Bent E. Sørensen

ECONOMICS 6331 – Probability and Statistics, Fall 2004

Homework 3. Wednesday September 15, 2004. Due Monday September 20.

1. Ramanathan, Exercise 3.1

2. Ramanthan, Exercise 3.8

3. Assume that a random variable X is uniformly distributed on the interval $[2, 4]$.
a) If $f(x) = 7 + 3x$, what is the distribution of the random variable $Y = f(X)$?
b) If $f(x) = e^x$, what is the distribution of the random variable $Y = f(X)$?
You have to be explicit about both the density for Y and the support (the area where the density for Y non-zero). For question a) a clearly marked graph will be a sufficient answer.