

Remember that you'll get extra credit for working in teams (write a paragraph with the names of your collaborators and what each one contributed).

- (1) Complete the following INOUT machine tables.

IN	OUT	IN	OUT	IN ₁	IN ₂	OUT	IN	OUT
2	5	1	6	2	3	8	7	4.6458...
7	10	2	9	4	1	6	9	5
12	15	3	12	7	4	30	14	5.7417...
18	21	6	21	6	8	50	49	9
23		40	123	3	10	32	100	12
30		100	303	2	7		1	
58		7		8	4		0	
100		12		5	4		13	
♣		21		#	b		1000	
		♡						

- (2) Complete the following INOUT machine tables. Describe the rules for each of these machines as precisely and concisely as you can.

IN	OUT	IN	OUT	IN ₁	IN ₂	OUT
1	1			time	energy	21
7	2	George	f	quarter	tie	18
8	2	cute	d	interest	go	13
9	3	elephant	h	friend	into	21
2	1	cover	e	speed	sound	22
10	3	triangle	h	picture	way	18
99	9	divide	f	telephone	picture	60
100	10	real		summary	seen	
16		picture		special	test	
9999			i	tried	hard	
10000			b			5
	14					10

- (3) For each of the INOUT machines in the last exercise, come up with a different rule that fits only part of the data (at least two of the rows). Describe the rule carefully and explain which of the rows do not fit the different rule.
- (4) Write an essay expanding on your positive experiences in your math classes. Describe one or two such experiences in detail. What made them positive? What did you do, and what did the teacher do to make them positive experiences? How can you use this experience in *your* future teaching?