



S12-10min Median Quartiles and IQR: 10-minute Pack

EDEXCEL 1ST0 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** The ages, in years, of 9 people running a charity race are, in order:

19, 22, 24, 24, 27, 29, 31, 34, 38

Write down the median age.

(Total for Question 1 is 1 mark)

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- 2** The number of text messages sent in a day by 8 students are:

12, 30, 8, 21, 15, 30, 18, 24

Find the median number of text messages.

(Total for Question 2 is 2 marks)

- 3** The times, in seconds, taken by 16 runners to complete an obstacle course are shown below, in order:

12, 14, 15, 15, 16, 17, 18, 18, 19, 20, 21, 22, 22, 23, 25, 27

For n data values, the position of the lower quartile can be estimated using $n/4$, the position of the median using $n/2$, and the position of the upper quartile using $3n/4$.

- (a) Use $n/4$ to find the position of the lower quartile, and hence write down the lower quartile. (2)

- (b) Find the median. (1)

- (c) Find the upper quartile. (1)

- (d) Calculate the interquartile range. (1)

(Total for Question 3 is 5 marks)

Mark scheme · S12-10min Median Quartiles and IQR: 10-minute Pack

Question 1

- **B1** 27 cao
- **Answer: 27**

Question 2

- **M1** data ordered: 8, 12, 15, 18, 21, 24, 30, 30
- **A1** 19.5 cao
- **Answer: 19.5**

Question 3

- (a) **M1** $16/4 = 4$, a whole number, so the lower quartile is the mean of the 4th and 5th values
- (a) **A1** 15.5 cao
- **(a) Answer: 15.5**
- (b) **B1** 18.5 cao
- **(b) Answer: 18.5**
- (c) **B1** 22 cao
- **(c) Answer: 22**
- (d) **B1** 6.5 cao, ft from (a) and (c)
- **(d) Answer: 6.5**