Solution (4)

- We can solve these equations (assuming $P_0(t) = 1$) to get

$$P_0(t) = \frac{\mu}{\lambda+\mu} + \frac{\lambda}{\lambda+\mu}e^{-(\lambda+\mu)t}$$

$$P_1(t) = \frac{\lambda}{\lambda+\mu} - \frac{\lambda}{\lambda+\mu}e^{-(\lambda+\mu)t}$$

Correction:
Should be
$P_0(0)$ not $P_0(t)$