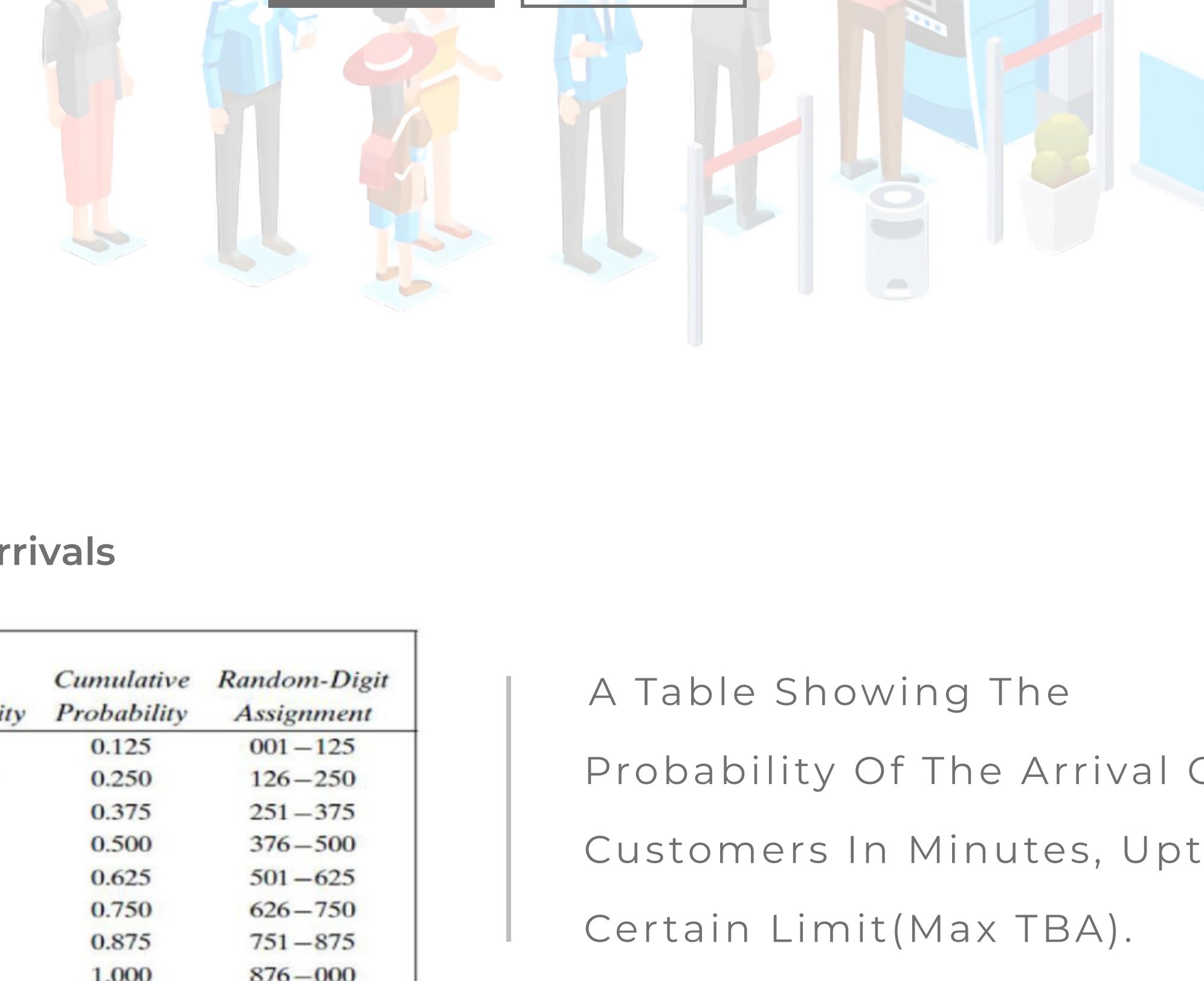




Single Channel Queueing

Single point of entry to the system, having one central process or server, thus efficiency of this type of system largely depends on the power of the central process.



i Distribution Of Time Between Arrivals

Time between Arrivals (Minutes)	Probability	Cumulative Probability	Random-Digit Assignment
1	0.125	0.125	001–125
2	0.125	0.250	126–250
3	0.125	0.375	251–375
4	0.125	0.500	376–500
5	0.125	0.625	501–625
6	0.125	0.750	626–750
7	0.125	0.875	751–875
8	0.125	1.000	876–000

A Table Showing The Probability Of The Arrival Of Customers In Minutes, Upto A Certain Limit(Max TBA).

i Table Of Service-Time Distribution

Time between Arrivals (Minutes)	Probability	Cumulative Probability	Random-Digit Assignment
1	0.125	0.125	001–125
2	0.125	0.250	126–250
3	0.125	0.375	251–375
4	0.125	0.500	376–500
5	0.125	0.625	501–625
6	0.125	0.750	626–750
7	0.125	0.875	751–875
8	0.125	1.000	876–000

A Table Showing The Probability Of The Average Service Time A Customer Requires, Upto A Certain Limit(Max Service Time).

SQC SOLVER

1 Step #1 Generating TBA Table

Max TBA:

Probabilities: Manual Input Auto Same Probability

Enter Manual Probabilities:

Time between Arrivals (Minutes)	Probability	Cumulative Probability	Random-Digit Assignment
1	0.125	0.125	001–125
2	0.125	0.250	126–250
3	0.125	0.375	251–375
4	0.125	0.500	376–500
5	0.125	0.625	501–625
6	0.125	0.750	626–750
7	0.125	0.875	751–875
8	0.125	1.000	876–000

2 Step #2 Generating Service Time Table

Max Service Time:

Probabilities: Manual Input Auto Same Probability

Enter Manual Probabilities:

Time between Arrivals (Minutes)	Probability	Cumulative Probability	Random-Digit Assignment
1	0.125	0.125	001–125
2	0.125	0.250	126–250
3	0.125	0.375	251–375
4	0.125	0.500	376–500
5	0.125	0.625	501–625
6	0.125	0.750	626–750
7	0.125	0.875	751–875
8	0.125	1.000	876–000

3 Step #3 Generating Service Time Table

Enter Number of Customers:

Range Random Numbers: Manual Input Auto Generated in range

Enter Manual Random Numbers:

Time between Arrivals (Minutes)	Probability	Cumulative Probability	Random-Digit Assignment
1	0.125	0.125	001–125
2	0.125	0.250	126–250
3	0.125	0.375	251–375
4	0.125	0.500	376–500
5	0.125	0.625	501–625
6	0.125	0.750	626–750
7	0.125	0.875	751–875
8	0.125	1.000	876–000

Average Waiting Time **2.8**

Average Service Time **3.4**

Average Time Between Arrivals **4.3**

Average Time Customer Spends in system **6.2**

probability of Waiting in Queue **0.65**

Average Waiting Time of Those Who Wait **4.3**

probability of Busy Server **0.79**

probability of Idle Server **0.21**

The Time I Took to Solve This Math! **2.05**

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