

Homework 5

Due: Thursday, November 1st.

1. Let $X_i \sim \text{Unif}[0, 1]$ be independent. Let

$$Y_n = n \cdot \min_{1 \leq i \leq n} X_i.$$

Show that $Y_n \Rightarrow Z$, where Z is an exponential RV with parameter 1.

2. Exercise 3.2.12.
3. Exercise 3.2.13.
4. Exercise 3.3.2(i).
5. Exercise 3.3.3.
6. Exercise 3.3.4.
7. Exercise 3.3.5.