1. Design a Turing machine that shifts a string $w$ one square rightward. Assume the tape is all #’s to the right of $w$, and there is a # to the left of $w$. Do not change anything on the tape the left of $w$.

2. What methods might be used to shift $w$ two squares rightward?

3. What about shifting a variable number of squares rightward?

4. Describe a Turing machine that computes the integer function $f(n) = n \div 1 = \max\{0, n-1\}$. 

This used 2 states $q_1, q_2$ to remember symbol being shifted forward.

To move 2 squares - use 4 states to remember a pair of symbols being shifted forward.