**IE3081 – Homework #3 – Report**

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**For the given example**

**a)** **1.** The average waiting time for a customer = 1.63 minutes

**2.** The probability that a customer has to wait in the queue = 0.46

**3.** Probability of idle server = 25% of the time, therefore the server is busy about 75% of the time.

**4.** The average service time = 3.20 minutes

**5.** The average time between arrivals = 4.24 minutes

**6.** The average waiting time of those who wait = 3.54 minutes

**7.** The average time a customer spends in the system = 4.83 minutes

**b)** Customer’s average waiting time = 1.63 minutes

Proportion of time that the server is idle = 106 minutes

**For my own system**

**a)** **1.** The average waiting time for a customer = 60/50 = 1.2 minutes

**2.** The probability that a customer has to wait in the queue = 35/50 = 0.7

**3.** Probability of idle server = 157.5/525 = 30% of the time, therefore the server is busy about 70% of the time.

**4.** The average service time =

**5.** The average time between arrivals = 525/49 = 10.71 minutes

**6.** The average waiting time of those who wait = 60/35 = 1.71 minutes

**7.** The average time a customer spends in the system =

**b)** Customer’s average waiting time = 1.2 minutes

Proportion of time that the server is idle = 157.5 minutes