

1) Given following table

Data Percentile

16.8 43th percentile

17.1 49th percentile

17.3 52th percentile

17.8 55th percentile

18.2 60th percentile

Find the median of the above observation?

Solution: Observe what is given in the problem.

16.8, 17.1, 17.3, 17.8, 18.2 are the values of their corresponding percentiles 43, 49, 52, 55, 60.

Here N, L are all unknown. If either N or L is known to us we can find out the median of the given observations where median = 50th percentile.

But on a rough estimation the median falls in the range (17.1, 17.3), since median = 50th percentile.

2) In a distribution of 6500 parameters, if 26.7 is 56 percentile & 37.1 is 78 percentile, then what is the percentile of x ($26.7 \leq x \leq 37$), that is closest in this range?

A. 1888

B. 4750

C. 6650

Solution: The Formula given is $(L/N) \times 100 = P$

Here N= 6500,

When P = 56, find L?

Therefore $L_1 = (P \times N) / 100$

$$= (6500 \times 56) / 100$$

$$= 3640$$

when P = 78,

$$L_2 = 65 \times 78 = 5070$$

Therefore for the values of x that lies in the range ($26.7 \leq x \leq 37$), is 4750, Hence the answer is Option B

