

CS 333202: Probability and Statistics
HW10 Part II

1. (a) $P(X > 1, Y < 1) = e^{-1}(1 - e^{-2})$

(b) $P(X < Y) = \frac{1}{3}$

(c) $P(X < a) = 1 - e^{-a}$

2. $f_{X/Y}(a) = 1/(a+1)^2, 0 < a < \infty$

3. 0.36

4. $3/4$