



MathsNET

A joined up approach to
teaching and learning
mathematics

The M/M/1 Queue

- Write out the transition graph for an M/M/1 Queue with finite capacity
- Write out the jump rate matrix for an M/M/1 Queue with infinite capacity
- How do you determine the stationary distribution of a continuous time Markov chain.
- Explain why the Poisson process does not have a stationary distribution.
- Calculate the fourth element of the stationary distribution vector π for an M/M/1 Queue.



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- Explain why the zeroth element of the stationary distribution vector π_0 is given by $\pi_0 = \left(1 - \frac{\lambda}{\mu}\right)$.