Assignment 4

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1. The results are dynamically changing since they based on random numbers. Please see the excel file for the results.
2. The queue will disappear at 60mins.

Queue disappear means queue length is zero, and A(t)-D(t)=0.

I found t=60mins, and queue length is zero.

Total waiting time:

When t=60, W(t)=dt

W(60)=1350+1350=2700

Average Queue Length=2700/60=45

3.

V(1) initial=55ft/s

Deceleration=7.33ft/s^2

At 7.5s, the velocity of vehicles is zero, thus the distance of later time should remain constant as this moment.

Result is in the excel