

Answer on Question #66066 – Math – Statistics and Probability

Question

Find the values of the 30th and 90th percentiles of the data. Please show your work.
129, 113, 200, 100, 105, 132, 100, 176, 146, 152

Solution

Organize the data into an ascending order:

- 1 - 100
- 2 - 100
- 3 - 105
- 4 - 113
- 5 - 129
- 6 - 132
- 7 - 146
- 8 - 152
- 9 - 176
- 10 - 200

Calculate the percentile location

$$i = \frac{30}{100} \cdot 10 = 3$$

30th percentile = 30% of the numbers are under this number.

Since there are 10 numbers, you just pick the 3rd one, so the 30th percentile is 105.

You just pick the 9th one, so the 90th percentile is 176.

Answer

30th percentile=105, 90th percentile=176