

Memory Location	Label	Mnemonic	Code
00		MOV A, #0	74 00
02		MOV R0, A	F8
03		MOV A, #3	74 03
05		MOV R1, A	F9
06	Loop:	MOV A, #5	74 05
08		CLR C	C3
09		ADDC A, R0	38
0A		MOV R0, A	F8
0B		MOV A, R1	E9
0C		CLR C	C3
0D		ADDC A, #FF	34 FF
0F		MOV R1, A	F9
10		JZ Stop	60 02
12		SJMP Loop	80 F2
14	Stop:	SJMP Stop	80 FE

Code executed:	PC	R0	R1	ACC	C
MOV A, #0	00	xx	xx	xx	x
MOV R0, A	02	xx	xx	00	x
MOV A, #3	03	00	xx	00	x
MOV R1, A	05	00	xx	03	x
MOV A, #5	06	00	03	03	x
CLR C	08	00	03	05	x
ADDC A, R0	09	00	03	05	0
MOV R0, A	0A	00	03	05	0
MOV A, R1	0B	05	03	05	0
CLR C	0C	05	03	03	0
ADDC A, #FF	0D	05	03	03	0
MOV R1, A	0F	05	03	02	1
JZ Stop	10	05	02	02	1
SJMP Loop	12	05	02	02	1
MOV A, #5	06	05	02	02	1
CLR C	08	05	02	05	1
ADDC A, R0	09	05	02	05	0
MOV R0, A	0A	05	02	0A	0
MOV A, R1	0B	0A	02	0A	0
CLR C	0C	0A	02	02	0
ADDC A, #FF	0D	0A	02	02	0
MOV R1, A	0F	0A	02	01	1
JZ Stop	10	0A	01	01	1
SJMP Loop	12	0A	01	01	1
MOV A, #5	06	0A	01	01	1
CLR C	08	0A	01	05	1
ADDC A, R0	09	0A	01	05	0
MOV R0, A	0A	0A	01	0F	0
MOV A, R1	0B	0F	01	0F	0
CLR C	0C	0F	01	01	0
ADDC A, #FF	0D	0F	01	01	0
MOV R1, A	0F	0F	01	00	1
JZ Stop	10	0F	00	00	1

SJMP Stop	14	0F	00	00	1
<b>Total instructions</b>	<b>34</b>	0F	00	00	1
<b>Total clock cycles</b>	<b>102</b>				

For calculating  $21 \times 60$ , we need a second register to hold the high byte of the result.  
Details have been discussed in class.