

Numerical on Percentile

<https://youtu.be/wli79sQiFJI>

Question 1

There are 25 test scores such as: 72, 54, 56, 61, 62, 66, 68, 43, 69, 69, 70, 71, 77, 78, 79, 85, 87, 88, 89, 93, 95, 96, 98, 99, 99. Find the 60th percentile?

Answer

There are 25 test scores such as: 72, 54, 56, 61, 62, 66, 68, 43, 69, 69, 70, 71, 77, 78, 79, 85, 87, 88, 89, 93, 95, 96, 98, 99, 99. Find the 60th percentile?

- Ans
- ① Ascending Order = 43, 54, 56, 61, 62, 66, 68, 69, 69, 70, 71, 72, 77, 78, 79, 85, 87, 88, 89, 93, 95, 96, 98, 99, 99
 - ② find Rank: $\text{Rank} = \frac{\text{percentile}}{100}$
 $= \frac{60}{100} = 0.6$
 - ③ find 60th percentile
 $\Rightarrow 60^{\text{th}} \text{ percentile} = 0.6 \times 25 = 15$ (n. of observations)
 - ④ from left in dataset, 15th element is 79
Find mean of 15th & 16th element: $\frac{79+85}{2} = 82$ From 60th percentile

Question 2

Let us consider the percentile example problem: In a college, a list of grades of 15 students has been declared. Their grades are: 85, 34, 42, 51, 84, 86, 78, 85, 87, 69, 74, 65. Find the 80th percentile?

Let us consider the percentile example problem: In a college, a list of grades of 12 students has been declared. Their grades are:

85, 34, 42, 51, 84, 86, 78, 85, 87, 69, 74, 65. Find the 80th percentile?

Ans

Ascending Order = 34, 42, 51, 65, 69, 74, 78, 84, 85, 85, 86, 87

② $\text{Rank} = \frac{\text{Percentile}}{100} = \frac{80}{100} = 0.8$

③ $80^{\text{th}} \text{ Percentile} = 0.8 \times 12 = 9.6 \approx 10$

④ $80^{\text{th}} \text{ Percentile} = 10^{\text{th}} \text{ no. in dataset from left} = 85$