

- 10 A company selected 4000 household at random and surveyed them to find out a relationship between income level and the number of television sets in a home. The information so obtained was listed in the following table.

Monthly income (In Rs.)	Number of televisions per household			
	0	1	2	Above 2
<10,000	20	80	10	0
10,000-14,999	10	240	60	0
15,000-19,999	0	380	120	30
20,000-24,999	0	520	370	80
25,000 and above	0	1100	760	220

Find the probability of

- Household earnings Rs. 10,000- Rs. 14,999 per year and having exactly one television.
 - A household earning Rs. 25,000 and above per year and having 2 television.
 - A household having no television.
- 11 Seven hundred cartons, each containing 40 bulbs, were examined for defective bulbs and the results were recorded as follows:

Number of defective bulbs	0	1	2	3	4	5	6	More than 6
Frequency	40	180	48	41	18	8	3	2

One carton was selected at random. What is the probability that it was

- No defective bulb
 - 2 to 6 defective bulbs.
- 12 Two dice are thrown simultaneously 500 times. Each time the sum of numbers appearing on their tops is noted and recorded as given in the following table.

Sum	2	3	4	5	6	7	8	9	10	11	12
Frequency	14	30	42	55	72	75	70	53	46	28	15

If the dice are thrown once more, what is the probability of getting a sum

- Equal to 3
 - More than 10
 - Less than or equal to 5
 - Between 8 and 12
- 13 A survey found that the age of workers in a factory is distributed as follows:

Age (in years)	20-29	30-39	40-49	50-59	60 and above
Number of workers	38	27	86	46	3

If a person is selected at random, find the probability that the person's age is

- 40 years or more
 - Under 40 years
 - 30 to 39 years
 - Under 60 but over 39 years
- 14 In a cricket match, a batsman plays 50 balls and hits a boundary 6 times. Find the probability that he will not hit a boundary.
- 15 Over the past 200 working days, the number of defective parts produced by a machine is given in the following table:

Number of defective parts	0	1	2	3	4	5	6	7	8	9	10	11	12	13
days	50	32	22	18	12	12	10	10	10	8	6	6	2	2

Determine the probability that tomorrow's output will have

- No defective part
- At most one defective part
- Not more than 5 defective parts
- More than 13 defective parts