Math 282 HW1 due Friday, Aug. 30.

Print your name carefully. Do problems sequentially, do not put problems side by side. Use a stapler. Box relevant answer. Show enough work so you know what you were doing when you see the problem, but do not show unnecessary scratch work. You are being graded for work, not just the final answer.

You may discuss HW with other students, but do not copy.

You may turn in HW early if you know that you will miss a due date. If you miss a quiz, you may take (up to 2 times) it before the next class period (Wednesday afternoon to Friday morning, preferably during office hours except for the first 2 quizzes). I do not want late HW or HW that you did but forgot to bring, but I will take late HW the following Monday if it is late due to an emergency.

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problems        FIVE PROBLEMS: A, B, C, D and E


A)  Which of the following variables are quantitative and
which are categorical? (Hint: See p. 4.)


a) Gender (male or female)
b) Race (Asian, black, white or other)
c) Systolic blood pressure (millimeter of mercury)


B) Make a stem and leaf plot of the following SSHA scores for 18 women.
Do any scores look like outliers?


154  109  137  115  152  140  154  178  101
103  126  126  137  165  165  129  200  148


Comment: See ex 1.9 on p. 21. Put the stem and leaf units on the plot.
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C) (like 1.35b p. 32, but 1999 data) Make a table that includes the class
intervals, tally and counts. Let D = doctors and use the classes

$0 < D \leq 50$, $50 < D \leq 100$, ..., $750 < D \leq 800$. Then make a histogram and label
the bars of the histograms with frequencies greater than 0. Say which observations are
outliers. See ex. 1.4 on p. 11-12.

Doctors per 100000 people, 1999

state	doctors	state	doctors	state	doctors	state	doctors	state	doctors
Alab	200	Ha	269	Mass	422	NY	395	Tenn	248
Al	170	Id	155	Mi	226	NC	237	TX	205
Ariz	203	Il	263	Minn	254	ND	224	Ut	202
Ark	192	In	198	Miss	164	Oh	237	Ver	313
Ca	248	Io	175	Mo	232	Ok	167	VA	243
Co	244	Ka	204	Mont	191	Or	227	WA	237
Conn	361	Ke	212	Neb	221	Pa	293	WV	219
Del	238	Lo	251	Nev	177	Ri	339	Wisc	232
Fl	243	Ma	232	NewH	234	SC	213	WY	172
Geor	211	Mary	379	NewJ	301	SD	188	WDC	758
				NewM	214				

D) (2.28 on p. 60, MODIFIED) The breaking strengths of 20 pieces of
Douglas fir are below.

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33190  31860  32590  26520  33280
32320  33020  32030  30460  32700
23040  30930  32720  33650  32340
24050  30170  31300  28730  31920
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List the data from smallest to largest. Compute the 5 number
summary. Then make a boxplot. Label the boxplot with the 5 number summary.
See p. 46. (I prefer horizontal boxplots to the vertical boxplots on p. 46.)

   E) Suppose that the mean GRE math scores for the 50 states and the District of
Columbia were entered into a computer. The computer gave the following descriptive
statistics. From these statistics, draw a boxplot of the 51 GRE scores.

N	MEAN	MEDIAN	STDEV	MIN	MAX	Q1	Q3
51	529.30	521.00	34.83	473.00	600.00	500.00	557.00