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Exercise: Estimates and estimators

(3/3 points)

Valerie wants to find an estimator for an unknown random variable Θ . She can observe a random variable X whose distribution satisfies $\mathbf{E}[X^2 | \Theta] = \Theta$. She goes ahead and observes that X took a numerical value of **5**. She then estimates Θ as the square of the observed value, namely, **25**.

For each of the following questions, choose the most appropriate answer.

1) X^2 is an

Estimator ▼



Answer: Estimator

2) **25** is an

Estimate ▼



Answer: Estimate

3) $X^3 + 2$ is another (not necessarily good)

Estimator ▼



Answer: Estimator


Answer:

In the first and the third cases, we have a random variable $g(X)$, which is determined as a function of the observation X . Such a random variable is called an estimator.


In the second case, we are dealing with the realized numerical value of an estimator, which we call an estimate.

You have used 1 of 1 submissions


Unit overview**Lec. 14:
Introduction to
Bayesian
inference**

Exercises 14 due Apr
06, 2016 at 23:59 UTC 


**Lec. 15: Linear
models with
normal noise**

Exercises 15 due Apr
06, 2016 at 23:59 UTC 


Problem Set 7a

Problem Set 7a due
Apr 06, 2016 at 23:59
UTC 


**Lec. 16: Least
mean squares
(LMS) estimation**

Exercises 16 due Apr
13, 2016 at 23:59 UTC 

**Lec. 17: Linear
least mean
squares (LLMS)
estimation**

Exercises 17 due Apr
13, 2016 at 23:59 UTC 

Problem Set 7b

Problem Set 7b due
Apr 13, 2016 at 23:59
UTC 

Solved problems**Additional
theoretical
material****Unit summary**

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