

ASSIGNMENT PROBABILITY 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) atmost 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

ANSWERS

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