

MA 486/586-1G (Statistics), Dr. Chernov
Due Mon, Feb 25

Assignment #7

7th Edition: 8.1-2, 8.1-8, 8.1-18a.

6th Edition: 8.1-2, 8.1-8, 8.1-18a.

The starred problems are for extra credit. Each problem is graded on the base of “4 points max”.

The first additional assignment for 586 students (due by the final exam):

7th edition: 6.2-5c, 6.3-1ab, 6.14-4c, and the problem below.

6th edition: 7.1-5c, 7.1-22b, 9.1-1ab, 9.6-4c.

There is no equivalent of problem 7.1-22b in the 7th edition, so here it is:

7.1-22. Let X_1, X_2, \dots, X_n be a random sample of size n from a two-parameter (shifted) exponential distribution with probability density function

$$f(x; \delta, \theta) = \frac{1}{\theta} e^{-(x-\delta)/\theta}, \quad \delta \leq x < \infty$$

where $-\infty < \delta < \infty$ and $0 < \theta < \infty$ are unknown parameters.

(b) Find the maximum likelihood estimators for δ and θ .