IMM - DTU

02405 Probability
2004-23-3
BFN/bfn

Solution for exercise 4.5.2 in Pitman

Question a)

$$P(X \leq x) = \sum_{i=0}^{x} \left(\begin{array}{c} 3 \\ i \end{array} \right) \frac{1}{8}$$

Question b)

$$P(X \leq x) = 1 - P(X > x) = 1 - P(X \geq x+1) = 1 - \frac{1}{2^x}$$