ECON 0150 | Fall 2025 | Homework 3.1

Due: Friday, Feb 21, 5PM

Homework is designed to both test your knowledge and challenge you to apply familiar concepts in new applications. Answer clearly and completely. You are welcomed and encouraged to work in groups so long as your work is your own. Use the provided datasets to answer the following questions. Then submit your figures and answers to Gradescope.

Q1. Normal Random Variable

Consider a model where customer wait times (in minutes) at a restaurant location follows a normal distribution with mean (μ) = 12 minutes and standard deviation (σ) = 2.5 minutes

a) What is the theoretical mean (μ) wait time *(warm up question)*?

b) What is the theoretical variance for the wait time *(warm up question)*?

c) What is the 77th percentile of the wait time distribution *(use python)*?