

STAT310
Practice Problems
Week 10

April 9, 2012

1 Maximum likelihood estimators.

1. Let X_1, \dots, X_n be an iid random sample from a Gamma(α, β) population. Find the MLE of β , assuming α known.
2. Let X_1, \dots, X_n be an iid random sample from a Uniform($0, \theta$) population. Find the MLE of θ .
3. Let X_1, \dots, X_n be an iid random sample from a Geometric(p) population. Find the MLE of θ .
4. For the maximum likelihood estimator $\hat{\theta}_{MLE}$ found in Question 2, find the mean of the $\hat{\theta}_{MLE}$.