

1. Menor entre três valores

0 a0h 50 MOV A, [50]

2 2ah 51 SUB A, [51]

4 72h 10 JC 10

6 a0h 51 MOV A, [51]

8 ebh 12 JMP 12

10 a0h 50 MOV A, [50]

12 a2h 60 MOV [60], A

14 2ah 52 SUB A, 52

16 72h 22 JC 22

18 a0h 52 MOV A, [52]

20 ebh 24 JMP 24

22 a0h 60 MOV A, [60]

24 a2h 61 A2H [61], A

2. Somar três variáveis inteiras

Registradores da CPU											
A: 23h: 00100011b 35		B: 00h: 00000000b 0		Flags: 00h: 00000000b C: 0 Z: 0		IP: 08h: 00001000b 8					
M:											
ADD A,[20] 02h		???	???	???	???	???	???	???	???	???	???
	[0]	10	[20]	0	[40]	0	[60]	0	[80]	0	[100]
20		???	???	???	???	???	???	???	???	???	???
	[1]	20	[21]	0	[41]	0	[61]	0	[81]	0	[101]
ADD A,[21] 02h		???	???	???	???	???	???	???	???	???	???
	[2]	5	[22]	0	[42]	0	[62]	0	[82]	0	[102]
21		???	???	???	???	???	???	???	???	???	???
	[3]	35	[23]	0	[43]	0	[63]	0	[83]	0	[103]
ADD A,[22] 02h		???	???	???	???	???	???	???	???	???	???
	[4]	0	[24]	0	[44]	0	[64]	0	[84]	0	[104]
22		???	???	???	???	???	???	???	???	???	???
	[5]	0	[25]	0	[45]	0	[65]	0	[85]	0	[105]
MOV [23],A a2h		???	???	???	???	???	???	???	???	???	???
	[6]	0	[26]	0	[46]	0	[66]	0	[86]	0	[106]
23		???	???	???	???	???	???	???	???	???	???
	[7]	0	[27]	0	[47]	0	[67]	0	[87]	0	[107]
0		???	???	???	???	???	???	???	???	???	???
	[8]	0	[28]	0	[48]	0	[68]	0	[88]	0	[108]

Soma os valores das posições 20, 21, 22 e coloca na posição 23.

3. Identificar se um número inteiro é igual a zero

Registadores da CPU													
A	01h: 00000001b 1		B	00h: 00000000b 0		Flags	80h: 10000000b C 0 Z 0		IP	14h: 00001100b 14			
M													
MOV A,[20]	???	???	???	???	???	???	???	???	???	???	???		
a0h	[0]	0	[20]	1	[40]	0	[60]	0	[80]	0	[100]	0	
???	???	???	???	???	???	???	???	???	???	???	???	???	
20	[1]	255	[21]	0	[41]	0	[61]	0	[81]	0	[101]	0	
ADD A,[21]	02h	[2]	1	[22]	0	[42]	0	[62]	0	[82]	0	[102]	0
???	???	???	???	???	???	???	???	???	???	???	???	???	
21	[3]	0	[23]	0	[43]	0	[63]	0	[83]	0	[103]	0	
???	???	???	???	???	???	???	???	???	???	???	???	???	
JC 10	72h	[4]	0	[24]	0	[44]	0	[64]	0	[84]	0	[104]	0
???	???	???	???	???	???	???	???	???	???	???	???	???	
10	[5]	0	[25]	0	[45]	0	[65]	0	[85]	0	[105]	0	
???	???	???	???	???	???	???	???	???	???	???	???	???	
MOV A,[22]	a0h	[6]	0	[26]	0	[46]	0	[66]	0	[86]	0	[106]	0
???	???	???	???	???	???	???	???	???	???	???	???	???	
22	[7]	0	[27]	0	[47]	0	[67]	0	[87]	0	[107]	0	
???	???	???	???	???	???	???	???	???	???	???	???	???	
JMP 12	ebh	[8]	0	[28]	0	[48]	0	[68]	0	[88]	0	[108]	0
???	???	???	???	???	???	???	???	???	???	???	???	???	
12	[9]	0	[29]	0	[49]	0	[69]	0	[89]	0	[109]	0	
???	???	???	???	???	???	???	???	???	???	???	???	???	
MOV A,[23]	a0h	[10]	0	[30]	0	[50]	0	[70]	0	[90]	0	[110]	0
???	???	???	???	???	???	???	???	???	???	???	???	???	
23	[11]	0	[31]	0	[51]	0	[71]	0	[91]	0	[111]	0	
???	???	???	???	???	???	???	???	???	???	???	???	???	
MOV [40],A	a2h	[12]	0	[32]	0	[52]	0	[72]	0	[92]	0	[112]	0
???	???	???	???	???	???	???	???	???	???	???	???	???	
40	[13]	0	[33]	0	[53]	0	[73]	0	[93]	0	[113]	0	
???	???	???	???	???	???	???	???	???	???	???	???	???	
0	[14]	0	[34]	0	[54]	0	[74]	0	[94]	0	[114]	0	

Coloca 1 na posição 40 se for zero e 0 se não for zero.

4. Dado três variáveis inteiras, contar quantas são maiores que 10

Registros da CPU															
A	[02h: 00000010h]				B	[00h: 00000000h]				Flags	[00h: 00000000h]	IP	[7eh: 01111110h]	SP	[00h: 00h]
2					0					C: 0 Z: 0		126		0	
Memoria															
MOV A,[40]	???	???	???	???	MOV A,[80]	???	???	MOV A,[80]	???	MOV A,[80]	???	MOV A,[80]	???	MOV A,[80]	???
a0h	[0]	???	[20]	1	a0h	[60]	1	a0h	[100]	a0h	[120]	a0h	[140]	a0h	[160]
40	[1]	0	[21]	12	80	[61]	2	80	[101]	80	[121]	80	[141]	80	[161]
SUB A,[43]	???	???	???	???	ADD A,[81]	???	???	ADD A,[81]	???	ADD A,[81]	???	ADD A,[81]	???	ADD A,[81]	???
2ah	[2]	0	[22]	11	02h	[62]	0	02h	[102]	02h	[122]	02h	[142]	02h	[162]
SUB A,[46]	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
43	[3]	0	[23]	10	81	[63]	0	81	[103]	81	[123]	81	[143]	81	[163]
JA 60	???	???	???	???	MOV [81],A	???	???	MOV [81],A	???	MOV [81],A	???	MOV [81],A	???	MOV [81],A	???
77h	[4]	0	[24]	0	a2h	[64]	0	a2h	[104]	a2h	[124]	a2h	[144]	a2h	[164]
CMP A,[60]	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
60	[5]	0	[25]	0	81	[65]	0	81	[105]	81	[125]	81	[145]	81	[165]
MOV A,[41]	???	???	???	???	AMP 6	???	???	AMP 12	???	AMP 12	???	AMP 12	???	AMP 12	???
a0h	[6]	0	[26]	0	ebh	[66]	0	ebh	[106]	0	[126]	0	[146]	0	[166]
41	[7]	0	[27]	0	6	[67]	0	12	[107]	0	[127]	0	[147]	0	[167]
SUB A,[43]	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
2ah	[8]	0	[28]	0	0	[68]	0	0	[108]	0	[128]	0	[148]	0	[168]
SUB A,[46]	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
43	[9]	0	[29]	0	0	[69]	0	0	[109]	0	[129]	0	[149]	0	[169]
JA 100	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
77h	[10]	0	[30]	0	0	[70]	0	0	[110]	0	[130]	0	[150]	0	[170]
100	[11]	0	[31]	0	0	[71]	0	0	[111]	0	[131]	0	[151]	0	[171]
MOV A,[42]	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
a0h	[12]	0	[32]	0	0	[72]	0	0	[112]	0	[132]	0	[152]	0	[172]
SUB A,[42]	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
42	[13]	0	[33]	0	0	[73]	0	0	[113]	0	[133]	0	[153]	0	[173]
SUB A,[43]	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
2ah	[14]	0	[34]	0	0	[74]	0	0	[114]	0	[134]	0	[154]	0	[174]
SUB A,[46]	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
43	[15]	0	[35]	0	0	[75]	0	0	[115]	0	[135]	0	[155]	0	[175]
JA 120	???	???	???	???	???	???	???	???	???	???	???	???	???	???	???
77h	[16]	0	[36]	0	0	[76]	0	0	[116]	0	[136]	0	[156]	0	[176]
120	[17]	0	[37]	0	0	[77]	0	0	[117]	0	[137]	0	[157]	0	[177]

Não sei se tem um jeito mais simples, mas tive que repetir o código do incremento 3 vezes para cada teste. No final estou colocando na posição 81 o incremento dos números que são maiores que 10 da posição 40 a 42.

5. Dado três variáveis inteiras, somar as variáveis maiores que 10

CPU0091

Registradores da CPU

A	[7eh: 00000110h] 23				B	[00h: 00000000h] 0				Flags	[00h: 00000000h] C: 0 Z: 0	IP	[7eh: 01111110h] 126	SP	[00h: 00h] 0
Memoria															
MOV A,[40]	???	???	???	???	MOV A,[40]	???	???	MOV A,[41]	???	MOV A,[42]	???				
a0h	[0]	???	[20]	1	a0h	[60]	0	a0h	[100]	a0h	[120]				
40	[1]	0	[21]	12	40	[61]	23	41	[101]	42	[121]				
SUB A,[43]	???	???	???	???	ADD A,[81]	???	???	ADD A,[81]	???	ADD A,[81]	???				
2ah	[2]	0	[22]	11	02h	[62]	0	02h	[102]	02h	[122]				
SUB A,[46]	???	???	???	???	???	???	???	???	???	???	???				
43	[3]	0	[23]	10	81	[63]	0	81	[103]	81	[123]				
JA 60	???	???	???	???	MOV [81],A	???	???	MOV [81],A	???	MOV [81],A	???				
77h	[4]	0	[24]	0	a2h	[64]	0	a2h	[104]	a2h	[124]				
CMP A,[60]	???	???	???	???	???	???	???	???	???	???	???				
60	[5]	0	[25]	0	81	[65]	0	81	[105]	81	[125]				
MOV A,[41]	???	???	???	???	AMP 6	???	???	AMP 12	???	AMP 12	???				
a0h	[6]	0	[26]	0	ebh	[66]	0	ebh	[106]	0	[126]				
41	[7]	0	[27]	0	6	[67]	0	12	[107]	0	[127]				
SUB A,[43]	???	???	???	???	???	???	???	???	???	???	???				
2ah	[8]	0	[28]	0	0	[68]	0	0	[108]	0	[128]				
SUB A,[46]	???	???	???	???	???	???	???	???	???	???	???				
43	[9]	0	[29]	0	0	[69]	0	0	[109]	0	[129]				
JA 100	???	???	???	???	???	???	???	???	???	???	???				
77h	[10]	0	[30]	0	0	[70]	0	0	[110]	0	[130]				
100	[11]	0	[31]	0	0	[71]	0	0	[111]	0	[131]				
MOV A,[42]	???	???	???	???	???	???	???	???	???	???	???				
a0h	[12]	0	[32]	0	0	[72]	0	0	[112]	0	[132]				
SUB A,[42]	???	???	???	???	???	???	???	???	???	???	???				
42	[13]	0	[33]	0	0	[73]	0	0	[113]	0	[133]				
SUB A,[43]	???	???	???	???	???	???	???	???	???	???	???				
2ah	[14]	0	[34]	0	0	[74]	0	0	[114]	0	[134]				
SUB A,[46]	???	???	???	???	???	???	???	???	???	???	???				
43	[15]	0	[35]	0	0	[75]	0	0	[115]	0	[135]				
JA 120	???	???	???	???	???	???	???	???	???	???	???				
77h	[16]	0	[36]	0	0	[76]	0	0	[116]	0	[136]				
120	[17]	0	[37]	0	0	[77]	0	0	[117]	0	[137]				

Basicamente mesmo programa de cima mas ao invés de incrementar na posição 81 eu estou somando os que são maiores de 10 na posição 81.