IE522_hw2

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Question 1.1

From slide 1 page 57, a laplace distribution has

$$mean = \mu \quad and \quad Var(x) = 2b^2$$

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Because,

$$\hat{\mu} = E[x] \quad and \quad Var(x) = 2\hat{b}^2 = E[x^2] - E[x]^2$$

So, the point estimators are

$$\hat{\mu} = E[x] \quad and \quad \hat{b} = \sqrt{(E[x^2] - E[x]^2)/2}$$

where

$$E[x^2] = (\sum_{i=0}^{n} x^2)/n \quad and \quad E[x] = (\sum_{i=0}^{n} x)/n$$

(from the moment matching approach)