Rajat Sethi – CPSC 3500 – Testlet 5

1a. 0^n

1b. 0^n

1c. Does not exist

2. Moving two-steps left and then one-step right is the exact same as going one-step left, which can be simulated in a TM using an extra state. That way, the TM has a way to go one-step left and one-step right, like a standard TM.

3a. 101

3b. Addition (x$y = x + y)