

Example - Sample a point from a interval

A train arrives passes through a small town at a random time between 10:00am and 10:12am. If I happen to drive through the town between 9:55am and 10:05am what is the probability that I will see the train?

Example - Continuous Random Variables

A patient with the flu may have a fever ranging between 39C and 42C. Let X be the temperature of a randomly selected flu patient. What is the probability that the temperature measured is less than 40C?

Example - Discrete Random Variables

The distribution function of a random variable X is given by

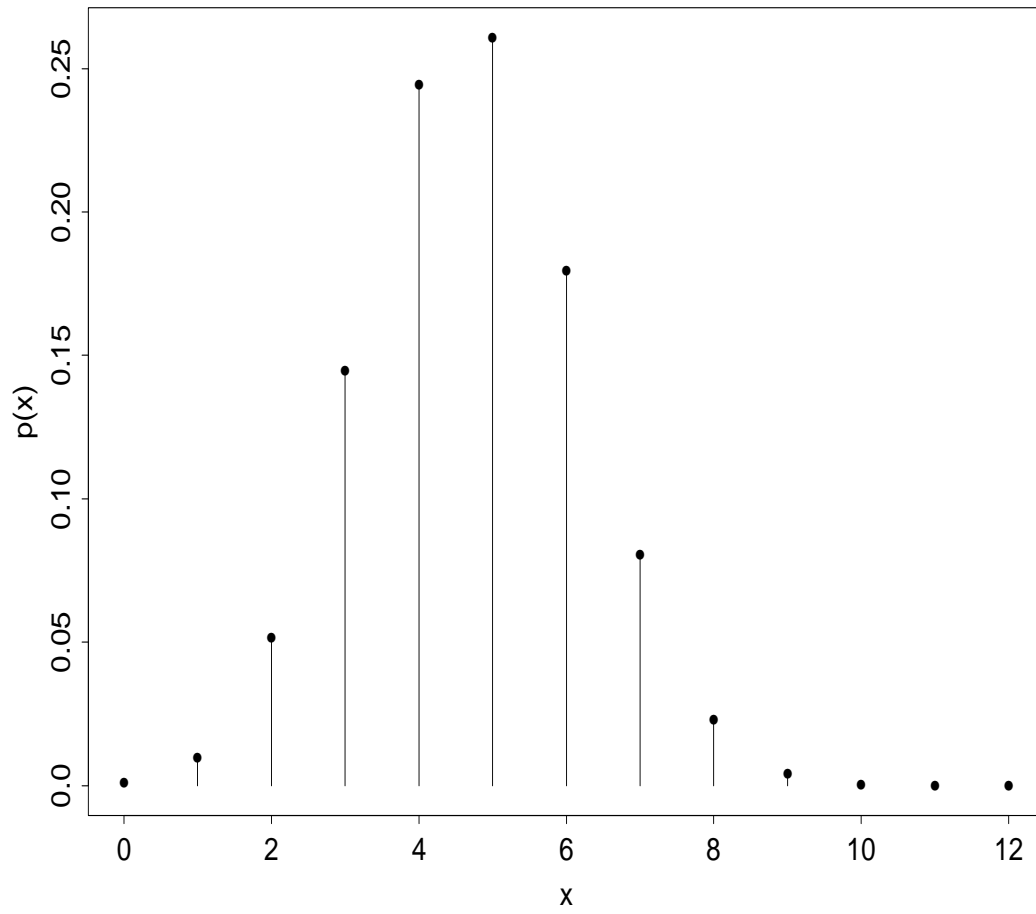
$$F(x) = \begin{cases} 0 & \text{if } x < -2 \\ 1/2 & \text{if } -2 \leq x < 2 \\ 3/5 & \text{if } 2 \leq x < 4 \\ 8/9 & \text{if } 4 \leq x < 6 \\ 1 & \text{if } 6 \leq x \end{cases}$$

Calculate the probability function of X .

Example - Discrete Random Variables

From 18 potential women jurors and 28 potential men jurors, a jury of 12 is chosen at random. Let X be the number of women selected. Find the probability function of X .

The probability function of X



The distribution function of X

