

Math 282 HW 4 due Friday, Sept. 20. Late policy. No late HW will be accepted (except for an emergency). You may turn in HW early if you know that you will miss Friday. If you miss a quiz, contact me before the next class period, and take it during Thursday office hours (up to 2 lates). EXAM 1 is Wednesday, Sept. 18. **Two pages: problems A)-G)**

A) An opinion poll contacts 1161 adults and asks "Which political party do you think has better ideas for leading the country?"
What is the individual? What is the population?

B) The 2000 census tried to gather basic information from every household in the United States. A "long form" was sent to a sample of about 17% of the households.
What is the individual? What is the population?

C) The internet Excite Poll has a question appear on the screen, and you simply click to respond. In Oct. 2002, the question was

"It is now possible for school students to log on to internet sites and download homework. Everything from book reports to doctoral dissertations can be downloaded for a fee. Do you believe a student caught plagiarizing an 'F' for their assignment is the right punishment?"

In all, 14793 people click "yes" and 1778 clicked "No, its too harsh."
2566 clicked "No, its not harsh enough," and 988 clicked don't know or don't care.

a) What is the sample size of this poll?

b) That's a much larger sample than standard sample surveys. In spite of this, we can't trust the result to give good information about any clearly defined population. Why?

comment: See p. 204-205.

D) Use line 139 from Table B to choose a sample of size six from the list below.

Abdulhamid	Agarwal	Baxter	Bonds	Brown	Castillo	Cross
Duncan	Fernandez	Fleming	Gates	Goel	Gomez	Hernandez
Huang	Kim	Liao	Mourning	Naber	Peters	Pliego
Puri	Richards	Rodriguez	Santiago	Shen	Vega	Wang

comment: Assign labels alphabetically: Abdulhamid 01, Agarwal 02, ..., Wang 28. Use line 139: 55, 58, 89, ... Then go to line 140 if necessary.

E) Following the comment below, use table B to select a stratified random sample of 4 students and 2 faculty members.

students:	Abel	Fisher	Huber	Miranda	Reinmann
	Carson	Ghosh	Jimenez	Moskowitz	Santos
	Chen	Griswold	Jones	Neyman	Shaw
	David	Hein	Kim	O'Brien	Thompson
	Deming	Hernandez	Klotz	Pearl	Utts
	Elashoff	Holland	Liu	Potter	Varga

faculty	Andrews	Fernandez	Kim	Moore	West
	Besicovitch	Gupta	Lightman	Vicario	Yang

comment: Assign 01 to 30 to the students (in alphabetical order). In table B, start on line 123: 54, 58, The first student will be 08 = Ghosh. Assign 1-9,0 to the faculty (in alphabetical order). In table B, start on line 109: 3, 6, The first faculty member selected will be Fernandez. Notice that 10th faculty member Yang gets label 0.

F) At a party there are 30 students over age 21 and 20 students under age 21. You choose at random 3 of those over 21 and separately choose at random 2 of those under 21 to interview about attitudes towards alcohol. You have given every student at the party the same chance to be interviewed.

What is the chance?

Why is your sample not a SRS?

comment: Would a SRS always have 3 over 21 and 2 under 21?

G) A New York Times opinion poll on women's issues contacted a sample of 1025 women and 472 men by randomly sampling telephone numbers. Why is the margin of error for men larger than the margin of error for women?

comment: See 1st full paragraph on p. 210.