

# Homework / Assignment

## Confidence intervals

13.2 Answer the following for the data as follows:

The number of disk I/O's performed by a number of programs were measured as follows: {23, 33, 14, 15, 42, 28, 33, 45, 23, 34, 39, 21, 36, 23, 34, 36, 25, 9, 11, 19, 35, 24, 31, 29, 16, 23, 34, 24, 38, 15, 13, 35, 28}.

- What is the 10-percentile and 90-percentile from the sample?
- What is the mean number of disk I/O's per program?
- What is the 90% confidence interval for the mean?
- What fraction of programs make less than or equal to 25 I/O's and what is the 90% confidence interval for the fraction?
- What is the one-sided 90% confidence interval for the mean?

## Regression

14.4 The designers of a database information system that allows its users to search backward for several days wanted to develop a formula to predict the time it would take to search. Actual elapsed time was measured for several different values of days. The measured data is shown in Table 14.4. Prepare a simple regression model for this data to predict elapsed time as a function of the number of days and interpret results.

**TABLE 14.4 Measured Performance of a Database Information System**

Number of Days	Elapsed Time
1	0.65
2	0.79
4	1.36
8	2.26
16	3.59
25	5.39