

Fall 2008

Time Series Analysis

Assignment 1

Due 09/02/08

Use Minitab, SAS, or Excel as much as possible.

1. Chapter 2, Problem 1
2. Reproduce the Figures 2-2, 2-3, and 2-4
3. Find the Binomial probabilities for $N=8$ and $p=0.3$.
4. Find the following probabilities using the standard normal distribution. **Also draw a normal probability graph for each part and shade the area of interest.**
 - a. $P(Z \leq 0)$.
 - b. $P(Z \leq 1.48)$.
 - c. $P(Z \leq -1.08)$.
 - d. $P(-1.48 \leq Z \leq -1.08)$.
 - e. $P(-1.48 \leq Z \leq 1.08)$.
5. If z_α denotes the value of Z for which the area under the standard normal curve to its right is equal to α , find
 - a. $z_{0.017}$;
 - b. $z_{0.0250}$;
6. Let the random variable X have a normal distribution with the mean 30 and the standard deviation 4. Find the following:
 - a. Z score when $X = 37$.
 - b. Z score when $X = 22$.
 - c. Z score when $X = 38$.
 - d. $P(37 \leq X \leq 38)$.
 - e. $P(22 \leq X \leq 38)$.
7. Find $t_{.05,8}$, $t_{.005,19}$
8. Chapter 2, Problem 6
9. Chapter 2, Problem 7
10. Chapter 2, Problem 11
11. Chapter 2, Problem 12