CS 333202: Probability and Statistics
HW12 Part III

1. $\begin{pmatrix} t \\ y \end{pmatrix} (\frac{\lambda_2}{\lambda_1+\lambda_2+\lambda_3})^y (\frac{\lambda_1+\lambda_3}{\lambda_1+\lambda_2+\lambda_3})^{t-y}$

2. $P(X+Y \geq 12) = \frac{5}{2}e^{-3/2} = 0.558.$

3. $P(X_1 + X_2 + \cdots + X_{12} \leq 2700) = \frac{1}{2}$