

1. Following equation holds for open networks (mean value method). Solve the equation by multiplying the both sides with $E[S_i^r]$ and taking a sum over r .

$$E[T_i^r] = E[S_i^r] + \lambda \sum_{r'=1}^R e_{ir'} E[T_i^{r'}] E[S_i^{r'}].$$

2. There are two customers in a closed network (see figure below). What is the average return time for a customer leaving a queue 4?

