Data Handling

Exercise-17.1

1. (i)

1, 1, 1, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, 5, 6, 6

(ii)

Range of the data = Maximum value - Minimum value

= 6 - 1

= 5

(iii)

No. of rooms	Tally marks	No. of houses (Frequency)
1	III	3
2	IIII	4
3	𝍸 III	8
4	𝍸	5
5	III	3
6	II	2

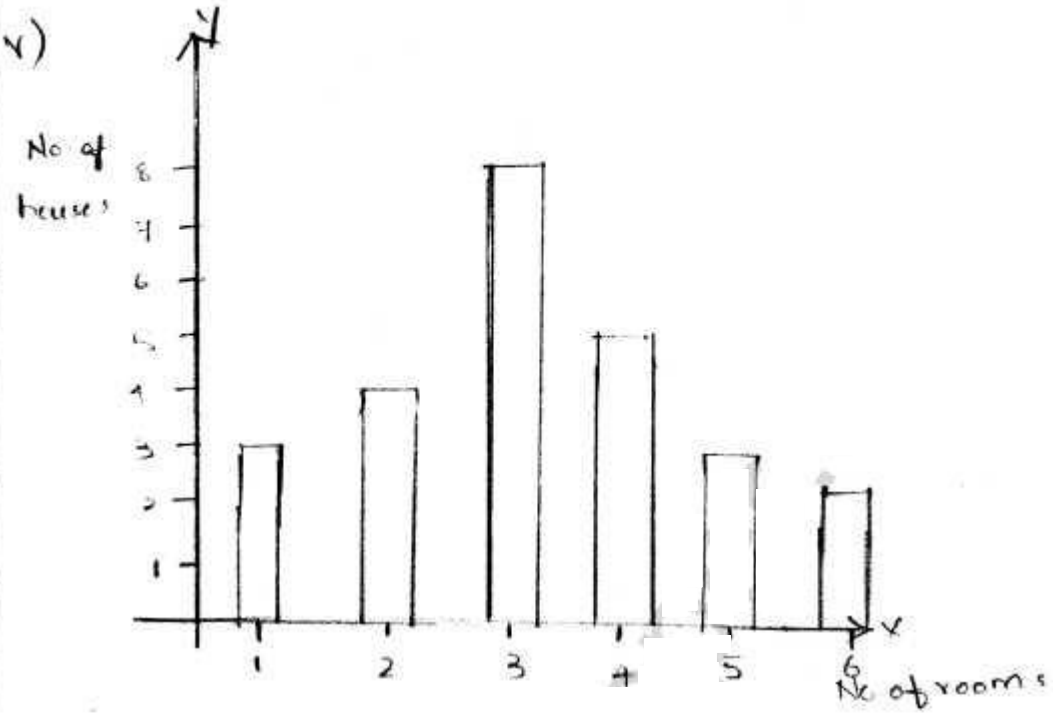
(iv)

Number of houses which have 4 or more than 4 rooms

= 5 + 3 + 2

= 10 houses

v)



2.

(i) Total no. of books sold in 2008 = 15

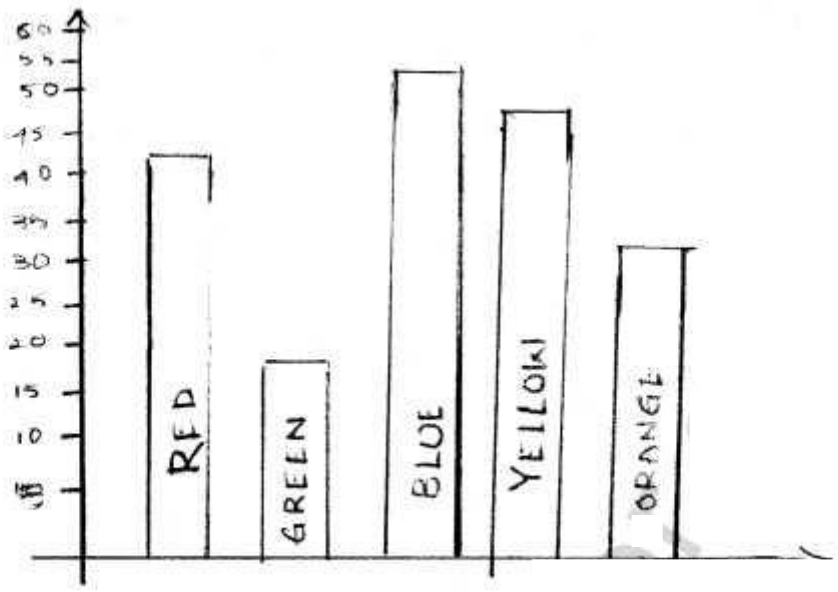
No. of books sold in 2009 =

No. of books sold in 2011 =

(ii) The year in which 475 books sold ~~are~~ is 2012

The year in which 225 books sold is 2010

3)



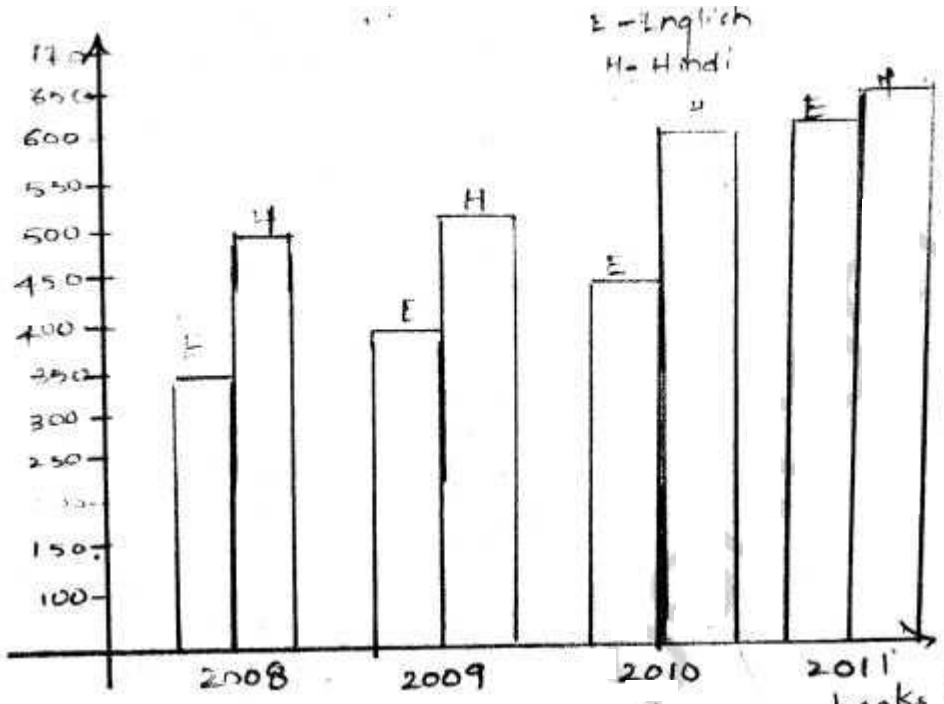
(i) Blue is the most preferred colour

(ii) Green is the least preferred colour

(iii) There are Five colours in all. They are

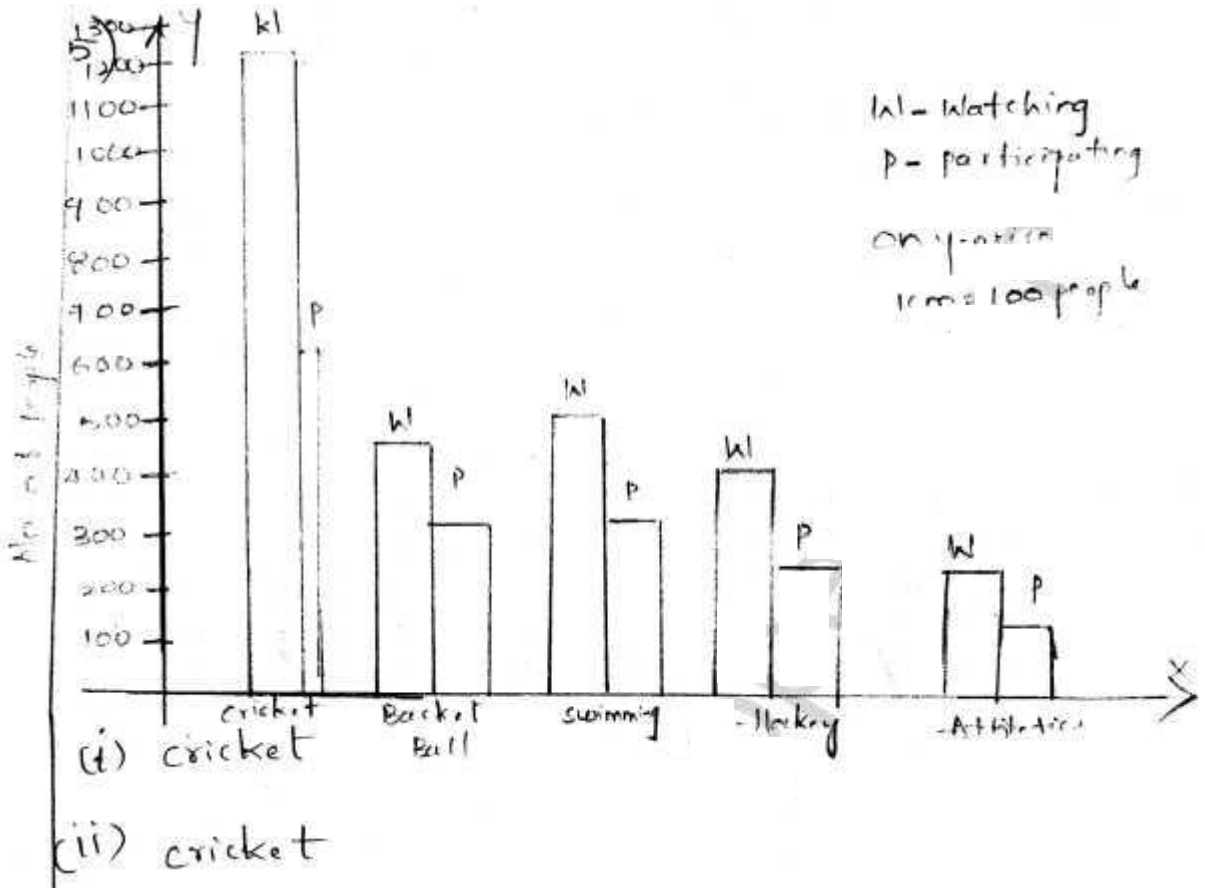
a) Red
b) Green
c) Blue
d) Yellow
e) orange.

4)



(i) The difference in the sale of two language books least is 2011

(ii) Yes the demand for English books rose faster from 2008 to 2009 and from year 2009 to 2010 it decreased comparitively with Hindi books Then from 2010 to 2011 it increased.



(i) cricket

(ii) cricket

Exercise-17.2

(i) $\text{Mean} = \frac{40+30+30+0+26+60}{6}$

$= \frac{186}{6}$

Mean = 31

(ii) $\text{Mean} = \frac{3+5+7+9+11+13+15}{7}$

=

2) Mean of first five whole numbers

$= \frac{0+1+2+3+4}{5}$

$= \frac{10}{5}$

$= 2$

3) $\text{Mean} = \frac{36+35+50+46+60+55}{6}$

Mean = 47

4) The mean enrollment of the school for the period $= \frac{1555+1670+1750+2013+2540+2825}{6}$

Mean = 2058.834

5)

(i) Highest Marks obtained by the students = 95

Lowest Marks obtained by the students = 39

(ii) Range of the Mark = Maximum Mark − Minimum Mark

$= 95 - 39$

$= 56$

(iii) Mean Marks obtained by the students

$$= \frac{85+76+90+85+39+48+56+95+81+75}{10}$$

$= 73$

6) (i) Height of the tallest girl = 151 cm

(ii) Height of the shortest girl = 128 cm

(iii) Mean height of the girls $= \frac{135+150+139+128+151+132+146+149+143+141}{10}$

$= 141.4$

(iv) 5 girls

7) Arithmetic Mean $= \frac{8+4+6+x+2+7}{6} = 5$

$\Rightarrow \frac{27+x}{6} = 5$

$x = 30 - 27$

$x = 3$

8) Mean $= \frac{\Sigma f_i x_i}{\Sigma f_i}$

Marks (x_i) obtained	no. of (f_i) students	$f_i x_i$
2	3	6
3	2	6
4	6	24
7	7	49
10	2	20
Total	$\Sigma f_i = 20$	$\Sigma f_i x_i = 105$

Mean $= \frac{2(3)+3(2)+4(6)+7(7)+10(2)}{3+2+6+7+2}$

$= \frac{6+6+24+49+20}{20}$

$= \frac{105}{20}$

Mean = 5.25

Exercise-17.3

1) (i) 1, 3, 3, 4, 5, 5, 6

Median = 4

(ii) 1, 3, 3, 4, 5, 5, 6, 6

$$\text{Median} = \frac{4+5}{2}$$
$$= \frac{9}{2}$$
$$= 4.5$$

2) (i) 3, 1, 5, 6, 3, 4, 5, 3

Mode = 3

(ii) In the given frequency distribution, we find that the observation 22 has maximum frequency so, the mode is = 22

3) 12, 12, 13, 13, 14, 14, 14, 16, 19

Median = 14

Mode = 14

4) 5, 9, 9, 12, 15, 16, 19, 20, 20, 20, 20, 23, 29, 25, 25

Median = 20

Mode = 20

5) (i) 32, 35, 36, 37, 38, 38, 38, 40, 42, 43, 43, 43, 45, 47, 50

Median = 40

Mode = 38, 43

(ii) Yes (38, 43)

6. 6, 8, 10, 10, 15, 15, 15, 50, 80, 100, 120

$$\text{Mean} = \frac{6+8+10+10+15+15+15+50+80+100+120}{11}$$

$$= 39$$

Median = 15

Mode = 15

No, all the three are not same

7) Mode = 15

Exercise - 17.4

(i) Certain to happen

(ii) impossible to happen

(iii) can happen but not certain

(iv) impossible to happen

v) can happen but not certain

vi) can happen but not certain

vii) can happen but not certain

2) probability = $\frac{\text{no. of events}}{\text{Total no. of outcomes}}$

No. of events = 1

No. of outcomes = 2

probability = $\frac{1}{2}$

3) (i) Event of drawing marble number 5 = 1

Total no. of outcomes = 6

probability (number 5) = $\frac{1}{6}$

(ii) Event of drawing marble number 2 = 1

Total no. of outcomes = 6

probability (getting no. 2) = $\frac{1}{6}$

4) (i) Event of getting a number less than 3 = 2

Total no. of outcomes = 6

probability (getting less than 3) = $\frac{2}{6}$

$\therefore P = \frac{1}{3}$

(ii) a prime number

Event of getting a number less prime number = 3

Total no. of outcomes = 6

probability = $\frac{3}{6}$

$= 1/2$

(iii) Event of getting a number greater than 2 = 4

Total no. of outcomes = 6

probability = $\frac{4}{6}$

$P = 2/3$

5) (i) Event of drawing a defective mango = 3

Total no of outcomes = 24

probability (getting a defective mango) = $\frac{3}{24}$

$= \frac{1}{8}$

(ii) Event of drawing a good mango = 21

Total no. of outcomes = 24.

probability (getting a good mango) = $\frac{21}{24} = \frac{7}{8}$

6) (i) Event of drawing a red card = 26

Total no. of outcomes = 52

probability $= \frac{26}{52}$

$= \frac{1}{2}$

(ii) Event of drawing a king = 4

Total no. of outcomes = 52

probability $= \frac{4}{52} = \frac{1}{13}$

(iii) a card of spades ⇒ Event = 13

Total no. of outcomes = 52

probability $= \frac{13}{52}$

$= \frac{1}{4}$