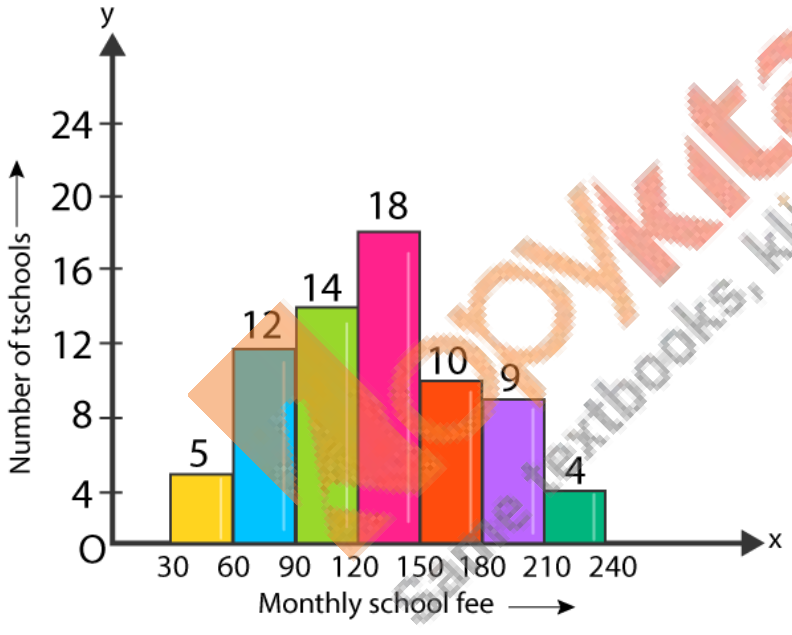
Question 1: Construct a histogram for the following data:

Monthly school Fee (in Rs.)	30-60	60-90	90-120	120-150	150-180	180-210	210-240
No. of schools	5	12	14	18	10	9	4

Solution:

Let us consider that the horizontal and vertical axes represent the monthly school fees and the number of schools respectively. Construct rectangles with class-intervals as bases and respective frequencies as heights as below.

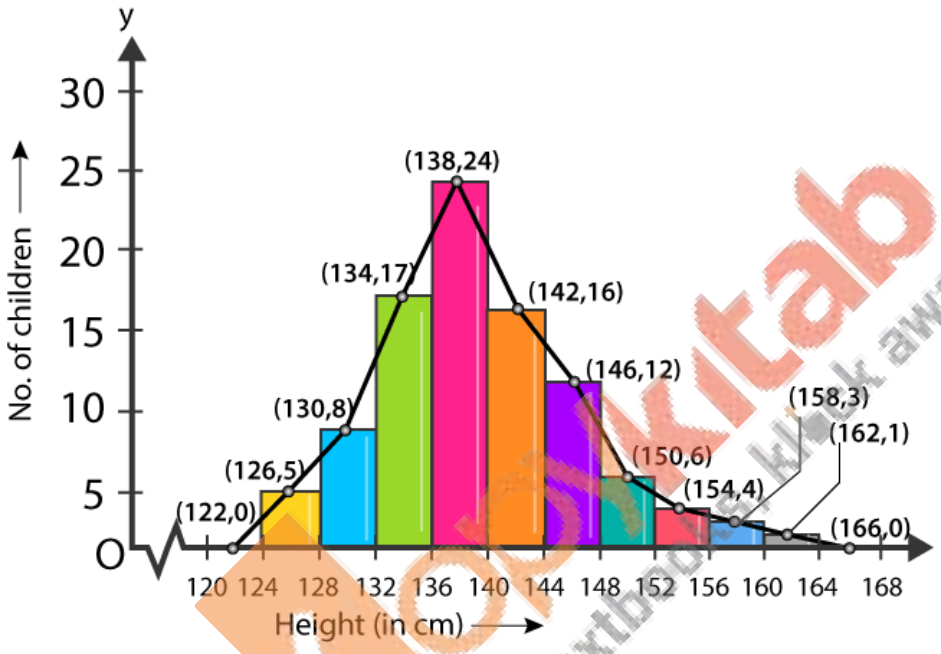
Histogram:



Question 2: The distribution of heights (in cm) of 96 children is given below. Construct a histogram and a frequency polygon on the same axes.

Height (in cm)	124 to 128	128 to 132	132 to 136	136 to 140	140 to 144	144 to 148	148 to 152	152 to 156	156 to 160	160 to 164
No. Of Children	5	8	17	24	16	12	6	4	3	1

Solution:
Let us consider that the horizontal and vertical axes represent the height (in cm) and the number of children respectively. Construct rectangles with class-intervals as bases and respective frequencies as heights as below.



Question 3: The time taken, in seconds, to solve a problem by each of 25 pupils is as follows:

16, 20, 26, 27, 28, 30, 33, 37, 38, 40, 42, 43, 46, 46, 46, 48, 49, 50, 53, 58, 59, 60, 64, 52, 20

(a) Construct a frequency distribution for these data, using a class interval of 10 seconds.
(b) Draw a histogram to represent the frequency distribution.

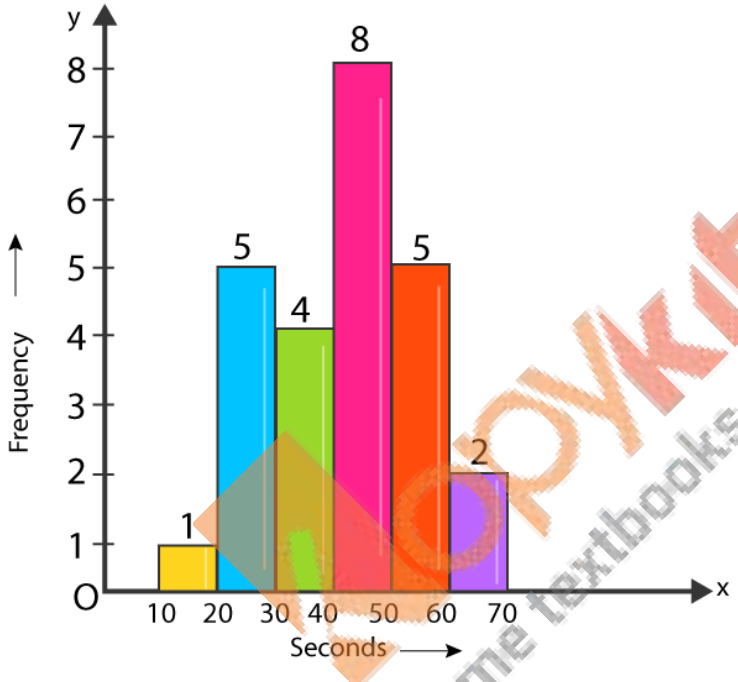
Solution:
Arrange raw data into ascending order:
16, 20, 20, 26, 27, 28, 30, 33, 37, 38, 40, 42, 43, 46, 46, 46, 48, 49, 50, 52, 53, 58, 59, 60, 64

(a) Frequency distribution for the given data, using a class interval of 10 seconds.

Class Interval		Frequency
10-20	16	1
20-30	20, 20, 26, 27, 28	5
30-40	30, 33, 37, 38	4
40-50	40, 42, 43, 46, 46, 46, 48, 49	8
50-60	50, 52, 53, 58, 59	5
60-70	60, 64	2

(b)

Consider horizontal and vertical axes represent the seconds and frequency respectively. Frequencies are the heights of rectangles.



Question 4: Draw, in the same diagram, a histogram and a frequency polygon to represent the following data which shows the monthly cost of living index of a city in a period of 2 years:

Cost of living index:	440-460	460-480	489-500	500-520	520-540	540-560	560-580	580-600
No. of months:	2	4	3	5	3	2	1	4

Solution:
Consider horizontal as cost of living (in Rs.) and vertical axis represent the number of months.

Histogram and a frequency polygon: