Stat 328 Lab 2
Summer 2005

Chapter 6 of MMD&S:

Do Problems 6.1, 6.2, 6.3, 6.15, 6.17, 6.18, 6.20, 6.91b

Additional Part for 6.91b: Also make a 95% prediction interval for single additional odor threshold assuming the population of thresholds is normal.

Do problems 6.31, 6.32, 6.33, 6.45, 6.54a, 6.63, 6.91c

Chapter 7 of MMD&S:

Do Problems 7.1, 7.2, 7.3, 7.4, 7.5, 7.10, 7.11, 7.23b, 7.25, 7.65, 7.83, 7.84

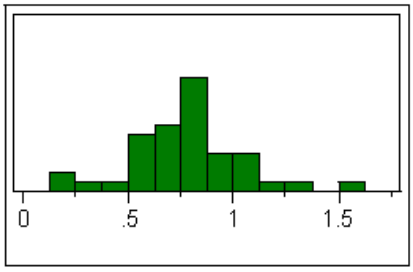
Additional Part for 7.3: Also make a 95% prediction interval for a single additional monthly rent drawn from this population under the assumption that the population is normal.

Additional Part for 7.23: Also make a 95% prediction interval for the annual earnings of an additional white female worker drawn from this population.

Below is a JMP report on the Expense Ratios of 40 mutual funds in 1991.

Distributions

Exp Ratio



Quantiles

100.0%	maximum	1.5100
99.5%		1.5100
97.5%		1.5048
90.0%		1.0560
75.0%	quartile	0.8800
50.0%	median	0.7700
25.0%	quartile	0.6075
10.0%		0.4730
2.5%		0.2102
0.5%		0.2100
0.0%	minimum	0.2100

Moments

Mean	0.76075
Std Dev	0.256419
Std Err Mean	0.0405434
upper 95% Mean	0.8427568
lower 95% Mean	0.6787432
N	40

Suppose that it is sensible to treat these 40 funds as a random sample of the very large population of mutual funds.

a) Give a 90% confidence interval for the mean expense rate of mutual funds in this year.

b) Judging that the histogram above is reasonably "bell-shaped" it is perhaps sensible to assume that expense rates were normally distributed in 1991. Under this assumption, give an interval that you are "90% sure" would contain one additional rate drawn from this population.