

Set up Rom:

binary
000 0000
⋮

decimal
00
⋮
Program

\$ ⇒ hex, else decimal
⇒ immediate

011 1100

60

\$ AAAAAAAAAA

011 1101

61

\$ FF00AA55

011 1110

62

\$ 12345678

011 1111

63

\$ 9ABCDEF0

Addr Label

Instruction

Comments

00

LDU R1, #14

; (address of sub1)

LDU R19, #31

; Rom is 0-63

ROL R26, R19

; C ← 0, R26 ← 62

LD R20, #ABCD

; FFFFABCD

ROL R21, R20

; sets C

ROR R22, R26

JSR sub1

NOP

BSR sub2

LDIX R11, R0, #61 ; decimal

OR R12, R11, #0x5A00 ; hex (#)

AND R13, R11, #0x5A00

XOR R9, R20, #0x1234

ELOOP

BRA ELOOP

sub1 ADD R25, R19, #29 ; R25 is 60
 SUB R0, R25, #60 ; R0 is 0

 STA \$76 R20 ; RAM \$64-\$127
 JMP smwh ; [R19]=31...

sub2 LDIX R28, R25, #3 ; from 63
 COMP R29, R28 ; 1's comp
 ADD R27, R29, R28 ; -1
 BNE R0, R28, always

again BEQ R27, R28, same
 BLT R27, R28, smlr ; if [R30]<[R28]
 BNE R27, R28, diff

 JSR SUB1

same RTS
 diff MOVE R27, R0
 BRA again

 smlr MOVE R28, R0
 always BRA again

smwh AND R6, R20, #003f ; ...0000
 OR R7, R6, #001c ; d29
 STIX R20, R7, #50 ; store [R20] @ m 19
 LDIX R8, R0, #76

 LDA R14 #79 ; decimal

end RTS