

Homework 1

2024-08-29

Homework 1 is due 9/7/2024 at 11:59 PM. Submit your homework on Canvas as one PDF document.

1. $X \sim \text{Bin}(n, p)$, show that the variance of Binomial distribution is $np(1 - p)$.
2. $X \sim \text{Pois}(\lambda)$, show that the expected value of a Poisson distribution is λ .
3. $X \sim \text{Pois}(\lambda)$, show that the variance of a Poisson distribution is λ .
4. $X \sim N(\mu, \sigma^2)$, show that the expected value is μ .