

1. Was completed via spreadsheet found below

Sequence = (T3, T2, T1, S2, T3, T3, S2, T2, T2, T1, S1, T2, S2, T2, S1, T2, T1, T3, T1)

Task	Probability
T1	0.07
T2	0.31
T3	0.25
S1	0.15
S2	0.22

Task	Cumulative probability
T1	0.07
T2	0.38
T3	0.63
S1	0.78
S2	1

Random Numbers	Task
0.39587	T3
0.25626	T2
0.0291	T1
0.79537	S2
0.44381	T3
0.47382	T3
0.98622	S2
0.37496	T2
0.13583	T2
0.23516	T2
0.0478	T1
0.64926	S1
0.14167	T2
0.8613	S2
0.14739	T2
0.65234	S1
0.22749	T2
0.06301	T1
0.6024	T3
0.03467	T1

2. Was completed via spreadsheet found below.

Sequence = (3, 5, 3, 3, 2, 1, 5, 7, 3, 3, 3, 1, 1, 2, 3, 5, 3, 2, 5, 1)

Interarrival times	Probability
1	0.14
2	0.22
3	0.34
5	0.23
7	0.07

Int. times	Cumulative probability
1	0.14
2	0.36
3	0.7
5	0.93
7	1

Start Time 8:10:00  
End Time 9:11:00

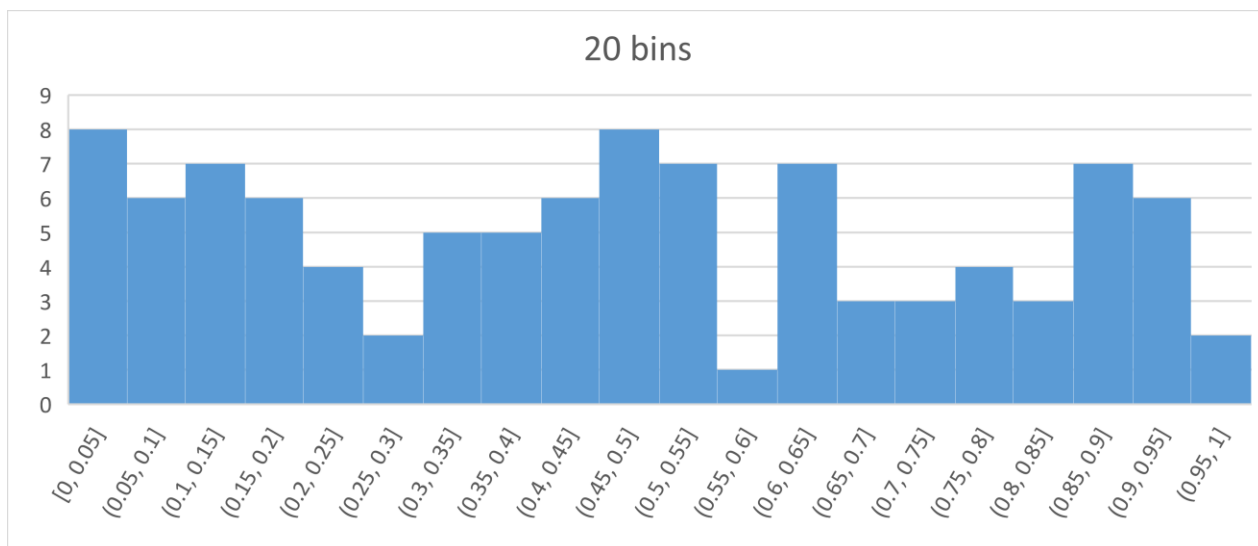
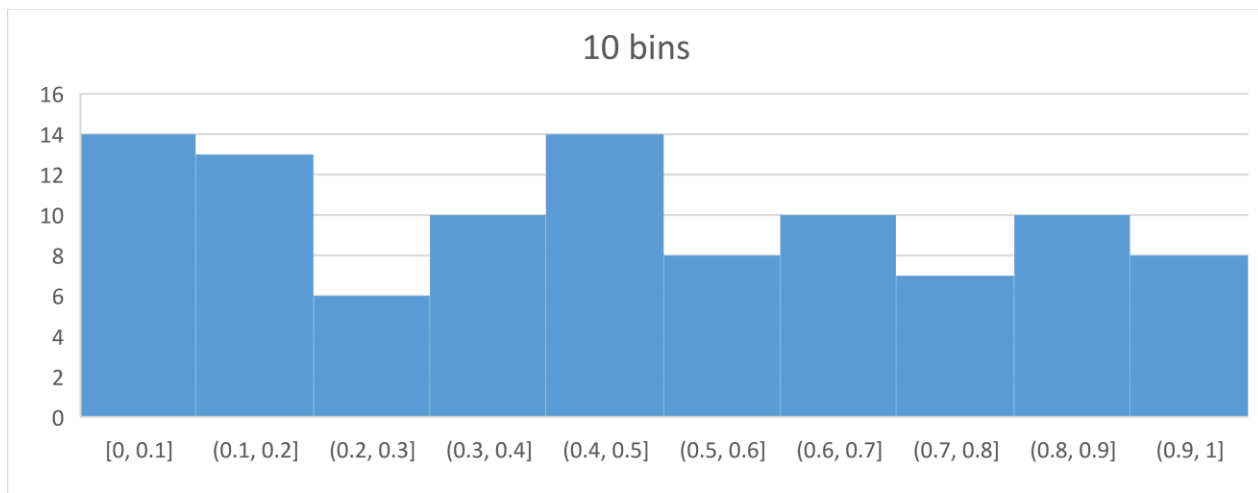
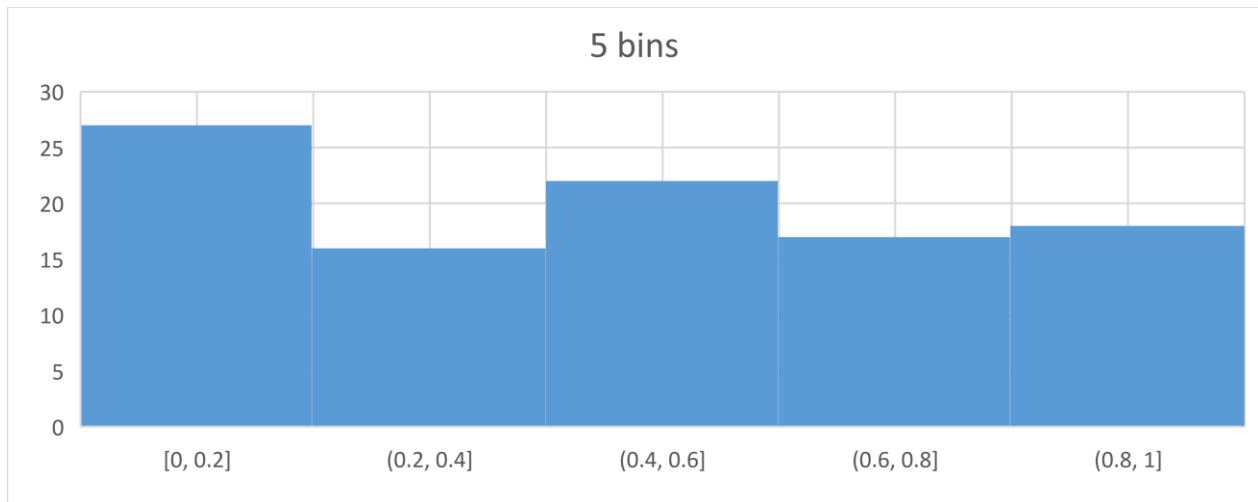
Random Numbers	Interarrival times
0.62589	3
0.7297	5
0.64817	3
0.55231	3
0.18171	2
0.05558	1
0.84907	5
0.95678	7
0.37868	3
0.42079	3
0.67668	3
0.08061	1
0.05571	1
0.23037	2
0.45709	3
0.76553	5
0.48789	3
0.27389	2
0.80047	5
0.12426	1
total time	61

3.

$(1 \cdot 0.14) + (2 \cdot 0.22) + (3 \cdot 0.34) + (5 \cdot 0.23) + (7 \cdot 0.07) = 3.24$  minutes

Arrival rate is one custom every 3.24 or ~18 customers per hours

4.



#### 4 (continued)

d. Each histogram has peaks in similar places. The peak ranges 0-0.2 and 0.4-0.6 on the five bin graph can still be seen in the more detailed graphs. Similarly, low points, notably 0.25-0.3, 0.55-0.6 and 0.95-1 on the 20 bins and their impact on the larger bins of the 10 and 5 bin graphs can be seen.

5. Not completed