**Percentiles and quartiles**

**Percentage: {1, 2, 3, 4, 5, 6, 7, 8}**

Percentage of even numbers **=** No of even numbers/ Total number of numbers = 4/8= 0.5 = 50%

**Percentiles:**

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

**Ex: 99 percentile –** it means the person has got better marks than 99% of entire students.

Let us observe the below dataset along with some calculations.

Dataset in ascending order = 2, 2, 3, 4, 5, 5, 5, 6, 7, 8, 8, 8, 8, 9, 9, 10, 11, 11, 12

**Q:** what is the percentile rank of value ‘10?’

Using below formula, we can calculate the percentile rank of x = **(no. of values below x)/n**

**16/20** = 80 Percentile.

**Q:** Percentile rank of 8 = 8/20 = 45 percentile

**Q:** Percentile rank of 6 = 7/20 = 35 percentile

**Q:** Percentile rank of 9 = 13/20 = 65%

**Q:** What is the value that exists of 25%?

**Formula:**

**Value = (Percentile/100)\*n**

**Ans. (25/100)\*20 = 5th index**

**Q: What is the value that exists of 95%?**

**Ans. (95/100)\*20 = 19.95th index**