

Problem 1: Draw the histogram for the given data.

Marks	No. of Students
15 – 18	7
19 – 22	12
23 – 26	56
27 – 30	40
31 – 34	11
35 – 38	54
39 – 42	26
43 – 46	37
47 – 50	7
Total	250

Solution: This grouped frequency distribution is not continuous. We need to convert it into a continuous distribution with exclusive type classes. This is done by averaging the difference of the lower limit of one class and the upper limit of the preceding class. Here, $d = \frac{1}{2} (19 - 18) = \frac{1}{2} = 0.5$. We add 0.5 to all the upper limits and we subtract 0.5 from all the lower limits.

Marks	No. of Students
14.5 – 18.5	7
18.5 – 22.5	12
22.5 – 26.5	56
26.5 – 30.5	40
30.5 – 34.5	11
34.5 – 38.5	54
38.5 – 42.5	26
42.5 – 46.5	37
46.5 – 50.6	7
Total	250

The corresponding histogram is

