

Lab Nr. 3, Probability and Statistics

Discrete Random Variables

1.

- *Statistics Toolbox*, pdf and cdf;
- *disttool*.

2. Plot the graphs of the pdf and the cdf of a random variable X having a binomial distribution of parameters n and p (given by the user).

Application

A coin is tossed 3 times. Let X denote the number of heads that appear.

- Write a Matlab code that simulates 3 coin tosses and computes the value of the variable X .
- Find the probability distribution function of X . What type of distribution does X have?
- Find the cumulative distribution function of X , F_X .
- Find $P(X \leq 2)$ and $P(X < 2)$.