107. Let $X_1, ..., X_n$ be IID with geometric(θ) distribution

$$P_\theta(X = x) = \theta(1-\theta)^{x-1}, \quad x = 1, 2, ..., 0 < \theta < 1$$

Show that $\sum_{i=1}^n X_i$ is sufficient for θ and find the family of distributions of $\sum_{i=1}^n X_i$. Is the family complete?