MECH 6325 HW1

b) $$f_{XY}(x,y) = \begin{cases} 6e^{-2x}e^{-3y}, & x>0, y>0 \\ 0, & \text{otherwise} \end{cases}$$

c) $$R_{XY} = \begin{bmatrix} E[X^2] & E[XY] \\ E[YX] & E[Y^2] \end{bmatrix}$$

$$R_{XY} = \begin{bmatrix} \frac{1}{2} & \frac{1}{6} \\ \frac{1}{6} & \frac{2}{9} \end{bmatrix}$$