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An English Medium Co.Ed. School | Science & Commerce

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VSA
A Real English Medium School

Little Steps
Pre Primary wing of VSA

Subject: Maths   Class:9   Topic: Ch.15 Probability

Practice Exercise 15.1

1. In a cricket match, a batswoman hits a boundary 6 times out of 30 balls she plays. Find the probability that she did not hit a boundary.

2. 1500 families with 2 children were selected randomly, and the following data were recorded :

Number of girls in a family	2	1	0
Number of families	475	814	211

Compute the probability of a family, chosen at random, having :
(i) 2 girls   (ii) 1 girl   (iii) No girl
Also check whether the sum of these probabilities is 1.

3. In a particular section of class IX, 40 students were asked about the month of their birth and the following graph was prepared for the data so obtained :
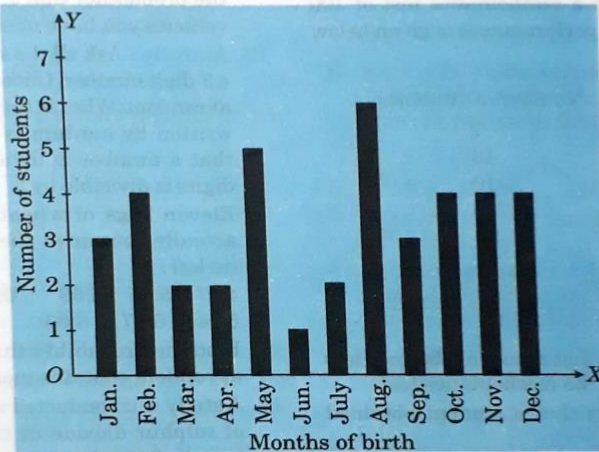

Fig. 15.3

Find the probability that a student of the class was born in August.

4. Three coins are tossed simultaneously 200 times with the following frequencies of different outcomes :

Outcome	Frequency
3 heads	23
2 heads	72
1 head	77
No head	28

If the three coins are simultaneously tossed again, compute the probability of 2 heads coming up.

5. An organisation selected 2400 families at random and surveyed them to determine a relationship between income level and the number of vehicles in a family. The information gathered is listed in the table below :

Monthly income (in ₹)	Vehicles per family			
	0	1	2	Above 2
Less than 7000	10	160	25	0
7000 — 10000	0	305	27	2
10000 — 13000	1	535	29	1
13000 — 16000	2	469	59	25
16000 or more	1	579	82	88

Suppose a family is chosen. Find the probability that the family chosen is :

(i) earning ₹ 10000 – ₹ 13000 per month and owning exactly 2 vehicles.

(ii) earning ₹ 16000 or more per month and owning exactly 1 vehicle.

(iii) earning less than ₹ 7000 per month and does not own any vehicle.

(iv) earning ₹ 13000 – ₹ 16000 per month and owning more than 2 vehicles.

(v) owning not more than 1 vehicle.

6. A teacher wanted to analyse the performance of two sections of students in a mathematics test of 100 marks. A data of their performances is given below in the table :

Marks	Number of students
0 – 20	7
20 – 30	10
30 – 40	10
40 – 50	20
50 – 60	20
60 – 70	15
70 – above	8
Total	90

(i) Find the probability that a student obtained less than 20% marks in the mathematics test.

(ii) Find the probability that a student obtained marks 60 or above.

7. To know the opinion of the students about the subject statistics, a survey of 200 students was conducted. The data is recorded in the following table :

Opinion	Number of students
like	135
dislike	65

Find the probability that a student chosen at random :
(i) likes statistics, (ii) does not like it.