WORKSHEET 1

CHAPTER 17 – PROBABILITY

1. What is the probability of an impossible event?
   (*a*) 1 (*b*) 2 (*c*) 0 (*d*) $\frac{1}{2}$

2. Two coins are tossed simultaneously. What is the probability of getting at most one head?
   (*a*) $\frac{1}{2}$ (*b*) $\frac{3}{4}$ (*c*) $\frac{3}{5}$ (*d*) $\frac{1}{4}$

3. A die is thrown once. What is the probability of getting a number less than 3?
   (*a*) $\frac{1}{6}$ (*b*) $\frac{1}{2}$ (*c*) $\frac{1}{5}$ (*d*) $\frac{1}{3}$

4. What is probability that an ordinary year has 53 Mondays?
   (*a*) $\frac{7}{52}$ (*b*) $\frac{7}{53}$ (*c*) $\frac{1}{7}$ (*d*) $\frac{3}{7}$

5. A card is drawn at random from a well-shuffled deck of 52 cards. What is the probability of getting a black king?
   (*a*) $\frac{1}{26}$ (*b*) $\frac{1}{13}$ (*c*) $\frac{2}{39}$ (*d*) $\frac{1}{39}$

6. Two friends were born in the year 2000. What is the probability that they have the same birthday?
   (*a*) $\frac{364}{365}$ (*b*) $\frac{1}{315}$ (*c*) $\frac{1}{366}$ (*d*) $\frac{1}{183}$

7. If an event cannot occur, then it probability is
   (*a*) 1 (*b*) 0 (*c*) $\frac{1}{2}$ (*d*) $\frac{2}{3}$

8. A die is thrown once. What is the probability of getting a prime number?

9. Find the probability that a number selected at random from the number 3, 4, 5, …, 25 is prime.

10. A bag contains 5 red balls and some blue balls. If the probability of drawing a blue ball from the bag is thrice that of a red ball, find the number of blue balls in the bag.

11. One card is drawn at random from a well-shuffled deck of 52 cards. What is the probability of drawing a king?

12. In a lottery there are 10 prizes and 25 blanks. What is the probability of getting a prize?

13. What is the probability that two friends have:
   (*i*) the same birthday;
   (*ii*) different birthday? [Ignoring a leap year]

14. What is the probability that an ordinary year has 53 Sundays?

15. There are 30 cards numbered from 1 to 30. One card is drawn at random. Find the probability that the number of the selected card is not divisible by 3.

16. Somya and Ranu are two friends. They were both born is 1990. What is the probability that they have
   (*i*) same birthday;
   (*ii*) different birthday?

Name: ..... Teacher's signature: .....

Class: X ..... Date: .....

17. A dart is thrown in the interior of a circle of radius 10 cm drawn on a square board of side 1 m. What is the probability that it will land in the circular region?

18. The probability of getting a bad egg in a lot of 500 is 0.028. What is the number of good eggs in the given lot?

19. In a single blow of three dice, find the probability of getting a total of 17 or 18.

20. Card having numbers 1, 3, 5, …, 35 on it, are kept in a bag. A card is drawn at random from the bag. Find the probability of getting a card having
    (*i*) a prime number less than 15
    (*ii*) a number divisible by 3 and 5.

ANSWERS

WORKSHEET 1

1. (*c*) 0 **2.** (*b*) $\frac{3}{4}$ **3.** (*d*) $\frac{1}{3}$ **4.** (*c*) $\frac{1}{7}$ **5.** (*a*) $\frac{1}{26}$ **6.** (*c*) $\frac{1}{366}$ **7.** (*b*) 0

8. $\frac{1}{2}$ **9.** $\frac{8}{23}$ **10.** 15 **11.** $\frac{1}{13}$ **12.** $\frac{2}{7}$ **13.** (*i*) $\frac{1}{365}$ (*ii*) $\frac{364}{365}$

14. $\frac{1}{7}$ **15.** $\frac{2}{3}$ **16.** (*i*) $\frac{1}{365}$ (*ii*) $\frac{364}{365}$ **17.** $\frac{11}{350}$ **18.** 486 **19.** $\frac{1}{54}$

20. (*i*) $\frac{1}{3}$ (*ii*) $\frac{1}{9}$