» Assume that you shuffle a regular deck of cards and draw a single card. After that you reshuffle and draw a second card.

» If Aces count as 1, and the 10, Jack, Queen, and King count as 10, and all other cards are their face value.

» Calculate all possible outcomes of the two-card draw.

» Determine the probability of each outcome

» Write a pdf for this set of outcomes: It may have multiple parts.

» What are the median and mode for this distribution?

» Write a python routine that

» Generates a random card from a deck of 52

» Generates a second random card from a deck of 52

» Adds the two card values

» Records the value

» Repeats this process at least 10,000 times

» Determines the median and mode from the simulated data

» Compare the results of your first analysis with the results from the program