1. **Race cars for a particular race are numbered sequentially from 12 to 115. What is the probability that a car selected at random will have a tens digit of 1? Ans:7/52**

2. **Three friends play marbles each week. When they combine their marbles, they have 100 in total. 45 of the marbles are new and the rest are old. 30 are red, 20 are green, 25 are yellow, and the rest are white. What is the probability that a randomly chosen marble is new OR yellow? Ans: 47/80**

3. **Flight A is on time for 93% of flights. Flight B is on time for 89% of flights. Flight A and B are both on time 87% of the time. What is the probability that at least one flight is on time? Ans: 0.95**

4. **At a school fair, there are 25 water balloons. 10 are yellow, 8 are red, and 7 are green. You try to pop the balloons. Given that you first pop a yellow balloon, what is the probability that the next balloon you hit is also yellow? Ans: 3/8**

5. **4 cards are to be dealt successively and without replacement from an ordinary deck of 52 cards. What is the probability of receiving, in order,**

   - **a spade,**
   - **a heart,**
   - **a diamond,**
   - **a club**

   Ans: 13/52,13/51,13/50,13/49

6. **A red die and a white die are rolled. What is the probability of getting a 4 on the red die AND an odd sum of numbers on the two dice?**
   Ans: 1/12

7. **Two fair dice are tossed. What is the probability that the dice will add up to a prime number? Ans: 5/12**

8. **Three unbiased coins are tossed. What is the probability of getting at most two heads? Ans: 7/8**

9. **A problem is given to three students whose chances of solving it are 1/2, 1/3 and 1/4 respectively. What is the probability that the problem will be solved?**
   Ans: 3/4

10. Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 5? Ans: 9/20

11. In a box, there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly. What is the probability that it is neither red nor green? Ans: 1/3

12. In a class, 30% of the students offered English, 20% offered Hindi and 10% offered both. If a student is selected at random, what is the probability that he. has offered English or Hindi? Ans: 2/5

13. I forgot the last digit of a 7-digit telephone number. If 1 randomly dial the final 3 digits after correctly dialing the first four, then what is the chance of dialing the correct number? Ans: 1/1000

14. A box contains 10 bulbs, of which just three are defective. If a random sample of five bulbs is drawn, find the probability that the sample contains exactly one defective bulb. Ans: 5/12

15. Out of 17 applicants 8 boys and 9 girls. Two persons are to be selected for the job. Find the probability that at least one of the selected persons will be a girl. Ans: 25/34

16. A bag contains 50 tickets numbered 1,2,3,4.....50 of which five are drawn at random and arranged in ascending order of magnitude. Find the probability that third drawn ticket is equal to 30. Ans: 551/15134

17. A speaks truth in 75% of cases and B in 80% of cases. In what percentage of cases are they likely to contradict each other, narrating the same incident. Ans: 35/100

18. If two letters are taken at random from the word HOME, what is the probability that none of the letters would be vowels? Ans: 1/6

19. A letter is taken out at random from 'ASSISTANT'' and another is taken out from 'STATISTICS'. The probability that they are the same letter is what? Ans: 19/90

20. Four persons are to be chosen from a group of 3 men, 2 women and 4 children. Find the probability of selecting 1 man,1 woman and 2 children. Ans: 2/7