Prb:

1) Having the probability density function that describes the energy distribution of fission neutrons coming from a specific fissile nuclide (the first assignment), generate at least 10000 samples randomly from this distribution by the acceptance-rejection method, and use these samples to estimate:

* the mean value of the fission neutron energy,
* the variance and the standard deviation of the energy of the fission neutrons,
* confidence intervals for the estimated mean value,
* the variance and the standard deviation of the mean value.

2) Compare the results with those obtained deterministically in the previous assignment.

3) Repeat the Monte Carlo simulation with different RNG seeds. How often does the accurate expectation value (computed in the previous assignment) fall into the computed confidence intervals?

You can use the RNG provided by the programming language you use, or you can implement the RNG yourself if you wish.