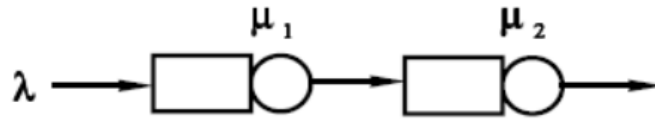


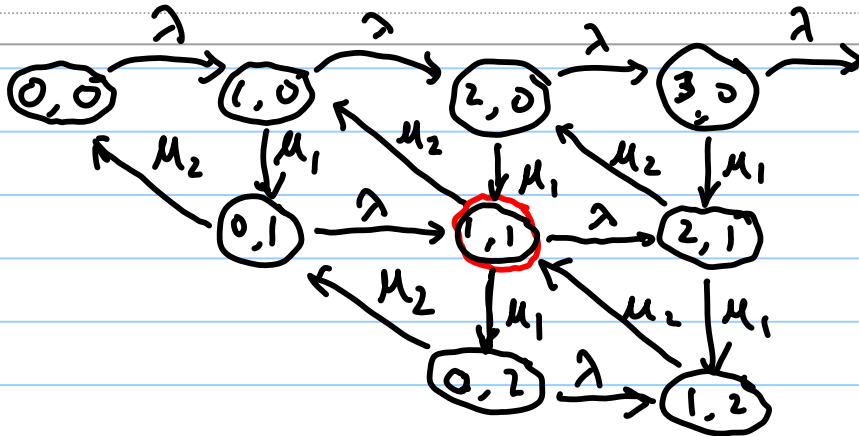
CDA6530

$$\pi(i,j) = (m,n)$$

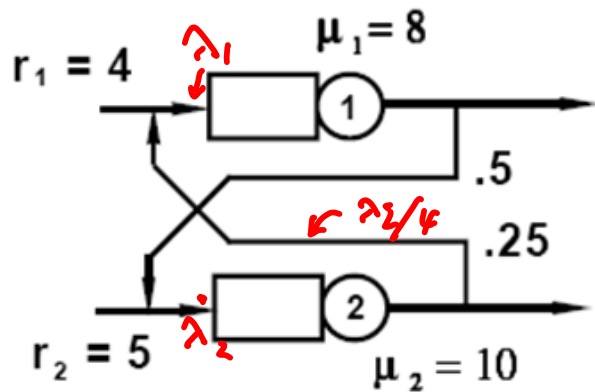


Note Title

10/23/2012



M/M/1 queue  
 $\pi_i = (1-\rho) \cdot \rho^i$



$$\lambda_1 = 4 + \lambda_2/4$$

$$\lambda_2 = 5 + \lambda_1/2$$

$T_1$ : response time of a job  
 come in from  $V_1$   
 $T_2$ : from  $V_2$

$$\begin{cases} E[T_1] = \frac{1}{\mu_1 - \lambda_1} \cdot \frac{1}{2} + \left( \frac{1}{\mu_1 - \lambda_1} + E[T_2] \right) \cdot \frac{1}{2} \\ E[T_2] = \frac{1}{\mu_2 - \lambda_2} \cdot \frac{3}{4} + \frac{1}{4} \left( \frac{1}{\mu_2 - \lambda_2} + E[T_1] \right) \end{cases}$$

M/M/1:  $E[T] = \frac{1}{\mu} + E[W] = \frac{1}{\mu - \lambda}$

