

## Assignment Probability (Statistics) Class X

- Q1. A coin is tossed. Find the probability that a head is obtained.
- Q2. Find probability of throwing 5 with an ordinary dice.
- Q3. Probability of winning a game is 0.4. What is the probability of loosing the game?
- Q4. A person is known to hit the target in 3 shots out of 4 shots. Find the probability that the target is not hit.
- Q5. Tickets numbered from 1 to 20 are mixed together and a ticket is drawn at random. What is the probability that the ticket has a number which is multiple of 3 or 7?
- Q6. A bag contains 100 identical tokens, on which numbers 1 to 100 are marked. A token is drawn at random. What is the probability that the number on the token is:
- (a) an even number (b) an odd number (c) a multiple of 3 (d) a multiple of 5  
(f) a multiple of 3 and 5 (g) a multiple of 3 or 5 (h) a number less than 20  
(i) a number greater than 70 (j) a perfect square number (k) a prime number less than 20.
- Q7. A card is drawn from a well-shuffled pack of cards. Find the probability that the card drawn is:
- (a) a queen (b) a king bearing diamond sign (c) a black card (d) a jack  
(e) black and a queen (f) either black or a queen (g) a red card (h) a face card  
(i) a diamond or a club (j) neither heart nor a jack (k) a 2 of diamond  
(l) an ace of hearts (m) a face card of red color (n) 10 of a black "suit"
- Q8. In a simultaneous toss of two coins, find:
- (a) P(2 tails) (b) P(exactly one tail) (c) P(no tails) (d) P(at most one head) (e) P(one head)
- Q9. A coin is tossed successively three times. Find probability of getting exactly one head or two heads.
- Q10. Three coins are tossed once. Find probability of:
- (a) 3 heads (b) exactly 2 heads (c) atleast 2 heads (d) atleast 2 heads  
(e) no tails (f) head and tail appear alternatively (g) atleast one head and one tail
- Q11. A dice is thrown once. Find:
- (a) P(number 5) (b) P(number 7) (c) P(an even number) (d) P( a number greater than 4)  
(e) P( a number less than or equal to 4) (f) P(a prime number)
- Q12. A bag contains 10 white, 6 black and 4 red balls. Find probability of getting:
- (a) a white ball (b) a black ball (c) not a red ball (d) a white or a red ball
- Q13. Two dice are thrown simultaneously. Find:
- (a) P(an odd number as a sum) (b) P(sum as a prime number) (c) P(a doublet of odd numbers)  
(d) P(a total of atleast 9) (e) P( a multiple of 2 on one die and a multiple of 3 on other die)  
(f) P(a doublet) (g) P(a multiple of 2 as sum) (h) P(getting the sum 9) (i) P(getting a sum greater than 12) (j) P( a prime number on each die) (k) P( a multiple of 5 as a sum)
- Q14. Find the probability that a leap year at random contains 53 Sundays.
- Q15. Two black kings and two black jacks are removed from a pack of 52 cards. Find the probability of getting:
- (a) a card of hearts (b) a black card (c) either a red card or a king  
(d) a red king (e) neither an ace nor a king (f) a jack, queen or a king

**\*NOTE:** A pack of playing cards consists of 52 cards, which are divided into 4 suits of 13 cards each. Each suit consists of one ace, one king, one queen, one jack and 9 other cards numbered from 2 to 10. Four suits are named as spades(♠), clubs(♣), hearts(♥) and diamonds(♦).(spades & clubs are **black**. hearts & diamonds are **red**)

### ANSWERS

- Ans(1)**  $\frac{1}{2}$  **Ans(2)**  $\frac{1}{6}$  **Ans(3)** 0.6 **Ans(4)**  $\frac{1}{4}$  **Ans(5)**  $\frac{2}{5}$  **Ans(6)** (a)  $\frac{1}{2}$  (b)  $\frac{1}{2}$  (c)  $\frac{33}{100}$  (d)  $\frac{1}{5}$  (e)  $\frac{3}{50}$  (f)  $\frac{47}{100}$  (g)  $\frac{19}{100}$  (h)  $\frac{3}{10}$  **Ans(7)** (a)  $\frac{1}{13}$  (b)  $\frac{1}{52}$  (c)  $\frac{1}{2}$  (d)  $\frac{1}{13}$  (e)  $\frac{1}{26}$  (f)  $\frac{7}{13}$  (g)  $\frac{1}{2}$  (h)  $\frac{4}{13}$  (i)  $\frac{1}{2}$  (j)  $\frac{9}{13}$  (k)  $\frac{1}{52}$  (l)  $\frac{1}{52}$  (m)  $\frac{3}{26}$  (n)  $\frac{1}{26}$  **Ans(8)** (a)  $\frac{1}{4}$  (b)  $\frac{1}{2}$  (c)  $\frac{1}{4}$  (d)  $\frac{3}{5}$  (e)  $\frac{1}{2}$  **Ans(9)**  $\frac{3}{4}$  **Ans(10)** (a)  $\frac{1}{8}$  (b)  $\frac{3}{8}$  (c)  $\frac{1}{2}$  (d)  $\frac{7}{8}$  (e)  $\frac{1}{8}$  (f)  $\frac{1}{4}$  (g)  $\frac{3}{4}$  **Ans(11)** (a)  $\frac{1}{6}$  (b) 0 (c)  $\frac{1}{2}$  (d)  $\frac{1}{3}$  (e)  $\frac{2}{3}$  (f)  $\frac{1}{2}$  **Ans(12)** (a)  $\frac{1}{2}$  (b)  $\frac{3}{10}$  (c)  $\frac{4}{5}$  (d)  $\frac{7}{10}$  **Ans(13)** (a)  $\frac{1}{2}$  (b)  $\frac{5}{12}$  (c)  $\frac{1}{12}$  (d)  $\frac{5}{18}$  (e)  $\frac{11}{36}$  (f)  $\frac{1}{6}$  (g)  $\frac{1}{2}$  (h)  $\frac{1}{9}$  (i) 0 (j)  $\frac{1}{12}$  (k)  $\frac{7}{36}$  **Ans(14)**  $\frac{2}{7}$  **Ans(15)** (a)  $\frac{13}{48}$  (b)  $\frac{11}{24}$  (c)  $\frac{13}{24}$  (d)  $\frac{1}{24}$  (e)  $\frac{7}{8}$  (f)  $\frac{1}{6}$