

Algebra 1 - Data Distributions and Summary Statistics - Test

Common Core S-ID.A.1, S-ID.A.2, S-ID.A.3 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This test checks data distributions and summary statistics for Common Core S-ID.A.1, S-ID.A.2, and S-ID.A.3. It has 9 questions worth 20 points in all, and you have 45 minutes. Write clear steps, because points are awarded for method as well as for the final answer. Leave a few minutes to review.

About this test

- Grade: Algebra 1
- Chapter: Data Distributions and Summary Statistics
- Standards: S-ID.A.1, S-ID.A.2, S-ID.A.3
- Time: 45 minutes
- Total: 20 points

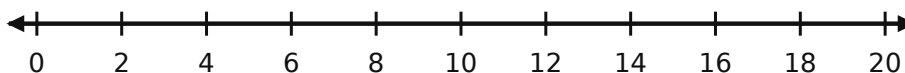
Question 1 - Mean and median [2 pts]

Find the mean and the median of 14,9,12,17,20,12.

Question 2 - Five-number summary [2 pts]

Find the five-number summary of 4,6,7,9,10,12,15.

Question 3 - Draw a box plot [2 pts]



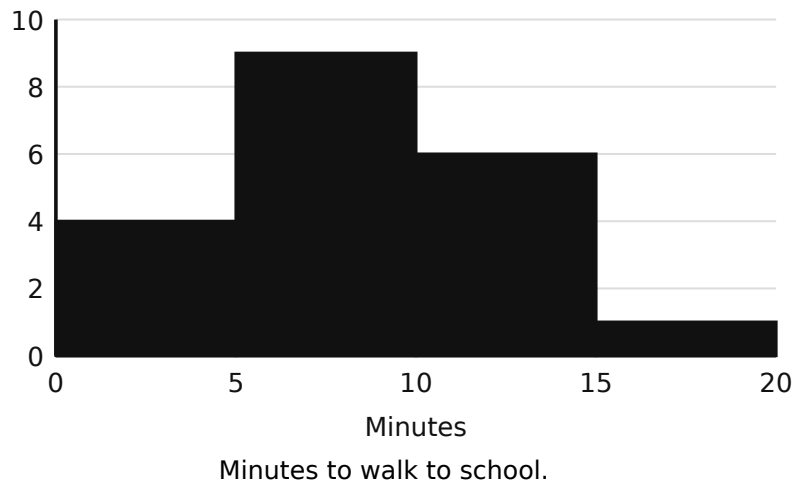
Number line for question 3.

Draw a box plot for the five-number summary: minimum 4, Q1 6, median 9, Q3 12, maximum 15.

Question 4 - Outlier test [2 pts]

The data are 20,22,23,25,26,27,28,60. Use the $1.5 \cdot \text{IQR}$ rule to decide whether 60 is an outlier.

Question 5 - Read a histogram [2 pts]



The histogram shows the walking times of 20 students. How many students walk less than 10 minutes, and what percent of the 20 is that?

Question 6 - Standard deviation [2 pts]

Find the standard deviation of 2,4,4,4,5,5,7,9. Divide by n .

Question 7 - Compare two groups [3 pts]

Group	Data
A	8, 9, 10, 10, 11, 12
B	5, 7, 10, 10, 13, 15

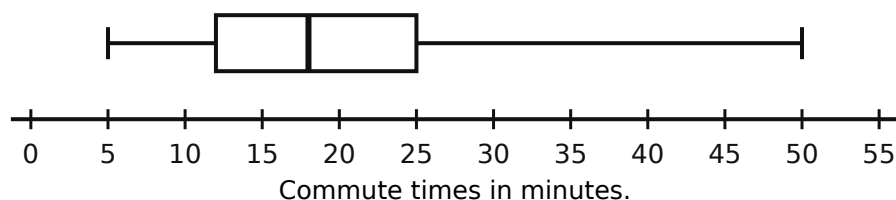
Two data sets.

Two groups have the data shown in the table. Both have a mean of 10.

- Find the range of each group. (1 point)
- The standard deviations are about 1.3 for A and 3.4 for B. Which group is more spread out? (1 point)

c. What does this mean about the groups? (1 point)

Question 8 - Commute times [3 pts]



The box plot shows commute times (minutes) for a class.

- What is the median? (1 point)
- Find the IQR. (1 point)
- Is 50 minutes an outlier? Use the $1.5 \cdot \text{IQR}$ rule. (1 point)

Question 9 - Choose a measure [2 pts]

The salaries (in thousands of dollars) of seven employees are 32,35,36,38,40,41,150. Find the mean and median. Which better describes a typical salary? Explain.