

MTH 210: Lab 6

P 1. Propose an optimal importance sampling estimator within the class of $N(0, \sigma^2)$ importance density for estimating the expectation of standard normal random distribution. Using this importance estimator, estimate the expectation based on 10^4 samples.

P 2. Estimate the variance of Gamma(2,4) using importance sampling estimator using optimal importance density (10^4 samples). Estimate the variance of the importance sampling estimator also.