MATH 440A
SCHILLING

TEXT HOMEWORK LIST

Problems will be assigned in the order listed below. "Chapter 1, #1,2(**C**),7, …" refers to Exercises 1.1, 1.2, 1.7, etc. Due dates for specific exercise sets will be given in class. Minor changes to this list are possible. For full credit, proper work must be shown and **all parts of an exercise must be answered**, including such questions as "What assumptions are required?", "Interpret the results", etc. Late homework will result in a substantial penalty.

Key to letter codes:

C: A **C**omputer with statistical software or a **C**alculator with statistical functions is helpful.
E: This problem is <u>Easy</u> and short if the right statistical tools are utilized, but not otherwise.

Ch. 1, #1abf,2(**C**),7,8,11(**C**),18,20,27.

"Sampling, Experiments & Sampling Distributions" Handout, #5,7,12,44–47,53-55.

Ch. 8, #2,6a,8(**E**),9(**E**),10ab,13,15.

Ch. 9, #2,6(**E**),7(**E**),8.

Ch. 7, #1,3,4,7(**E**),9,10b(**E**),11(**E**),19ab • 29,32,38–40[refer to #7.7 before doing these three], , 70,71a(**E**) • 47,50,57,58(**E**),61.

Ch. 8, #19,20,22,24,25,30,31 • 36a,37,38

Ch. 8, #44–47,50,55 • 58,61,62 • "Confidence Intervals" Handout, #1-4 • Ch. 8, #86(**C**),89(**C**).

Ch. 7, #15(**E**),20ab • Ch. 8, #68,69(**C**),70,73,74(**C**),77(**C**).

Ch. 9, #32,33,35,43,48,50,56a • 61–63[you do not need to show that the estimator is consistent in #61] • 72abd,76abd(**E**),78,80,83,87(**E**)[the book's answer is wrong].

Ch. 10, #2,3,7,9,14,20,23,24[record rejection regions for #9,20,24 for use in next assignment] • 27,29,31,32,35 • 40,43ab,46–48.

"Tests of Significance" Handout, #25,26,45,46,51-53.

Ch. 10, #49–51(**C**),55,56,61,62(**C**),63(**C**) • 66–68,70b,71,74,75 • 76,79(**E**),80[caution: do not use the rejection region from #79, which is based on $n = 20$],83,89. [Hint for #83a: Use the transformation method formula (Ch. 6) to show that $2Y_i/\theta_0 \sim \chi^2$ with 6 d.f., i=1,...,4; also, in the book's answer β_0 should be θ_0.]

Ch. 12, #10,13 • Ch. 15, #3,4,7[for #3&7 compare the p-value to α],8,10–12 • 18,19[the 2nd row of data is a continuation of the 1st],22,57,58,64[the book's answer for #57 should be doubled].