

Econ 703 Fall 2007
Homework 12

Not to be collected (solutions will be posted Thursday December 13).

1. Sundaram, #3, p. 198.
2. Show that the real-valued function

$$f(x) = \sum_{j=1}^n x_j \ln x_j - \sum_{j=1}^n x_j \ln \left(\sum_{k=1}^n x_k \right)$$

is convex on the set $C(\alpha) = \{x \in \mathbb{R}^n : x > 0, x_1 + \dots + x_n = \alpha\}$, where $\alpha > 0$.

3. Sundaram, #17, p. 200.