

Case-based Social Statistics I

CSSS 322

Professor: Mark S. Handcock

Homework 1

Due Tuesday, April 9, 2002

Problems to be handed in:

- 1) Exercise 10.12 from page 308 in Chapter 10: “Estimating Proportions with Confidence” of **MOS**.
- 2) Exercise 10.23 from page 309 in Chapter 10: “Estimating Proportions with Confidence” of **MOS**.
- 3) Exercise 10.25 from page 309 in Chapter 10: “Estimating Proportions with Confidence” of **MOS**.
- 4) Submit electronically exercises 3, 4, and 5 from Unit B11 of *CyberStats* entitled “Sampling Distributions.”
- 5) Submit electronically exercises 2, 3, 5, 6, 7, 10, and 13 (all are related) from Unit B12 of *CyberStats* entitled “Central Limit Theorem.”

Extra Credit Problem:

- 6) A Washington State Circuit Judge with two courts and serious transportation constraints wants to keep the total workday at the down-town Seattle court down to six hours. The cases that are presented at this court require an amount of time which is approximately normally distributed with mean 32 minutes and standard deviation 12 minutes. Find the maximum number of cases, n , that can be scheduled while keeping the total time under six hours, with probability at least 95%.

hint: This problem has several solution methods. Trial-and-error is probably the easiest way. Talk with other students about how this might be solved!