Table 7.1 TIC Operation Codes

Binary	*Description*	*Shorthand*
0000 0001	Read input data, store in location xxxx xxxx.	INP
0000 0010	Output (print) contents of location xxxx xxxx.	OUT
0000 0011	Load contents of location xxxx xxxx into accumulator.	LDA
0000 0100	Store contents of accumulator in location xxxx xxxx.	STO
0000 0101	Add contents of location xxxx xxxx to contents of accumulator; sum left in accumulator.	ADD
0000 0110	Subtract contents of xxxx xxxx from contents of accumulator; difference left in accumulator.	SUB
0000 0111	Multiply contents of accumulator by contents of location xxxx xxxx; product left in accumulator.	MUL
0000 1000	Divide contents of location xxxx xxxx into contents of accumulator; quotient left in accumulator.	DIV
0000 1001	If contents of accumulator is positive, branch to location xxxx xxxx, otherwise continue.	POS
0000 1010	If contents of accumulator is negative, branch to location xxxx xxxx, otherwise continue.	NEG
0000 1011	If contents of accumulator is zero, branch to location xxxx xxxx, otherwise continue.	ZER
0000 1100	Branch to location xxxx xxxx.	BRA
0000 1101	Stop.	STP

Tiny Imaginary Computer = TIC

Tuesday ~~Thursday~~ 01/25/2011
Group exercise

TIC

10	0000 0011	LDA	00	10100	20
11	0000 0101	ADD	00	10101	21
12	0000 0111	MUL	00	10110	22
13	0000 0100	STO	00	10111	23
14	0000 0010	OUT	00	10111	23
15	0000 0111	MUL	00	10110	22
16	0000 0100	STO	00	10111	23
17	0000 0010	OUT	00	10111	23
18	0000 1101	STP	00	00000000	
19	0000 1111		00	00101	15
20	00000000		00	00111	37
21	00000000		00	00101	5
22	00000000		00	00000010	2
23	00000000		00	01101000	104
	00000000		00	11010000	208

TIC program

data area

PC (IAR)	10 ①	11 ②	~~12~~	~~13~~	~~14~~
	~~15~~	~~16~~	~~17~~	~~18~~	19
ACC	15 ③	~~52~~	~~104~~	208	

Show "history" or trace of execution but in base ten decimal.

OUTPUT: 104, 208

Note: do (NOT) cross out

PC: ~~18~~ ~~19~~ ~~20~~ ~~21~~ 22