Percentiles And Quartiles

Percentage : $\{1, 2, 3, 4, 5, 6\}$

No. of odd numbers = 3

Percentage of odd numbers in this group $= \frac{3}{6} \times 100 = 50\%$

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

$\{2, 2, 3, 4, 5, 5, 6, 7, 8, 8, 9, 9, 10\}$ $n = 9$

$\frac{3+4}{2} = 3.5$

Percentile of value x $= \frac{\#\text{ of values below } x}{n} \times 100$ (no.)

$= \frac{11}{14} \times 100$

$= 78.57\%$ of value 9

Percentile Ranking

25% is 3.75

to get value :

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

$= \frac{25}{100} \times (15)$

$= 3.75 \approx 3.5$

here, as 3.75 not present in our data , and it lies in 3 and 4 hence we will take the avg of 3 and 5 which is 3.5

② Quartiles

25% = 1st Quartile
50% = 2nd Quartile
75% = 3rd Quartile