



Exercise 14C

Question 12:

The given frequency distribution table is as below:

Class Intervals	1-10	11-20	21-30	31-40	41-50	51-60
Frequency	8	3	6	12	2	7

This table has inclusive class intervals and so these are to be converted into exclusive class intervals (i.e true class limits). These are (0.5-10.5), (10.5-20.5), (20.5-30.5), (30.5-40.5), (40.5-50.5), and (50.5-60.5)

In order to draw a frequency polygon, we need to determine the class marks.

$$\text{Class marks of a class interval} = \frac{\text{upper limit} + \text{lower limit}}{2}$$

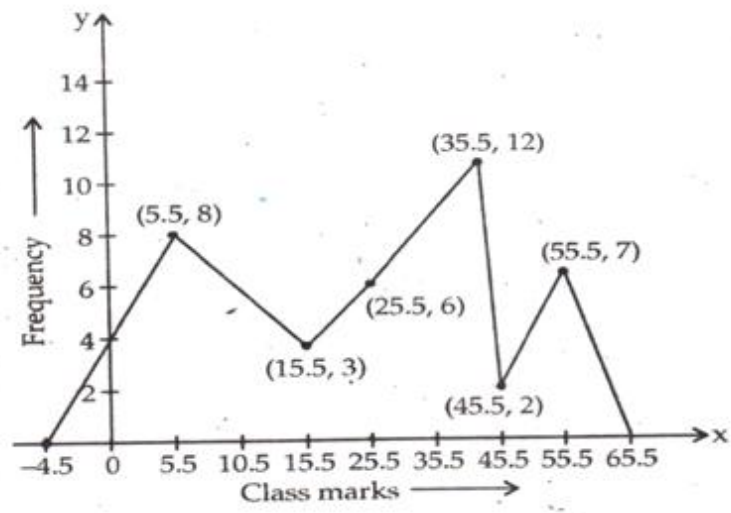
Take imaginary class interval (-9.5-0.5) at the beginning and (60.5-70.5) at the end , each with frequency zero. So we have the following table

Class Intervals	True class Intervals	Class marks	Frequency
(-9)-0	(-9.5)-0.5	-4.5	0
1-10	0.5-10.5	5.5	8
11-20	10.5-20.5	15.5	3
21-30	20.5-30.5	25.5	6
31-40	30.5-40.5	35.5	12
41-50	40.5-50.5	45.5	2
51-60	50.5-60.5	55.5	7
61-70	60.5-70.5	65.5	0

Now, take class marks along x-axis and their corresponding frequencies along y-axis.

Mark the points and join them.

Thus, we obtain a complete frequency polygon as shown below:



***** END *****