Name:

1. Let $X_1, X_2, ..., X_n$ be a random sample from the following distribution:

$$f(x) = \begin{cases} \alpha x^{\alpha-1}, & 0 \leq x \leq 1, \ \alpha > 0 \\ 0, & \text{elsewhere.} \end{cases}$$

(a) What is the MLE for α?

(b) What is the MLE for $1/\alpha$?