Exercise

1.

Rolling two fair dice. Write a function to calculate the practical probability of the following evens with n times of experiments. :

a/ Both dice are the same

b/ Both dice are different

c/ Both dice are even

d/ Both dice are odd

e/ One die is even and the other is odd

f/ Both dice are 6

g/ Summation of both dice are greater than 10.

2.

Given a close urn with 2 blue balls, 3 red balls and 5 white balls. Choose 3 balls from the urn. Write an function to calculate the practical probability of the following evens with n times of experiments.

a/ All 3 balls are same color.

b/ All 3 balls are different colors.

c/ Only 2 balls are same color.

d/ There are 2 red balls and 1 white ball.

e/ List all the cases that all 3 balls are white.

3.

Drawing 4 cards from a deck of 52 cards. Write a function to compute the practical probabitity of the following evens with n times of experiments.

a/ All 4 cards are from the same suit.

b/ All 4 cards are differents suits.

c/ All 4 cards are same color.

d/ All 4 cards are same value.

e/ All 4 cards are numbers.

f/ All 4 cards are faces.

4.

Given a close urn that contains 9 balls: 2 white balls, 3 blue balls, and 4 red balls. Knowing that the probabilities of choosing each ball are equals.

a/ Create a set to save all the balls. Call the 2 white balls 'W1' and 'W2'. Similiarly, 3 blue balls are 'B1', 'B2', 'B3' and 4 red balls are 'R1', 'R2', 'R3'. Save them in a variable named URN.

b/ Find the subset of 3 balls from set URN (regardless the order). Save your result in variable U3.

c/ List all the cases that 3 balls in question (b) including 1 white ball, 1 blue ball, and 1 red ball. Save your result in variable white1blue1red1.

d/ Find the probability that randomly choose 3 balls including 1 white ball, 1 blue ball, and 1 red ball. Save your result in variable P.

5.

Given an deck of 52 cards. Randomly choose 5 cards. Find the probability that these 5 cards make a straight.

a/ Theorical probability

b/ Practical probability

6.

Let set E = {0,1,2,3,4,5}

a/ List all 3-digits numbers in which every digit is an element in E.

b/ List all 4-digits numbers in which all digits are pairwise different and every digit is an element in E.