HW 1

From the Textbook

Questions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, and 1.8

- 7 out of 8 Question (for Undergraduates)
- All Questions (for Graduates)

Extra Question

Follow the example we had in the classroom, find the E(X) and Var(X) based on (i) equations (2.1) and (2.2), and (ii) simulation for the following cases. Does (i) and (ii) give you the same result?

- (a) $X \sim \chi^2(\nu = N + 1)$, where $N \sim Poisson(\lambda)$.
- (b) (Only for Graduate Students) $X \sim Binomial(n = Y, p = P)$, where $Y \sim Poisson(\lambda)$ and $P \sim Beta(\alpha, \beta)$.