

7. The  $X_1, \dots, X_n$  be a random sample from a population with PDF

$$P_\theta(X = x) = \theta^x(1 - \theta)^{1-x}, \quad x = 0 \text{ or } 1, \quad 0 \leq \theta \leq 0.5.$$

(a) Find the MME of  $\theta$ .

(b) Find the MLE of  $\theta$ .