

Mean: 4.72
 Median:
 1, 3, 3, 4, 6, 6, 8, 2, 11, 8, 3
 Mode: 3

Apr 16-9:42 AM

PERCENTILE
 Percentiles: divide the distribution into 100 sections each containing 1% of the data.

$$\text{Percentile rank } (x) = \frac{\left(\begin{smallmatrix} \text{Number of data} \\ \text{less than } x \end{smallmatrix}\right) + \frac{1}{2} \times \left(\begin{smallmatrix} \text{Number of data} \\ \text{equal to } x \end{smallmatrix}\right)}{\text{Total number of data}} \times 100$$
 Usually, the percentile rank is rounded up to the nearest integer.
 Percentile rank is used when the distribution has a very large number of data.
 The percentile rank of data entry "x" represents the approximate percentage of data that is less than or equal to "x"
 ex:
 The following distribution, placed in increasing order, has 250 data. Calculate the percentile rank of the data entry 72.
 18, ..., 70, 71, 71, 72, 72, 72, 72, 73, ..., 92
 164 data 4 data

$$\text{P.Rank} = \left(\frac{164 + \frac{1}{2}(4)}{250}\right) \times 100$$

$$\text{P.Rank} = \left(\frac{166}{250}\right) \times 100$$

$$\text{P.Rank} = 66.4 \rightarrow 67$$

Apr 17-8:45 AM

The results of 185 students on a mathematics exam are given below, in increasing order.
 45, 48, 50, ..., 78, 79, 79, 80, 80, 80, 81, ..., 99, 100
 153 results 32 results
 Richard received an 80 on this exam. What is the percentile rank attributed to Richard's mark?

$$\left(\frac{153 + \frac{1}{2}(3)}{185}\right) \times 100$$

$$\left(\frac{154.5}{185}\right) \times 100 = 83.5 \rightarrow 84\%$$

Apr 17-8:53 AM

Given the list of data values below, which one has a Percentile Rank of at least 72
 25, ..., 67, 68, 68, 69, 69, 69, ..., 80 81, 81, 82, ..., 100
 720 data values 100 data values 180 data values

$$\frac{72}{100} \times \frac{720}{1000}$$

$$\left(\frac{718 + \frac{1}{2}(2)}{1000}\right) \times 100$$

$$71.9 \rightarrow 72\%$$

Apr 15-2:05 PM

Given the list of data values below, which one has a percentile rank of at least 65
 45, ..., 55, 59 60, 61, 61, ..., 63, 65, 65
 128 data values 72 data values

$$\frac{65}{100} \times \frac{200}{200} = 130$$

Apr 15-2:14 PM