

Ass. Ques 4)

What is the value of the 99th percentile?

{ 2, 2, 3, 4, 5, 5, 5, 6, 7, 8, 8, 8, 8, 8, 9, 9, 10, 11, 11, 12 }

Ans :- N^{th} percentile = $\frac{N}{100} \times (n+1)$
 (Index) Total count

$$\begin{aligned} \therefore 99^{\text{th}} \text{ percentile (Index)} &= \frac{99}{100} \times (20+1) \\ &= \frac{99}{100} \times 21 \\ &= 20.79 \rightarrow \text{Index.} \\ &\approx 20 \end{aligned}$$

And as there are only 20 total numbers

$$\therefore 99^{\text{th}} \text{ percentile} = 12$$