

# Problem Set 4 (Due 10/26/2011 in class)

October 16, 2011

1. The random variable  $X$  conditional on another random variable  $Y$  has pdf:  $f_{X|Y}(x|y) \forall y : f_Y(y) > 0$ . Let  $Z = g(Y)$  for a one-to-one function  $g$ . Show that  $f_{X|Y}(x|y) = f_{X|Z}(x|g(y))$ .
2. 2.1.16 of HMC
3. 2.3.10 of HMC
4. 2.4.6 of HMC
5. 2.5.11 of HMC
6. 2.6.1 of HMC
7. 3.5.7 of HMC
8. 3.5.8 of HMC