

Please do not write on the subject, and do not forget to hand it back at the end.

STATISTICS

In a town two schools, school A and school B, enter a sit-ups competition: they train their students to do sit-ups.

Then they test them to see how many sit-ups they can do in one minute.

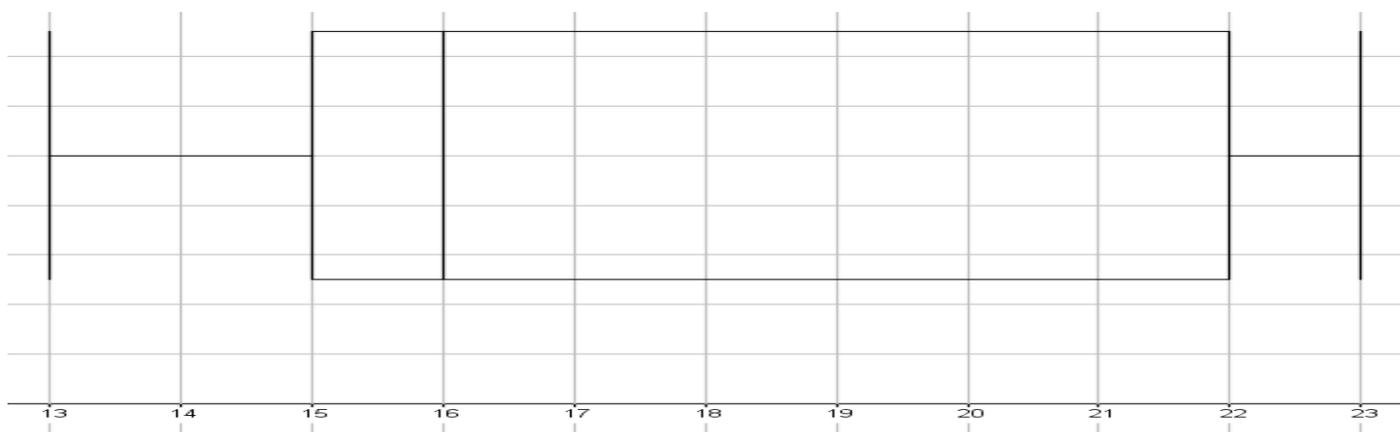
The results from school A are given below:

number of sit-ups	number of students	cumulative number of students
15	11	11
16	21	32
17	33	p
18	q	99
19	18	117
20	8	125

- 1) Find the value of p and q.
- 2) Find the median number of sit-ups for school A.
- 3) Find the mean number of sit-ups for school A.
- 4) Find the quartiles for school A.

School B has the same total frequency as school A.

For school B the mean number of sit-ups is about 18, and we have the following box and whiskers plot:



- 5) In your opinion, which school should win the sit-ups competition?

Give reasons for your answer, based on the previous questions and the box plot above.

NB: sit-ups: abdominaux.