Assignment 2

Insert author

Insert date

Abstract

Instructions: Please set the following using equation labels (don't cheat!). Experiment with the following commands:

\qquad \Pr \rho \lambda \dots \in

Let X be a discrete random variable taking values in $S = \{0, 1, \ldots\}$ and suppose that

$$\Pr(X = n) = e^{-\lambda}\frac{\lambda^n}{n!}, \qquad n = 0, 1, \ldots \tag{1}$$

We say that X has a *Poisson distribution* if its probability function is given by (1), where $\lambda > 0$. X has a *geometric distribution* if its probability function is given by (2), immediately below, with $\rho \in (0, 1)$.

$$\Pr(X = n) = (1 - \rho)\rho^n, \qquad n = 0, 1, \ldots \tag{2}$$