Important Questions for Class 9 consist of Subjective Questions of the following Types
Section-1 It consists of the Most Important Questions of 5 Marks with solutions
Section-2. It consists of the Most Important questions with solutions
Section-3. It consists of Most Important questions of 2 & with solutions

Chapter-15 Probability

Q1. On one page of a telephone directory, there were 210 telephone numbers. The frequency distribution of their unit place is given as follows

Digits	0	1	2	3	4	5	6	7	8	9
Frequency	10	20	30	40	10	20	30	5	30	15

With out looking at the page, the pencil is placed on one of these number the number is chosen at random what is the probability that the digit in its unit place is multiple of 3

Ans.
total numbers of telephone on a page = 210
Occurrence of unit place number multiple of 3 = 3,6,9 = 40+30+15 = 85
Probability of unit place number multiple of 3 = 85/210 = 17/42

Q2. The record of a weather station shows that out of the past 200 consecutive days. Its weather forecasts were correct 180 times.
What is the probability that on a given day it was correct and also find the probability on a given day it was not correct.

Ans.   Number of record = 200
         Correct forecasts = 180
         Probability of correct forecasts = 180/200 = .9
         Probability of not correct forecasts = 1-.9 = 0.1

Q3. 1000 families with 2 children were selected randomly and the following data were recorded:

Number of girls in a family:	0	1	2
Number of family :	200	500	300

If a family is chosen at random, compute the probability that it has
1. No girls   2. At least one girl

Ans. Total numbers of families = 1000
Number of family having no girls = 200
Probability of family having no girls = 200/1000 =.2
Number of families having at least one girls = 500+300
Probability of family having at least one girl = 800/1000 = .8

**Q4. A coin is tossed 100 times with the following frequencies
Head: 45, tail:55 compute the probability for each event.**

Ans.

$$\text{Probability of Heads} = \frac{\text{number of heads}}{\text{total number of trials}}$$

$$\frac{45}{100} = \frac{9}{20} = .45$$

$$\text{Probability of Tails} = \frac{\text{number of tails}}{\text{total number of trials}}$$

$$\frac{55}{100} = \frac{11}{20} = .55$$

Q5. The percentage of marks obtained by a student in monthly unit tests is given below:

Unit test	I	II	III	IV	V
Percentage	69	71	73	68	76

Find the probability that the student gets more than 68% marks

Ans. total number of tests = 5
Number of tests he got more than 68% = 4

Probability he got more than 68% = 4/5 = .8

Q6 A die is thrown 200 times with the following frequency for the outcomes 1,2,3,4,5,6 as given below.

Out comes	1	2	3	4	5	6
Frequency	30	40	50	20	30	30

Find the probabilities of out come less than 5

Ans. Total number of throws = 200
Total numbers of throws less than 5 = 30+40+50+20 =140
Probability of less than 5 = 140/200 = .7

Q5. To know the opinion of students about mathematics, a survey of 100 students was conducted. The data is recorded in the following table:

Opinion	Like	Dislike
Number of Students	70	30

**Find the probability that a student chosen at random 1. like Mathematic
2. Dislike mathematics.**

Ans. Total number of students for survey = 100
Likes mathematics   = 70
Probability to like mathematics = 70/100 = .7
Dislike mathematics   = 30
Probability to dislike mathematics = 30/100 = .3

Q6. 8 bags of wheat flour, each marked 10 kg, actually contained the following weights of flour(in Kg.)
        10.01, 9.97, 10.03, 9.96, 10.04, 10.06, 10.02, 9.98 find the probability that any of these bags chosen at random contain less than 10 kg of wheat.

Ans. Total Numbers of bags = 8
Number of bags contain less than 10 kg of wheat = 3
Probability of bags contain less than 10 kg = 3/8 = .375

Q7. A cycle manufacturing company kept a record of recycling of tyre maintains the record of distance covered by it. Table show the record of 100 tyre

Distance in K.M	Less than 2000	2000-5000	5000-7000	more than 7000
Frequency	30	50	10	10

What will be the probability to replace a tyre less than 5000 km.

Ans. Total numbers of record of tyre = 100
Covered less than 5000 = 30+50 = 80
Probability of tyre less than 5000 K.M = 80/100 = .8

Q8. In a match, a batsman hits a boundary 6 times out of 30 balls he plays. Find the probability that he did not hit a boundary.

Ans. probability for a batsman hit a boundary = 6/30 = 1/5
Probability for a batsman did not hit a boundary = 1-1/5 = 4/5