# 24. Data Handling-II (Graphical Representation of Data as Pie Charts

## Exercise 24.1

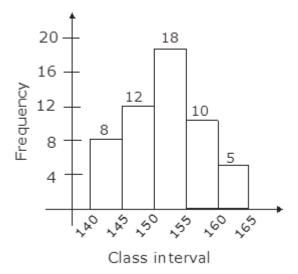
# 1. Question

Given below is the frequency distribution of the heights of 50 students of a class:

Class interval:	140-145	145-150	150-155	155-160	160-165
Frequency:	8	12	18	10	5

Draw a histogram representing the above data.

## **Answer**



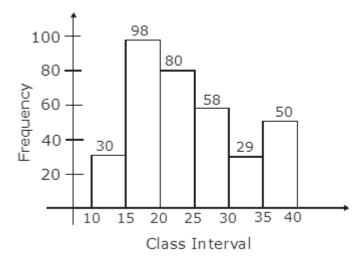
We have drowned the histogram by using the class-interval and frequency given in the question. The hight of the rectangle in the histogram shows the frequencies of class intervals.

## 2. Question

Draw a histogram of the following data:

Class interval:	10-15	15-20	20-25	25-30	30-35	35-40
Frequency:	30	98	80	58	29	50

By drawing class interval at 'x' axis and frequency at 'y' axis.



We have drowned the histogram by using the class-interval and frequency given in the question.

# 3. Question

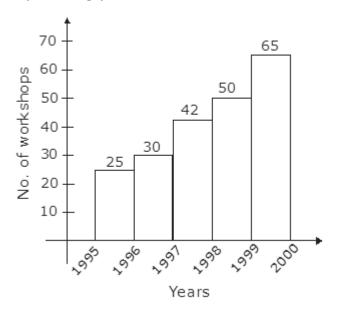
Number of workshops organized by a school in different areas during the last five years are follows:

Years	No. of workshops
1995-1996	25
1996-1997	30
1997-1998	42
1998-1999	50
1999-2000	65

Draw a histogram representing the above data:

#### **Answer**

By drawing years on 'x' axis and number on workshops on 'y' axis .



We have drowned the histogram by using the No. of workshops and years given in the question.

# 4. Question

In a hypothetical sample of 20 people the amounts of money with them were found to be as follows:

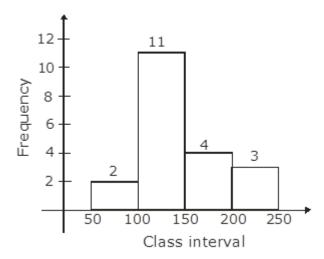
114, 108, 100, 98, 101, 109, 117, 119, 126, 131, 136, 143, 156, 168, 182, 195, 207, 219, 235, 118.

Draw the histogram of the frequency distribution (taking one of the class intervals as 50-100).

#### **Answer**

Class interval	Frequency
50 - 100	2
100 - 150	11
150 - 200	4
200 - 250	3

By drawing class interval on x' axis and frequency on y' axis. The height of histogram shows the frequency for particular class interval.

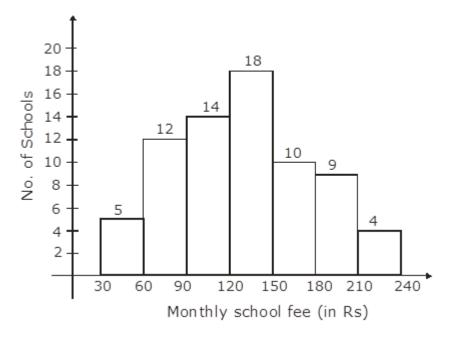


## 5. Question

Construct a histogram for the following data:

Monthly school	30-60	60-90	90-120	120-150	150-180	180-210	210-240
Fee (in Rs)							
Number of Schools :	5	12	14	18	10	9	4

By drawing monthly school fee on 'x' axis and number of schools on 'y' axis.



# 6. Question

Draw a histogram for the daily earnings of 30 drug stores in the following table:

Daily earning	450-500	500-550	550-600	600-650	650-700
(in Rs.)					
Number of	16	10	7	3	1
Stores:					

By drawing daily earnings on 'x' axis and number of stores on 'y' axis.



# 7. Question

Draw a histogram to represent the following data :

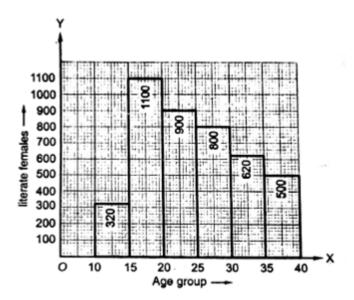
Monthly salary (in Rs)	Number of teachers
5600-5700	8
5700-5800	4
5800-5900	3
5900-6000	5
6000-6100	2
6100-6200	3
6200-6300	1
6300-6400	2

By drawing monthly salary on 'x' axis and numbers of teacher on 'y' axis.



## 8. Question

The following histogram shows the number of literate females in the age group of 10 to 40 years in a town:



- (i) Write the age group in which the number of literate female is the highest.
- (ii) What is the class width?
- (iii) What is the lowest frequency?
- (iv) What are the class marks of the classes?
- (v) In which age group literate females are the least?

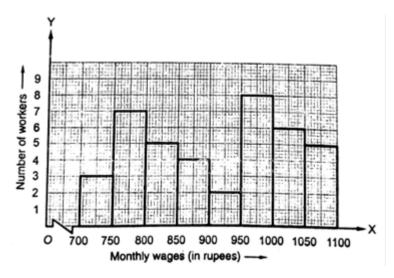
#### **Answer**

- (i) Age group 15-20 has the highest number of literate female.
- (ii) Class width = 5 years
- (iii) Lowest frequency = 320

- (iv) Class marks of classes = average of class intervals = 17.5, 25, 32.5, 40, 47.5, 55
- (v) Age group of 10-15 has the lowest literate females.

## 9. Question

The following histogram shows the monthly wages (in Rs) of workers in a factory:



- (i) In which wage-group the largest numbers of worders are being kept? What is their number?
- (ii) What wages are the least number of workers getting? What is the number of such workers?
- (iii) What is the total number of workers?
- (iv) What is the factory size?

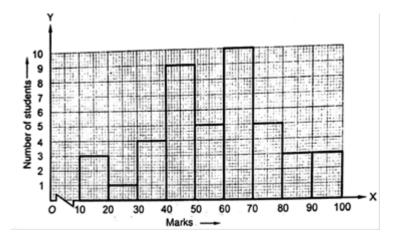
## **Answer**

- (i) Wage-group 950-1000 has the largest numbers of workers and their number is 8.
- (ii) Wages 900-950 is getting the least number of workers. The number of such workers is 2.
- (iii) Total number of workers = total no. of frequencies = 3+7+5+4+2+8+6+5=40
- (iv) Factory size = 50

## 10. Question

Below is the histogram depicting marks obtained by 43 students of a class:

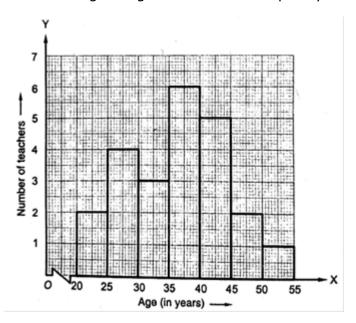
- (i) Write the number of students getting the highest marks.
- (ii) What is the class size?



- (i) Number of students getting the highest marks = 3
- (ii) Class size = 10

## 11. Question

The following histogram shows the frequency distribution of the ages of 22 teachers in a school:



- (i) What is the number of eldest and youngest teachers in the school?
- (ii) Which age group teachers are more in the school and which least?
- (iii) What is the size of the classes?
- (iv) What are the class marks of the classes?

## **Answer**

- (i) The number of eldest teacher = 1
- youngest teachers in the school = 2
- (ii) 35-40 age group teachers are more in the school.
- 50-55 age group teachers are least.

- (iii) Size of the classes = 5 years
- (iv) Class marks of the classes = average of class intervals = 32.5, 40, 47.5, 55, 62.5, 70, 77.5

# 12. Question

The weekly wages (in Rs.) of 30 workers in a factory are given:

830, 835, 890, 810, 835, 836, 869, 845, 898, 890, 820, 860, 832, 833, 855, 845, 804, 808, 812, 840, 885, 835, 835, 836, 878, 840, 868, 890, 806, 840

Mark a frequency table with intervals as 800-810, 810-820 and so on, using tally marks.

Also, draw a histogram and answer the following questions:

- (i) Which group has the maximum number of workers?
- (ii) How many workers earn Rs. 850 and more?
- (iii) How many workers earn less then Rs, 850?

#### **Answer**

Class interval	Frequency
800 - 810	4
810 - 820	2
820 - 830	1
830 - 840	11
840 - 850	2
850 - 860	2

860 - 870	2
870 - 880	1
880 - 890	4
890-900	1

- (i) Group have maximum workers = (830 840)
- (ii) Workers have earning more than Rs.850 = 2+1+4+1+2 = 10
- (iii) Worker earns less than Rs.850 = 4+2+1+11+2 = 20.

Histogram: by drawing class interval on 'x' axis and number of workers on 'y' axis.

