MA 486/586-1C (Statistics), Dr. Chernov Assignment #7
Due Mon, Feb 24

7.1-2 (use common sense, not formal rules), 7.1-8, 7.1-18a, 7.2-2, 7.2-6.

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

6.1-5c, 10.1-7ab, 10.7-4c, and the problem below.

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

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

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

Find the maximum likelihood estimators for δ and θ.