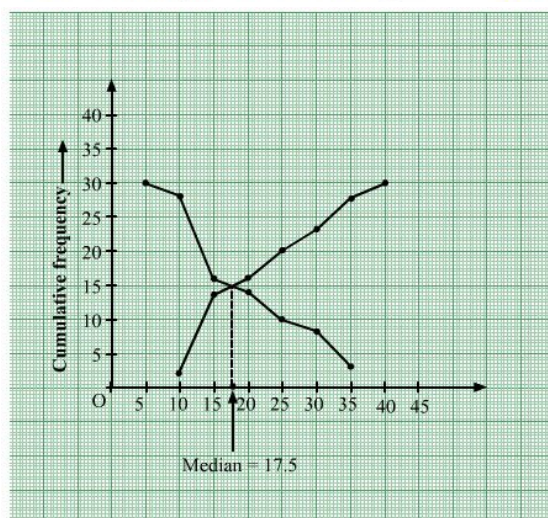Statistics Ex 7.6 Q6

Answer :

Firstly, we prepare the cumulative frequency table for less than type.

Profit (In lakh in Rs.)	No. of shops (frequency)	Profit (less than)	Cumulative frequency	Suitable points
5-10	2	10	2	(10, 2)
10-15	12	15	14	(15, 14)
15-20	2	20	16	(20, 16)
20-25	4	25	20	(25, 20)
25-30	3	30	23	(30, 23)
30-35	4	35	27	(35, 27)
35-40	3	40	30	(40, 30)

Again, prepare the cumulative frequency table for more than type.

Profit (In lakh in Rs.)	No. of shops (frequency)	Profit (more than)	Cumulative frequency	Suitable points
5-10	2	5	30	(5, 30)
10-15	12	10	28	(10, 28)
15-20	2	15	16	(15, 16)
20-25	4	20	14	(20, 14)
25-30	3	25	10	(25, 10)
30-35	4	30	7	(30, 7)
35-40	3	35	3	(35, 3)

Now, "more than ogive" and "less than ogive" can be drawn as follows:

The x-coordinate of the point of intersection of the "more-than ogive" and "less-than ogive" gives the median of the given distribution..

So, the corresponding median is Rs 17.5 lakh.

********** END **********