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Probability

Q1. Choose a word from the words given below and write against appropriate definition:

Event Sample space Probability Favourable event

a. The set of all possible outcomes of an experiment : _____

b. Each possible outcome of an experiment : _____

c. Desired event as an outcome : _____

d. The ratio between the favourable event to the sample space : _____

Q2. Fill in the blanks:

a. When a coin is tossed the probability of getting a head is _____.

b. The probability of an impossible event is _____.

c. In a die, the sum of dots on opposite faces is _____.

d. When a die is thrown randomly the number of outcome(s) is/are _____.

Q3. Aarti's school bag contains 2 English notebooks, 3 Science notebooks, 2 Maths notebooks and 1 rough notebook. Aarti randomly takes out a notebook from her bag. Find the probability of her taking out:

a. A Science notebook : Probability = _____

b. An English or Maths notebook : Probability = _____

c. A rough notebook : Probability = _____

d. A Hindi notebook : Probability = _____

Q4. In a box, there are cards bearing numbers from 1 to 20. A card is taken out of the box at random. What is the probability that card taken out bears:

a. an even number : Probability = $\frac{\square}{\square}$

b. an odd number : Probability = $\frac{\square}{\square}$

c. a multiple of 7 : Probability = $\frac{\square}{\square}$

d. a factor of 18 : Probability = $\frac{\square}{\square}$

Q5. A die is thrown randomly 25 times and the outcomes are noted as shown below:

Outcome	1	2	3	4	5	6
Frequency	2	5	7	3	6	2

If the die is thrown at random, find the probability of getting:

a. a multiple of 2:

Probability = $\frac{\square}{\square}$

b. a number less than 7:

Probability = $\frac{\square}{\square}$

c. a number between 1 and 3:

Probability = $\frac{\square}{\square}$

Q6. If two coins are tossed simultaneously, find the probability of getting:

a. one head and one tail:

Probability = $\frac{\square}{\square}$

b. not more than one tail:

Probability = $\frac{\square}{\square}$

c. no heads:

Probability = $\frac{\square}{\square}$

Q7. From a well-shuffled pack of cards, a card is chosen at random. What is the probability that the chosen card is:

a. Black or red in colour:

Probability = _____

b. A black face card:

Probability = _____

c. Not an Ace:

Probability = _____

Q8. A coin is tossed 400 times with the following observations:

Head: 225; Tail : 175

When a coin is tossed at random, find the probability of getting:

a. a head :

Probability : _____

b. a tail :

Probability : _____

Q9. A book has 238 pages. Raman had put a bookmark on page number 136, but it fell off. What is the probability that when Raman opens a page of the book, it would be page number 136?

Answer: _____

Q10. In the last ten class tests, Lata's scores were recorded as follows:

Marks scored	Less than 20	20	More than 20
Number of class tests	3	5	2

Find the probability of Lata scoring the following marks in the next class test:

a. at least 20 marks : Probability = $\frac{\square}{\square}$

b. more than 20 marks : Probability = $\frac{\square}{\square}$

c. less than 21 marks : Probability = $\frac{\square}{\square}$

Answers

1. a. Sample space; b. Event; c. Favourable event; d. Probability

2. a. $\frac{1}{2}$; b. 0; c. 7; d. 6

3. a. $\frac{3}{8}$; b. $\frac{1}{2}$; c. $\frac{1}{8}$; d. 0

4. a. $\frac{1}{2}$; b. $\frac{1}{2}$; c. $\frac{1}{10}$; d. $\frac{3}{10}$

5. a. $\frac{2}{5}$; b. 1; c. $\frac{1}{5}$

6. a. $\frac{1}{2}$; b. $\frac{3}{4}$; c. $\frac{1}{4}$

7. a. 1; b. $\frac{3}{26}$; c. $\frac{12}{13}$

8. a. $\frac{9}{16}$; b. $\frac{7}{16}$

9. $\frac{1}{238}$

10. a. $\frac{7}{10}$; b. $\frac{1}{5}$; c. $\frac{4}{5}$