

Chapter 3 HW



Here is a list of recommended exercises. This list is based on the 8th edition of "A first Course in Probability" by Sheldon Ross.

Problems

1-3, 5-6, 10-17, 19-24, 26, 28-33, 35-38, 43-45, 52-53, 55, 57-59, 74-78

Extra-Credit

Lilli pond leaves labeled 0-10 form a bridge from one shore of the pond to the next. A frog is initially on leaf # 1 and a snake is waiting in ambush on leaf # 0. If the frog jumps to leaf # 0, it is dead, whereas, if it gets to leaf # 10, the frog survives. Given that the frog is on leaf # k , it will jump to leaf # $k-1$ with probability $\frac{k}{10}$ and it will jump to leaf # $k+1$ with probability $\frac{10-k}{10}$. For example, given that the frog is on leaf # 3, it will jump back to leaf # 2 with probability $\frac{3}{10}$ and it will jump forward to leaf number 4 with probability $\frac{10-3}{10} = \frac{7}{10}$. Find the probability that the frog survives.

										
0	1	2	3	4	5	6	7	8	9	10