

VIII - Mathematics [Data Handling]

Academic Year 2011-2012

1. What is the probability that a number selected from the numbers 1, 2, 3,, 25 is a prime number , when each of the given numbers is equally likely to selected .
2. Tickets numbered from 1 to 20 are mixed up together and then a ticket is drawn at random. What is the probability that the ticket has a number which is a multiple of 3 or 7.
3. 17 cards numbered 1,2,3 17 are put in a box and mixed thoroughly . One person draws a card from the box. Find the probability that the number on the card is
(a) odd (b) a prime (c) divisible by 3 (d) divisible by 3 and 2 both
4. A bag contains 5 red balls , 8 white balls, 4 green balls and 7 black balls. If one ball is drawn at random. Find the probability that it is
(a) Black (b) red (c) not green
5. A child has a block in the shape of a cube with one letter written on each face as shown below.

| | | | | | |
|---|---|---|---|---|---|
| A | B | C | D | E | A |
|---|---|---|---|---|---|

The cube is thrown once. What is the probability of getting (i) A (ii) D

6. A letter is chosen at random from the letters of the word ASSASSINATION. Find the probability that the letter chosen is a
(i) vowel (ii) consonant

7. The number of members in 20 families of a township are 6, 8, 4, 3, 5, 6, 7, 4, 3, 4, 5, 6, 4, 5, 4, 3, 3, 6, 4 and 3. Prepare a frequency distribution table for the data and answer the following questions :

- (i) What is the smallest family size ? How many families are of this size ?
- (ii) What is the largest family size ? How many are of this size ?
- (iii) What is the most common family size ?

8. The heights of 10 girls were measured in cm and the results were as follows :

143, 148, 135, 150, 128, 139, 149, 146, 151, 132

- (i) What is the height of the tallest girl?

- (ii) What is the height of the shortest girl ?
- (iii) What is the range of the data ?
- (iv) Find the mean height.
- (v) How many girls are there whose heights are less than the mean height ?

9. The following data give the pocket expenses of 100 students of a school

| | | | | | | | |
|------------------------------------|----|----|----|----|----|----|----|
| Weekly pocket expenses (in rupees) | 30 | 35 | 45 | 50 | 55 | 60 | 65 |
| Number of students | 6 | 10 | 14 | 22 | 35 | 9 | 4 |

Prepare a grouped frequency distribution of class intervals of equal width, taking one of the class intervals as 30 – 40

10. The following distribution table shows the performance of 270 candidates appearing for Army Education Corps intelligence test.

| | | | | | |
|-------------------|-------|-------|-------|--------|---------|
| I.Q | 55–69 | 69–83 | 83–97 | 97–111 | 111–125 |
| No. of candidates | 20 | 50 | 75 | 75 | 50 |

Draw a histogram for this distribution.

Answers:

1. $\frac{9}{25}$

2. $\frac{2}{5}$

3. $\frac{9}{17}, \frac{7}{17}, \frac{5}{17}, \frac{2}{17}$

4. $\frac{7}{24}, \frac{5}{24}, \frac{5}{6}$

5. $\frac{1}{3}, \frac{1}{6}$

6. $\frac{6}{13}, \frac{7}{13}$