DS:DATA
 8
         START:
         MOV AX, DATA
         MOV DS, AX
10
11
         MOV AL, BVFF
12
         CMP AL, 20
13
         JL SELCET1
14
         CMP AL,60
15
16
         JL SELCET2
17
         MOV AL,80
18
         JMP RESULT
19
         SELCET1:MOV BL,3
20
         MUL BL
21
         JMP RESULT
         SELCET2:SUB AL, 20
22
         RESULT: MOV DES, AL
23
24
     CODE ENDS
25
     END START
26
```

```
🞇 DOSBox 0.74-3, Cpu speed:
                                 3000 cycles, F...
                                                                    Х
Libraries [.lib]:
Definitions File [nul.def]:
LINK : warning L4021: no stack segment
C:\WORK>DEBUG T4.EXE
AX=0788 BX=0000 CX=002F DX=0000 SP=0000 BP=0000 SI=0000 DI=0000
DS=0778 ES=0778 SS=0787 CS=0789 IP=0003 NV UP EI PL NZ NA PO NC
                             DS,AX
0789:0003 8ED8
                     MOV
-Т
       BX=0000 CX=002F
                        DX=0000
                                SP=0000 BP=0000 SI=0000 DI=0000
AX=0788
                SS=0787 CS=0789
DS=0788 ES=0778
                                IP=0005
                                         NV UP EI PL NZ NA PO NC
0789:0005 A00000
                     MOV
                             AL,[0000]
                                                             DS:0000=07
-D DS:0
0788:0010 B8 88 07 8E D8 A0 00 00-3C 14 7C 08 3C 3C 7C 0A
                                                       0788:0020 B0 50 EB 08 B3 03 F6 E3-EB 02 2C 14 A2 01 00 27
                                                       .P....,...
0788:0030 50 FF 76 E0 FF 76 DE B8-1A 53 50 0E E8 CB 07 B8
                                                       P.v..v...SP.....
         04 00 50 0E E8 B9 09 B8-6E 27
                                                       ..P....n'P.v..v
0788:0040
                                     50 FF
                                          76 F6 FF
                                                  76
                                                         "SP.....P...
         F4 B8 22 53 50 OE E8 B1-07 B8 08 00 50 OE E8 9F
0788:0050
0788:0060
         09 FF 36 F6 56 FF 36 F4-56 B8 2A 53 50 0E E8 99
                                                       ..6.V.6.V.*SP...
\dotsF.F.t...P
```

```
BB DOSBox 0.74-3, Cpu speed:
                                3000 cycles, F...
                                                                 Х
AX=0015 BX=0003 CX=002F DX=0000
                               SP=0000 BP=0000 SI=0000 DI=0000
DS=0788 ES=0778 SS=0787 CS=0789
                               IP=001F
                                        NU UP EI NG NZ NA PE NC
0789:001F 27
                     DAA
-T
               CX=002F
                       DX=0000
                               SP=0000
AX=0015
       BX=0003
                                       BP=0000 SI=0000 DI=0000
       ES=0778
                      CS=0789
DS=0788
               SS=0787
                               IP=0020
                                        NU UP EI PL NZ NA PO NC
                     PUSH
0789:0020-50
                           ΑX
-T
AX=0015 BX=0003 CX=002F DX=0000 SP=FFFE BP=0000 SI=0000 DI=0000
DS=0788 ES=0778 SS=0787 CS=0789 IP=0021
                                        NU UP EI PL NZ NA PO NC
0789:0021 FF76EØ
                    PUSH
                          [BP-20]
                                                          SS:FFE0=8926
-TD DS:0
   ^ Error
-D DS:0
B8 88 07 8E D8 A0 00 00-3C 14 7C 08 3C 3C 7C 0A
0788:0010
         BO 50 EB 08 B3 03 F6 E3-EB 02 2C 14 A2 01 00 27
0788:0020
                                                     .P.....
                      76 DE B8-1A 53 50 OE E8 CB O7 B8
0788:0030
         50 FF 76 E0 FF
                                                     P.∪..∪...SP.....
         04 00 50 0E E8 B9 09 B8-6E 27 50 FF 76 F6 FF 76
                                                     ..P....n'P.∨..∨
0788:0040
                                                     .."SP.....P...
0788:0050 F4 B8 22 53 50 0E E8 B1-07 B8 08 00 50 0E E8 9F
                                                     ..6.V.6.V.*SP...
0788:0060   09 FF 36 F6 56 FF 36 F4-56 B8 2A 53 50 0E E8 99
.....F..F.t....P
-A
```

3.13 试编写程序,给从主存 40000H 到 4BFFFH 的每个单元中均写入 55H, 并逐个单元读出比较。若写入的与读出的完全一致,则将 AL 置 7EH; 若有错,则将 AL 置 81H。 3.14 试编写程序,统计由主存 40000H 开始的 16K 个单元中所存放的字符 "A" 的个数,并将结果存放在 DX 中。 3.15 试采用 MMX 和 SSE2 技术分别编写程序实现两个 8×8 矩阵 A 和 B 的乘积,结

🚟 DOSB	ох	0.7	4-	3, 0	ρι	sp	ee	d:	3	00	0 0	yc	les,	F		_	\Box \times
0000:00A0	20	15	00	FΘ	40	15	00	F0-0	00	15	00	F0	60	10	00	F0	@
0000:00B0	60	10	00	FΘ	60	10	00	F0-6	60	10	00	FΘ	AΘ	15	00	F0	
0000:00C0	60	10	00	FΘ	60	10	00	F0-6	60 :	10	∞	FΘ	10	00	$\mathbf{F}\mathbf{F}$	C7	
0000:00D0	60	10	00	FΘ	60	10	00	F0-6	60	10	00	FΘ	60	10	00	F0	
0000:00E0	60	10	00	FΘ	60	10	00	F0-6	i0 :	10	∞	FΘ	60	10	∞	FΘ	
0000:00F0	60	10	00	FΘ	60	10	∞	F0-6	50 :	10	∞	FΘ	60	10	∞	FΘ	
−d																	
0000:0100	60	10	00	FΘ	60	11	00	F0-6	60	10	00	F0	00	17	00	CO	
0000:0110	60	10	00	FΘ	60	10	00	F0-8	30	11	00	FΘ	60	10	00	F0	
0000:0120	60	10	$\Theta\Theta$	FΘ	60	10	00	F0-6	60	10	00	FΘ	$\Theta\Theta$	16	00	F0	
0000:0130	60	10	00	FΘ	60	10	00	F0-6	6 0 :	10	$\Theta\Theta$	FΘ	60	10	$\Theta\Theta$	FΘ	
0000:0140	60	10	00	FΘ	60	10	00	F0-6	60	10	00	FΘ	60	10	00	F0	
0000:0150	60	10	$\Theta\Theta$	FΘ	60	10	00	F0-6	60	10	00	FΘ	60	10	00	F0	
0000:0160	60	10	00	FΘ	60	10	00	F0-6	6 0 :	10	$\Theta\Theta$	FΘ	60	10	00	FΘ	
0000:0170	60	10	00	FΘ	60	10	00	F0-6	6 0 :	10	00	FΘ	60	10	00	FΘ	
–d																	
0000:0180	00	00	00	00	00	00	00	00-6	90 (00	$\Theta\Theta$	00	00	00	00	$\Theta\Theta$	
0000:0190	$\Theta\Theta$	00	00	00	00	$\Theta\Theta$	00	00-6	60	10	00	FΘ	04	00	41	C8	A .
0000:01A0	60	10	00	FΘ	60	10	$\Theta\Theta$	F0-6	i 0	10	$\Theta\Theta$	FΘ	60	10	$\Theta\Theta$	FΘ	
0000:01B0	60	10	00	FΘ	60	10	00	F0-6	60	10	00	FΘ	60	10	00	F0	
0000:01C0	80	12	00	FΘ	ΑO	12	00	F0-6	90 (00	00	00	$\Theta\Theta$	00	00	00	
0000:01D0	20	14	00	FΘ	00	$\Theta\Theta$	00	00-6	00 (00	00	00	00	00	00	00	
0000:01E0	00	00	00	00	00	00	00	00-6	00 (00	00	00	00	00	00	00	
0000:01F0	00	00	00	00	00	00	00	00-6	00 (00	00	00	00	00	00	00	
–d ▲																	

₩ DOS	SBox 0.74	4-3, Cpu	speed:	3000 c	ycles, F	_		×
	BX=0000 ES=0778 E 8A04	CX=3934 SS=0787 M 0	CS=0788		BP=0000 S NU UP EI	I=06CC PL NZ NA		CC= 0 0
DS=0000	BX=0000 ES=0778 0 3C41		CS=0788	IP=0010	BP=0000 S NV UP EI			
AX=FF00 DS=0000 0788:001	ES=0778	CX=3934 SS=0787 JN:		IP=0012	BP=0000 S NV UP EI	I=06CC NG NZ AC		
	BX=0000 ES=0778 5 46		DX=0001 CS=0788 C SI		BP=0000 S NV UP EI			
AX=FF00 DS=0000 0788:001	ES=0778	CX=3934 SS=0787 LO	CS=0788		BP=0000 S NV UP EI			
AX=FF00 DS=0000 0788:000 - A_	ES=0778	CX=3933 SS=0787 MO	DX=0001 CS=0788 U AL,		BP=0000 S NV UP EI		DI=0000 PO CY DS:06	CD=00