

Percentiles And Quartiles

CAT, GATE

① Percentage

How many ^{% of} number are odd?

dataset = { 2, 4, [✓]7, [✓]5, 8, [✓]9, 10 }

$$\text{Percentage} = \frac{\# \text{ Numbers are odd}}{\# \text{ of observation}} = \frac{3}{7}$$

② Percentile : A percentile is a value below which a certain percentage of observations lie.

Eg: Dataset 5-25

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

What is the percentile ranking of '10'

$$\begin{aligned} \text{Percentile Rank of } x &= \frac{\# \text{ of values below } x}{n} \times 100 \\ &= \frac{16}{20} \times 100 \\ &= 80\% \end{aligned}$$

③ What value exists at the percentile ranking of 25% ??

$$\text{Value} = \frac{\text{Percentile}}{100} \times (n+1)$$

$$= \frac{25}{100} \times (20+1) = \underline{\underline{5.25}} \rightarrow \underline{\underline{\text{Index}}}$$

5.25 Index position indication

$$\text{Avg}(5+6) = \frac{5+5}{2} = \underline{\underline{5}} \}$$

Assignment : 99%

Homework

② Quartiles

1st Quartile Median 3rd Quartile

Second Quartile



- ① Percentage
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- ③ Quartiles