

GCSE Statistics Extended Response Questions

Students often struggle or avoid these questions so it is worth practising and learning how to approach them.

Both Papers 1 and 2 in GCSE Statistics (Edexcel 9-1) will include an extended response question. These are usually worth 5 or 6 marks.

Key Tips:

Fully explain your point.

E.G. Don't just say 'is appropriate'

→ need to say **why**.

Use the content of the question to structure your answer.

E.G. make a comment on each point in the question:

- Is taking a census appropriate or not? *Why?*
- Is each runner measuring their heart rate appropriate? *Why?*
- Is separating males and females appropriate? *Why?*
- Is constructing a box plot appropriate? *Why?*
- Is calculating the mean, median and mode appropriate? *Why?*

8 Roxann wants to investigate the resting heart rates for members of her running club. She believes that the resting heart rates will be normally distributed.

Here is the plan for her investigation.

Cover **all** elements of the question

E.G cover **both** data collection **and** presenting data

Data collection

Take a census of the 110 members of the running club (50 female runners and 60 male runners).

Each runner will measure their resting heart rate and input the information into the spreadsheet when they come to the club.

Processing and presenting data

Construct a box plot for the resting heart rate of the male runners and a box plot for the resting heart rate of the female runners.

Work out the mean, median and mode for the resting heart rate of the male runners and for the resting heart rate of the female runners.

Work out the standard deviation for the resting heart rate of the male runners and for the resting heart rate of the female runners.

Discuss whether Roxann's plans for collecting and presenting data are appropriate.

(Total for Question 8 is 6 marks)

A video walkthrough of this question is available on our [YouTube channel](#)



Use the marks for the question as a guide for how many points you need to make in your answer.

- E.G. If the question is worth 6 marks, then you need to make 6 separate points.