

Machine Problem 2

ORG 000
INPUT
STORE A

WHILE, LOAD X
SUBT A
SKIPCOND 000
JUMP END
JUMP IF

END, HALT

IF, LOAD X
SKIPCOND 400
JUMP ELSEIF
JUMP IFLOOP

IFLOOP,LOAD A
OUTPUT A
LOAD X
ADD ONE
STORE X
OUTPUT X
JUMP CHECKIF

CHECKIF, LOAD X
SUBT A
SKIPCOND 000
JUMP END
JUMP ELSEIF

ELSEIF, LOAD FOUR
SUBT X
SKIPCOND 800
JUMP ELSE
JUMP ELSEIFLOOP

ELSEIFLOOP, LOAD X
ADD TWO
STORE X
OUTPUT X
JUMP CHECKELSEIF

CHECKELSEIF, LOAD X
SUBT A
SKIPCOND 000
JUMP END
JUMP ELSEIF

ELSE, LOAD X
OUTPUT X
JUMP ELSELOOP

ELSELOOP, LOAD X
ADD ONE
STORE X
OUTPUT X
JUMP CHECKELSE

CHECKELSE, LOAD X
SUBT A
SKIPCOND 000

JUMP END
JUMP ELSELOOP

A, DEC 00
X, DEC 00
ONE, DEC 01
TWO, DEC 02
FOUR, DEC 04

