

3.2.3

$$P = \begin{pmatrix} 0,99 & 0,01 \\ 0,12 & 0,88 \end{pmatrix}$$

$$P^3 = \begin{pmatrix} 0,9737 & 0,0263 \\ 0,3152 & 0,6848 \end{pmatrix}$$

Therefore the probability of the 4th item being defective is 0,6848, given the first item being defective.