Percentage and percentile

Percentage :- {1,2,3,4,5,6}
What is % of odd numbers
= Num of odd nums/all num
= 3/6
=0.5
=50%

Percentiles :- A percentile is value below which certain percentage of observation lie.

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

Q:- What is the percentile ranking of 10 ?

percentile ranking x = NO. OF VALUES BELOW X/n *100
Percentile ranking 10 = 18/22 *100 = 81

Q2:- What value exists at percentile ranking of 25%?

value = percentile/100 * (n+1)
value = 25/100 * (22+1)
value = 5.75 ---> Index

Q3: 75 ?
Ans: 9

5 Number Summery

1.Minimum
2.First Quartile (Q1)
3.Median
4.Third Quartile (Q3)
5. Maximum

Removing Outliers

{1,2,2,2,3,3,4,5,5,5,6,6,6,6,7,8,8,9,27}
Goal --> { Lower fense ---- Higher Fense}

Minimum = 1
Q1=25% ---> 3
Median = 5
Q3 = 75% -->7
max= 9

IQR = Inter Quartile Range = Q3 - Q1 =7-3= 4
Lower fense = Q1 - 1.5 * (IQR)
=3 -1.5 *4 = 3- 6 = -3

Higher fense = q3 + 1.5(IQR)
= 7 + 1.5 *4 = 13