MECH 6325 HW1

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

e) $C = \begin{bmatrix} \sigma_x^2 & C_{XY} \\ C_{YX} & \sigma_Y^2 \end{bmatrix} = \begin{bmatrix} \frac{1}{4} & 0 \\ 0 & \frac{1}{9} \end{bmatrix}$

f) $\rho = \frac{C_{XY}}{\sigma_x \sigma_y} = 0$