

CHAPTER 14

Statistics

Drawing of more than ogive:

We plot the lower limits of the class intervals on the x – axis and their corresponding cumulative frequencies on the y – axis.

Then we plot the points on a graph paper and join them by a free hand smooth curve. The curve we get is called a cumulative frequency curve or more than ogive.

Example:

The following table gives production yield per hectare of wheat of 100 farms of a village.

Production yield (in Kg/ha)	50 – 55	55 – 60	60 – 65	65 – 70	70 – 75	75 – 80
No. of farms	2	8	12	24	38	16

Change the distribution to a more than type distribution and draw its ogive.

Sol.

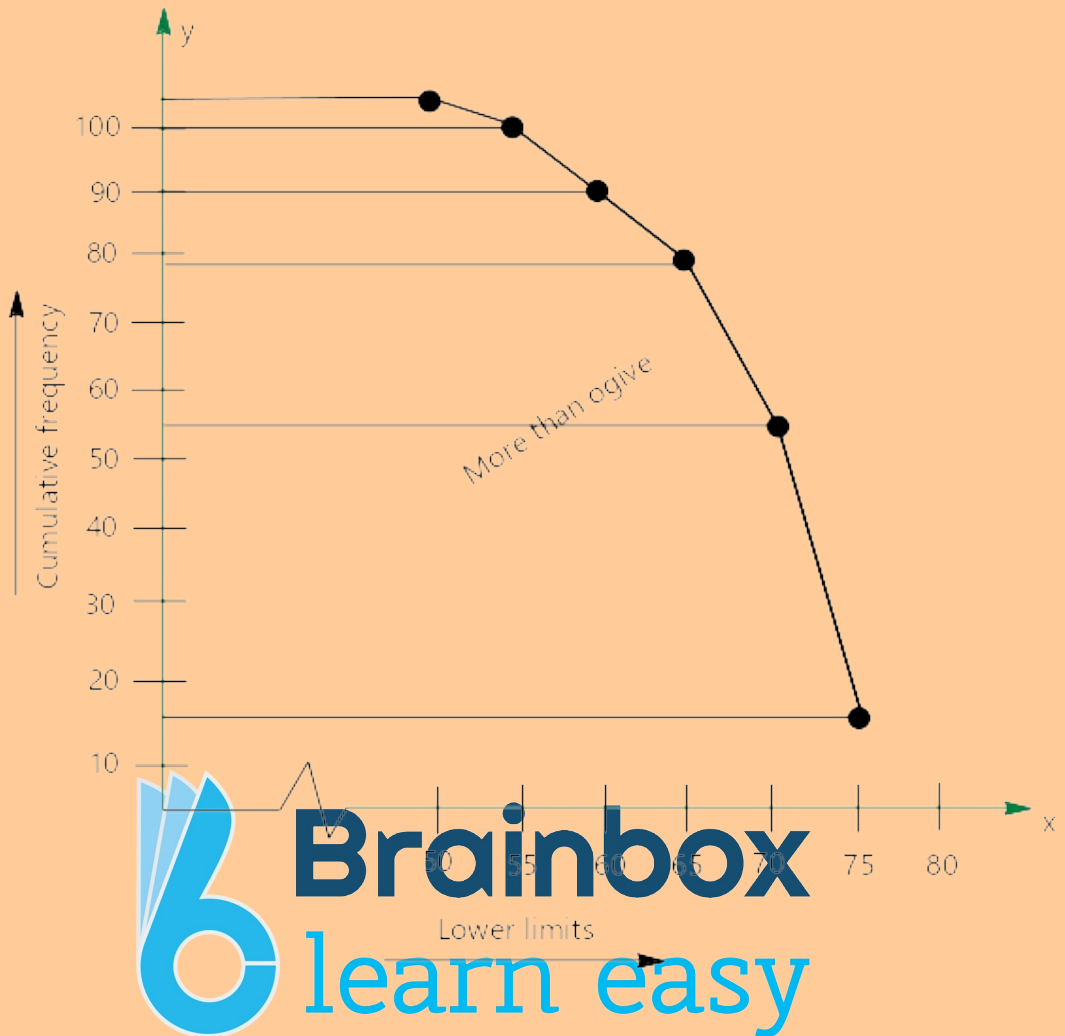
More than type cumulative frequency distribution for the given data is as follows:

N = Sum of all the frequencies in the given data is

$$N = 2 + 8 + 12 + 24 + 38 + 16 = 100$$

Production yield (in Kg/ha)	Frequency	Cumulative frequency (C. f)
More than or equal to 50	2	100
More than or equal to 55	8	$100 - 2 = 98$
More than or equal to 60	12	$98 - 8 = 90$
More than or equal to 65	24	$90 - 12 = 78$
More than or equal to 70	38	$78 - 24 = 54$
More than or equal to 75	16	$54 - 38 = 16$

Now mark the cumulative frequencies on the y – axis and lower limits of the class intervals on the x – axis by choosing a suitable scale. Then plot the points (50, 100), (55, 98), (60, 90), (65, 78), (70, 54) and (75, 16) on a graph paper and join them by a free hand smooth curves as shown below:

**Note:**

For drawing ogives, it should be ensured that the class intervals are continuous, because cumulative frequencies are linked with boundaries but not with limits.