

Quiz Problem 12

Problem. Let $X \sim f_\theta$ so that for $\theta > 0$

$$f_\theta(x) = 2x/\theta^2 \text{ for } 0 < x < \theta.$$

Notice that $T = X/\theta$ has PDF $f(t) = 2t$ for $0 < t < 1$. Construct a $(1 - \alpha)$ confidence interval for θ using T .

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