

MA 485-1E (Probability Theory), Dr. Chernov
Due Mon, Oct 7

Assignment #6

Chapter VII. Problems 7.1.6, 7.1.14*, 7.1.16*.

Two more problems:

6-A. Let X be an exponential random variable with parameter λ . Find

$$P\left(\left|X - \frac{1}{\lambda}\right| \geq \frac{1}{2\lambda}\right)$$

6-B. Let X be an exponential random variable with parameter λ . Find

$$P\left(\left|X - \frac{1}{\lambda}\right| \geq \frac{2}{\lambda}\right)$$

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

Note: the average on the first test is 15.3 out of 20 (or 76.5%).