

Handout for sampling and probability

Try:

Figure out the probability that a random poker hand is "four-of-a-kind". This is a five card hand drawn at random without replacement with four card of one face value, and one card of another face value.

Try:

Suppose we wanted to simulate coin tossing using python. How could we do it using the pandas sample function? Construct an appropriate data frame and show how to sample n coin tosses and report the number of tails.

Try:

Instead of coin tossing, suppose we roll a 6-sided die with sides number 1,2, ... ,6.

a) If we roll it twice, what is the probability of "snake eyes", i.e., rolling two 1's? Hint: consider how many possible outcomes there are.

b) If we roll it 10 times, what is the probability of getting exactly two 1's?