STA 213

Problem 2.1
In all 3 cases, Theorem 2.1.2 is applicable and yields the following answers.

(a) $f_Y(y) = \frac{1}{2} y^{-\frac{1}{2}},\ 0 < y < 1.$

(b) $f_Y(y) = \frac{(n+m+1)!}{n!m!} \exp\{-y(n+1)\}(1 - \exp\{-y\})^m,\ 0 < y < \infty.$

(c) $f_Y(y) = \frac{\log(y)}{\sigma^2 y} \exp\{-\frac{1}{2} \left(\frac{\log(y)}{\sigma}\right)^2\},\ 1 < y < \infty.$