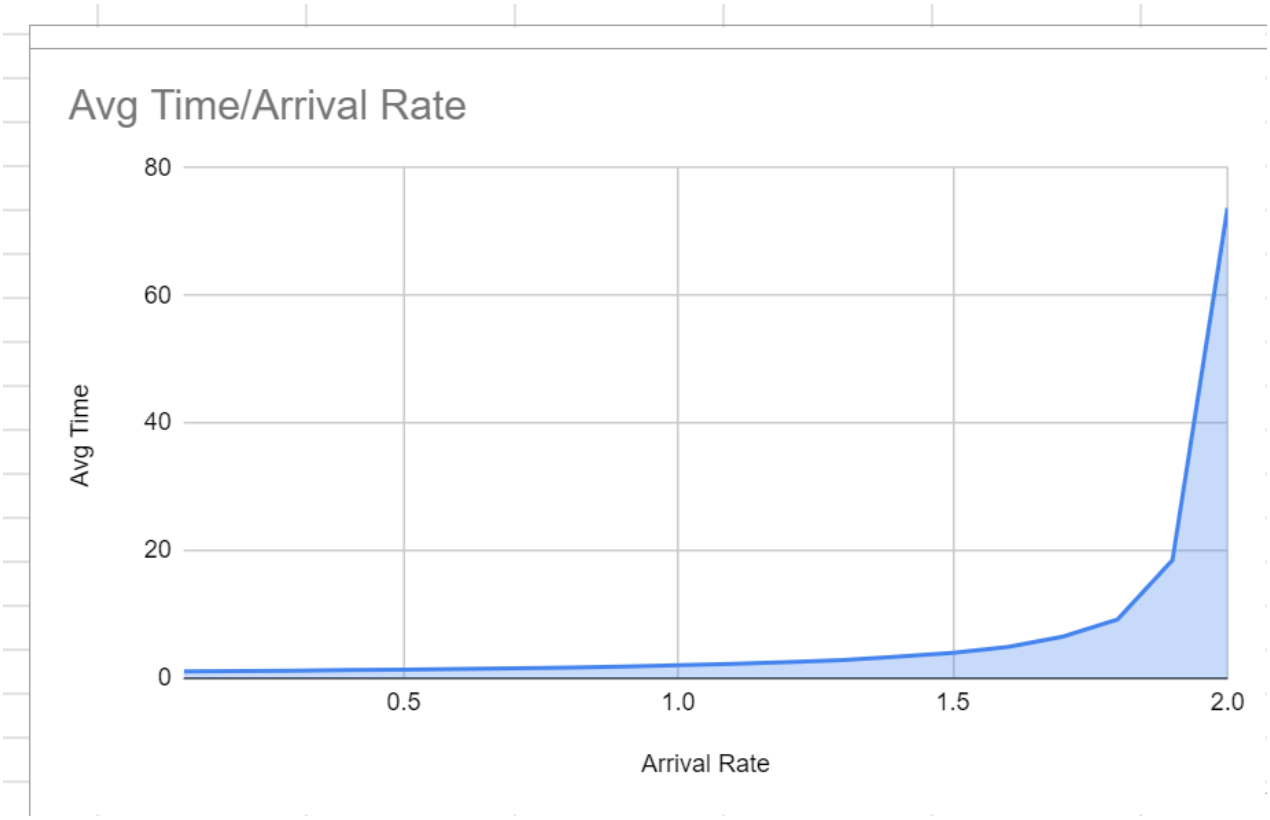
- For the case *K=2*, plot the system time vs. increasing arrival rate *λ*.
  - 

- What is the value of the system time when *λ=1.5*?
  - 3.9902
- What value of *λ* would cause the queue to become unstable?
  - when λ is larger than 1.6, there's a huge jump in avg system time.
- What value of *λ* would cause the queue to become unstable when *K=3*?
  - Avg system time jumps from 13 to 30 when *λ* increase from 2.8 to 2.9. So a $\lambda > 2.8$ makes queue of K=3 unstable
- What did you do to assess the accuracy of your estimates?
  - My estimates are based on averages after 100k departures. So the uncertainties are mostly ruled out.
- Write down two applications of the above queueing model?
  - Network Load balancing
  - Ticket purchasing service