Probability By Topic

1. **HKDSE MATH CORE 2019 Past Paper I Q15**

   There are 21 boys and 11 girls in a class. If 5 students are selected from the class to form a committee consisting of at least 1 boy, how many different committees can be formed?

   (3 marks)

2. **HKDSE MATH CORE 2020 Past Paper I Q15**

   In a box, there are 3 blue plates, 7 green plates and 9 purple plates. If 4 plates are randomly selected from the box at the same time, find

   (a) the probability that 4 plates of the same colour are selected;

   (3 marks)

   (b) the probability that at least 2 plates of different clours are selected.

   (2 marks)

3. **HKDSE MATH CORE 2021 Past Paper I Q15**

   A queue is randomly formed by 7 teachers and 3 students.

   (a) How many different queues can be formed?

   (1 marks)

   (b) Find the probability that no students are next to each other in the queue.

   (3 marks)

4. **HKDSE MATH CORE 2022 Past Paper I Q15**

   There are 10 boys and 12 girls in a class. If 4 students are randomly selected from the class to form a committee.

   (a) find the probability that there are 2 boys and 2 girls in the committee.

   (2 marks)

   (b) find the probability that the number of boys and the number of girls in the committee are different.

   (2 marks)

5. **HKDSE MATH CORE 2023 Past Paper I Q15**

   In a box, there are 4 red balls and 4 black balls. From the box, 2 balls are randomly chosen at the same time.

   (a) Find the probability that the 2 balls chosen are red.

   (2 marks)

   (b) In a bag, there are 8 red balls. The 2 balls form the box are put into the bag and then 3 balls are randomly chosen at the smae time from the bag. Find the probability that the 3 balls chosen are of the same colour.

   (2 marks)

6. **HKDSE MATH CORE 2018 Past Paper I Q15**

   An eight-digit phone number is formed by a permutation of 2, 3, 4, 5, 6, 7, 8 and 9.

   (a) How many different eight-digit phone numbers can be formed?
   (1 mark)

   (b) If the first digit and the last digit of an eight-digit phone number are odd numbers, how many different eight-digit phone numbers can be formed?
   (2 marks)

7. **HKDSE MATH CORE 2017 Past Paper I Q17**

   In a bag, there are 4 green pens, 7 blue pens and 8 black pens. If 5 pens are randomly drawn from the bag at the same time,

   (a) find the probability that exactly 4 green pens are drawn;
   (2 marks)

   (b) find the probability that exactly 3 green pens are drawn;
   (2 marks)

   (c) find the probability that not more than 2 green pens are drawn.
   (2 marks)