Assignment Day 6

1) The time required to play a game of Battleship is uniformly distributed between 15 and 60 minutes.
   a. Find the expected value and variance of the time to complete the game.
   b. What is the probability of finishing within 30 minutes?
   c. What is the probability that the game would take longer than 40 minutes?

2) The distribution of the SAT scores in math for an incoming class of business students has a mean of 590 and standard deviation of 22. Assume that the score are normally distributed.
   a. Find the probability that an individual's SAT score is less than 550.
   b. Find the probability that an individual's SAT score is between 550 and 600.
   c. Find the probability that an individual's SAT score is greater than 620.
   d. What percentage of students will have score better than 700?
   e. Find the standardized values for students scoring 550, 600, 650 and 700 on the test.

3) The actual delivery time from Giodanni's Pizza is exponentially distributed with a mean of 20 minutes.
   a. What is the probability that the delivery time will exceed 30 minutes?
   b. What portion of deliveries will be completed within 20 minutes?

4) Perform Butler Inventory level simulation using python.