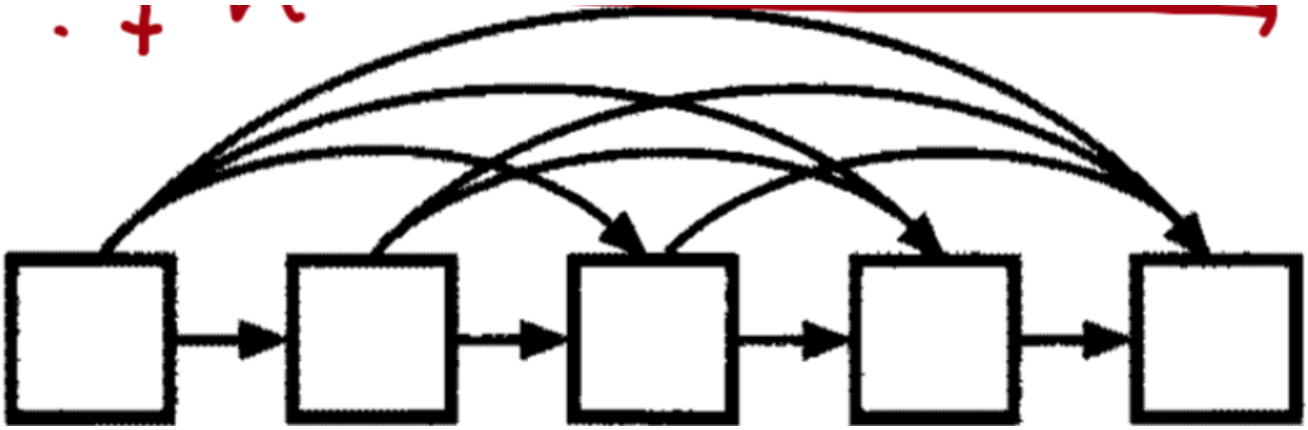
Exercises

3.7 Calculate the total number of transitions needed in a forward connected model as the one shown above with a length of L. Calculate the same number for a model with silent states (as above).

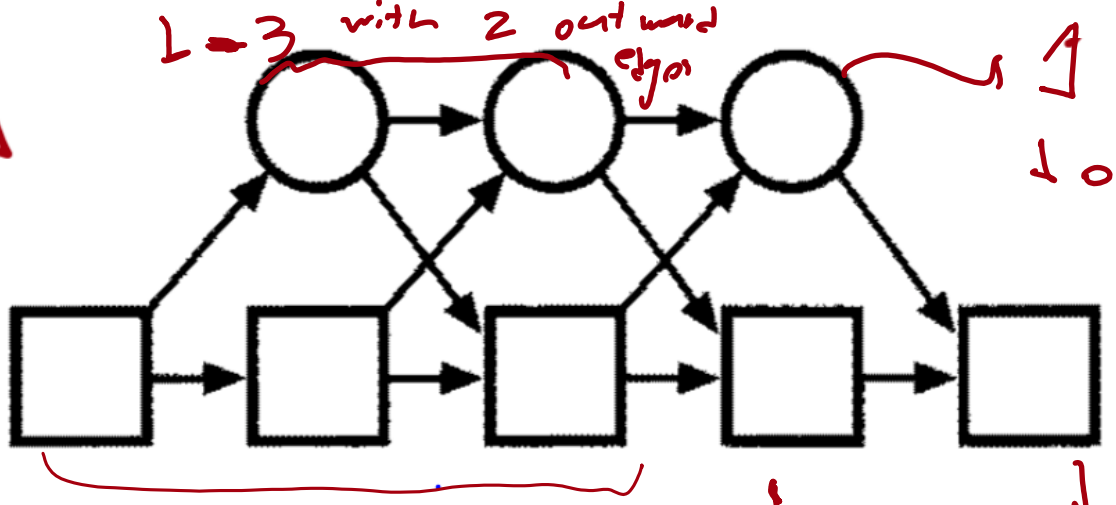


deg$^+$ (# outward edges)

$L-1 \quad L-2 \quad L-3 \quad \cdots \quad 1 \quad + \quad 0$

$0 + 1 + 2 + \cdots + L-1$

$= \frac{L(L-1)}{2} = \frac{1}{2}[L^2 - 2L + 1]$



$$2(L-2) + 1 + 0 + 2(L-3) + 1$$

$$= 4L - 8$$

? (why L=200 states → around 600 transitions in book?