The contest is in progress. It ends about an hour from now.

Contests > IEEEXtreme Programming Competition 7.0 >

Problem_AT

| Problem | Submissions | Leaderboard | Discussions |

The following 8086 code gets input in the AL register and computes a function in BL.

```
0100 E2FE          LOOPW   0100
0102 50            PUSH    AX
0103 5E            POP     SI
0104 89C3          MOV     BX,AX
0106 D1E8          SHR     AX,1
0108 D1D1          RCL     CX,1
010A 75FA          JNZ     0106
010C 91            XCHG    AX,CX
010D BA0102        MOV     DX,0201
0110 D1C2          ROL     DX,1
0112 D1EB          SHR     BX,1
0114 D1D1          RCL     CX,1
0116 38DE          CMP     DH,BL
0118 7EF6          JLE     0110
011A 38D3          CMP     BL,DL
011C 7E06          JLE     0124
011E D1CB          ROR     BX,1
0120 D1D1          RCL     CX,1
0122 D1C3          ROL     BX,1
0124 28D4          SUB     AH,DL
0126 4A            DEC     DX
0127 20D0          AND     AL,DL
0129 21F2          AND     DX,SI
012B 38C2          CMP     DL,AL
012D 18E3          SBB     BL,AH
```

Understand what it does, and generalize it for arbitrary long numbers.

Sample Input 1:

33

Sample Output 1:

12

Problem Author: IEEE

Suggest Edits

| Emacs | Normal | Vim |

Select Language: Python 2 ▾ ⤢

save code

```
1 # Enter your code here. Read input from STDIN. Print output to STDOUT
```

Line: 1 Col: 1 Count: 69

☐ **Use a custom test case**

⬆ Upload Code as File

Compile & Test   Submit Code

This is a beta version. Join us on IRC at #hackerrank on freenode for hugs or bugs.

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