

Problem 1) [9 points] pg 188, #11

Problem 2) [7 points] pg 189, #13

Problem 3) [9 points] Two continuous random variables X and Y have a joint PDF given by

$$f_{X,Y}(x,y) = \begin{cases} c(x+y), & \text{if } 0 \leq x \leq 2, 0 \leq y \leq 2 \\ 0, & \text{otherwise} \end{cases}$$

- (a) [3 points] Find c
- (b) [3 points] Find $f_X(x)$, $f_Y(y)$
- (c) [3 points] Find $E(X)$, $E(Y)$, and $E(2X + 3Y)$