RS Aggarwal Solutions for Class 8 Maths Chapter 24 Exercise 24.1: RS Aggarwal Solutions for Class 8 Maths Chapter 24 Exercise 24.1 on Probability provides a structured approach to understanding the basic concepts of probability.

The RS Aggarwal Solutions for Class 8 Maths Chapter 24 Exercise 24.1 offer detailed, step-by-step explanations for each problem, helping students grasp the foundational principles of probability, such as calculating the likelihood of events. This exercise includes a variety of problems, ranging from simple to more challenging, allowing students to practice and solidify their understanding.

RS Aggarwal Solutions for Class 8 Maths Chapter 24 Exercise 24.1 Probability Overview

RS Aggarwal Solutions for Class 8 Maths Chapter 24 Exercise 24.1 focuses on the topic of Probability, a fundamental concept in mathematics that deals with the likelihood of events occurring. This exercise serves as an introduction to probability, presenting problems that are essential for building a strong understanding of the topic.

The RS Aggarwal Solutions for Class 8 Maths Chapter 24 Exercise 24.1 are meticulously crafted to offer clear and concise explanations, ensuring that students can easily follow and comprehend each step involved in solving the problems. The exercise begins with basic probability questions, such as determining the probability of simple events like drawing a specific card from a deck or rolling a die. These problems are designed to familiarize students with the concept of favorable outcomes over total outcomes, which is the core principle of probability.

RS Aggarwal Solutions for Class 8 Maths Chapter 24 Exercise 24.1 (Ex 24A)

Below we have provided RS Aggarwal Solutions for Class 8 Maths Chapter 24 Exercise 24.1 PDF -

(1) (i) A coin is tossed. What are all possible outcomes?

Ans: All possible outcomes are Head (H) and Tail (T).

(ii) Two coins are tossed simultaneously. What are all possible outcomes?

Ans: HH, HT, TH, TT.

(iii) A die is thrown. What are all possible outcomes?

Ans: 1, 2, 2, 4, 5 and 6.

(iv) From a well- shuffled deck of 52 cards, one card is drawn at random. What is the number of all possible outcomes?

Ans: It has 13 cards of each suit, name spades, hearts and diamonds.

Cards of spades and clubs are black cards

Cards of hearts and diamonds are red cards.

There are 4 honours of each unit.

There are kings, queens and Jacks. These are all called face cards.

(2) In a single throw of a coin, what is the probability of getting a tail?

Solution: Total number of all possible outcomes = 2

Number of tails = 1

∴ P(getting tail) = ½.

(3) In a single throw of two coins, find the probability of getting (i) both tails, (ii) at least 1 tail, (iii) at the most 1 tail.

Solution: Total number of all possible outcomes = 4.

(i) Getting both tails TT.

Number of such outcomes = 1

∴ P(getting both tails) = ¼.

(ii) Getting at least 1 tail means HT, TH, TT.

Number of such outcomes = 3.

∴ P(Getting at least 1 tail) = ¾.

(iii) Getting at the most 1 tail means TH, HT, TT

Number of such outcomes = 3.

∴ P(Getting at least 1 tail) =3/4 .

(4) A bag contains 4 white and 5 blue balls. They are mixed thoroughly and one ball is drawn at random. What is the probability of getting (i) a white ball? (ii) a blue ball?

Solution: (i) Number of white balls = 4

∴ P = 4/9

(ii) Number of blue balls = 5

∴ P = 5/9.

(5) A bag contains 5 white, 6 red and 4 green balls. One ball is drawn at random. What is the probability that the ball drawn is (i) green? (ii) White? (ii) non – red?

Solution: Total number of ball = (5 + 6 + 4) = 15.

(i) Number of green balls = 4

∴ P = 4/15.

(ii) Number of white balls = 5

∴ P = 5/15 = 1/3.

(ii) Number of non-red balls = (4+5) = 9

∴ P = 9/15 = 3/5.

(6) In a lottery, there are 10 prizes and 20 blanks. A ticket is chosen at random. What is the probability of getting a prize?

Solution: Number of lottery = (10 + 20) = 30.

Number of getting prize = 10.

∴ P = 10/30 = 1/3.

(7) It is known that a box of 100 electric bulbs contains 8 defective bulbs. One bulb is taken out at random from the box. What is the probability that the bulb drawn is (i) defective? (ii) non-defective?

Solution: Number of total bulbs = 100.

(i) Number of defective bulbs = 8.

∴ P = 8/100 = 2/25.

(ii) Number of non-defective = 100 – 8 = 92

∴ P= 92/100 = 23/25.

(8) A die is thrown at random. Find the probability of getting (i) 2, (ii) a number less than 3, (iii) a composite number, (iv) a number not less than 4.

Solution: In throwing a die, all possible outcomes are 1, 2, 3, 4, 5, 6.

∴ number of all possible outcomes = 6.

(i) Number of getting 2 = 1

∴ P = 1/6 = 1/3.

(ii) number less than 3 = 1, 2 = 2

∴ P = 2/6 = 1/3.

(iii) a composite number= 4, 5

∴ P = 2/6 = 1/3

(iv) a number not less than 4 = 4, 5, 6

∴ P = 3/6 = ½.

(9) In a survey of 200 ladies, it was found that 82 like coffee while 118 dislike it. From these ladies, one is chosen at random. What is the probability that the chosen lady dislike coffee?

Solution: Number of total ladies = 200.

Number of dislike coffee = 118

∴ P = 118/200 = 59/100.

(10) A box contains 19 balls bearing numbers 1, 2, 3, …. 19 respectively. A ball is drawn at random from the box. Find the probability that the number on the ball is (i) a prime number, (ii) an even number, (iii) a number divisible by 3.

Solution: Number of total balls = 19.

(i) Prime numbers = 2, 3, 5, 7, 11, 13, 17, 19 = 8

∴ P = 8/19

(ii) Even numbers = 2, 4, 6, 8, 10, 12, 14, 16, 18

∴ P = 9/19.

(iii) Number divisible by 3 = 3, 6, 9, 12, 15, 18

∴ P = 6/19.

(11) One card is drawn at random from a well-shuffled deck of 52 cards. Find the probability that the card drawn is (i) a king, (ii) a spade, (iii) a red queen, (iv) a black 8.

Solution: Total number of cards = 52

(i) Number of king = 4

∴ P = 4/52 = 1/13.

(ii) Spade = 13/52 = ¼.

(iii) red queen = 2

∴ P = 2/52 = 1/26.

(iv) Black 8 = 2

∴ P = 2/52 = 1/26.

(12) One card is drawn at random from a well-shuffled deck of 52 cards. Find the probability that the card drawn is (i) a 4, (ii) a queen, (iii) a black card.

Solution: Total number of cards = 52.

(i) Number of 4 = 4

∴ P = 4/52 = 1/13.

(ii)Number of queen = 4

∴ P = 4/52 = 1/13.

(iii) Number of black card = 13 +13 = 26

∴ P = 26/52 = ½.

Benefits of RS Aggarwal Solutions for Class 8 Maths Chapter 24 Exercise 24.1

RS Aggarwal Solutions for Class 8 Maths, particularly for Chapter 24 Exercise 24.1 on Probability, offer several benefits to students. Here's how these solutions can be advantageous:

1. **Comprehensive Explanation:**

The solutions provide step-by-step explanations for each problem, helping students understand the basic concepts of probability. This detailed approach ensures that students grasp the logic behind each step, which is crucial for mastering the topic.

2. **Conceptual Clarity:**

Probability can be a challenging topic for many students. RS Aggarwal's solutions focus on building a strong foundation by explaining the fundamental concepts in a simple and clear manner, aiding in long-term retention of the concepts.

3. **Practice Problems:**

The exercise includes a variety of problems that range in difficulty, giving students ample practice. By working through these problems, students can develop a better understanding of how to apply probability concepts to different types of questions.

4. **Error Rectification:**

By comparing their solutions with the RS Aggarwal Solutions, students can identify and correct their mistakes. This immediate feedback helps in avoiding similar errors in the future and reinforces learning.

5. **Preparation for Exams:**

The solutions are designed in a way that aligns with the exam pattern. By practicing these exercises, students can improve their problem-solving speed and accuracy, which are essential for performing well in exams.