The arrival rate is the number of arrivals per unit of time.

λ: the arrival rate (the expected time between each customer arriving, e.g. 30 seconds); μ: the reciprocal of the mean service time (the expected number of consecutive service completions per the same unit time, e.g. per 30 seconds)

service rate denotes the rate at which customers are being served in a system. It is the reciprocal of the service time. For example, a supermarket cash desk with an average service time of 30 seconds per customer would have an average service rate of 2 per minute.

Importance of Replacement.

The Replacement Theory in Operations Research is used in the decision making process of replacing a used equipment with a substitute; mostly a new equipment of better usage.

The replacement might be necessary due to the deteriorating property or failure or breakdown of particular equipment.

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