1. Let $X_1, X_2, \ldots, X_n$ be independent identically distributed random variables with density function

$$h(t; \theta) = \frac{1}{2\theta} e^{-|t|/\theta}, \quad -\infty < t < \infty.$$

Find the maximum likelihood estimator for θ and compute the asymptotic variance of the maximum likelihood estimator.