

1. Consider the following Turing Machine.

State	Read	Write	Move	Next
0	B	B		Fail
0	0	0	L	0
0	1	1	L	1
0	B	B		Accept
0	0	0	L	1
0	1	1	L	0

Determine what happens when the Turing Machine is run with the following inputs initially on the tape.

- (a) 0001
  - (b) 0111
  - (c) 0110
  - (d) 0101010001
  - (e) 000000000000000111
  - (f) 00
  - (g) 1
2. Give the state table for a Turing Machine that appends a parity bit to a tape with a string of consecutive 0's and 1's
  3. Construct a Turing Machine to compute the sequence 0\_1\_0\_1\_0\_1..., that is, 0 blank 1 blank 0 blank, etc.

## References