Q-4:- What is the value of the 99 percentile?

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

Solution :-

we know that

Value of percentile = $\dfrac{\text{Percentile}}{100} \times (n+1)$

Here $n = 20$

we have to find 99 percentile.

∴ Value of 99 percentile = $\dfrac{99}{100} \times (20+1)$

$\quad = \dfrac{99}{100} \times 21$

$\quad = \dfrac{2079}{100}$

$\quad = 20.79$ index

So index of 20.79 is − 11, 12

∴ 99 percentile = $\dfrac{11+12}{2} = \boxed{11.5}$