

Commentary on candidate evidence

The candidate evidence has achieved the following marks for each section of the project.

Introduction

Candidate 1

The candidate was awarded **5/6 marks**.

- ✓ ●¹ Mark 1 was awarded because the candidate explained the background and context of the project.
- ✓ ●² Mark 2 was awarded because the candidate stated the research question (includes 'relationship').
- ✓ ●³ Mark 3 was awarded because the candidate stated the numerical data used.
- ✓ ●⁴ Mark 4 was awarded because the candidate provided information on the background of the data.
- ✓ ●⁵ Mark 5 was awarded because the candidate discussed the validity of the source.
- ✗ ●⁶ Mark 6 was not awarded because there is a contradiction within the candidate's statement.

Candidate 2

The candidate was awarded **3/6 marks**.

- ✓ ●¹ Mark 1 was awarded because the candidate explained the background and context of the project.
- ✓ ●² Mark 2 was awarded because the candidate stated the research question (includes 'correlation').
- ✗ ●³ Mark 3 was not awarded because the type of data was not stated.
- ✓ ●⁴ Mark 4 was awarded because the candidate provided information on the background of the data.
- ✗ ●⁵ Mark 5 was not awarded because the candidate did not discuss the validity of the source.
- ✗ ●⁶ Mark 6 was not awarded because the candidate did not discuss whether the data was unbiased and uninfluenced.

Candidate 3

The candidate was awarded **3/6 marks**.

- ✗ ●¹ Mark 1 was not awarded because the candidate did not explain the background and context of the project.
- ✓ ●² Mark 2 was awarded because the candidate stated the research question (includes 'correlation').
- ✓ ●³ Mark 3 was awarded because the candidate stated the type of data.
- ✓ ●⁴ Mark 4 was awarded because the candidate provided information on the background of the data.
- ✗ ●⁵ Mark 5 was not awarded because the candidate did not discuss the validity of the source.
- ✗ ●⁶ Mark 6 was not awarded because there is a contradiction within the candidate's statement.

Subjective Impression

Candidate 4

NB: Projects are scanned and will always appear in black and white. Candidates should check that their graphs and charts are readable when printed in black and white.

Candidate 5

The candidate was awarded **8/8 marks**.

- ✓ ●⁷ Mark 7 was awarded because the candidate provided an appropriate graph (even although it is a bar chart with numerical data it is helpful to show the data).
- ✓ ●⁸ Mark 8 was awarded because the candidate provided an appropriate graph (boxplot).
- ✓ ●⁹ Mark 9 was awarded for the candidate's comment on the bar chart which showed the spending of both leagues.
- ✓ ●¹⁰ Mark 10 was awarded for the candidate's comments on how varied one league was, and also the outliers.
- ✓ ●¹¹ Mark 11 was awarded because the graphs labels and titles are correct.
- ✓ ●¹² Mark 12 was awarded for location of measure.
- ✓ ●¹³ Mark 13 was awarded because the candidate stated the spread.
- ✓ ●¹⁴ Mark 14 was awarded because the candidate labelled the statistics.

Candidate 6

The candidate was awarded **7/8 marks**.

- ✓ ●⁷ Mark 7 was awarded because the candidate provided an appropriate graph (line graph showing both reaction times).
- ✓ ●⁸ Mark 8 was awarded because the candidate provided an appropriate graph (box plot showing the spread of both of the reaction times).
- ✓ ●⁹ Mark 9 was awarded for comment on how helpful the display is in terms of visualising statistics.
- ✓ ●¹⁰ Mark 10 was awarded for the candidate's comment on range and median.
- ✗ ●¹¹ Mark 11 was not awarded, as the labels are incorrect.
- ✓ ●¹² Mark 12 was awarded because the candidate stated the location of measure.
- ✓ ●¹³ Mark 13 was awarded because the candidate stated the spread (assuming is symmetrical).
- ✓ ●¹⁴ Mark 14 was awarded because the statistics were labelled.

Candidate 7

The candidate was awarded **4/8 marks**.

- ✓ ●⁷ Mark 7 was awarded because the candidate provided an appropriate graph.
- ✗ ●⁸ Mark 8 was not awarded because the candidate did not provide another graph.
- ✓ ●⁹ Mark 9 was awarded because the candidate's graph showed the difference in deaths from each drug.
- ✗ ●¹⁰ Mark 10 was not awarded as there is no additional display to comment on.
- ✗ ●¹¹ Mark 11 was not awarded because labels were missing.
- ✓ ●¹² Mark 12 was awarded as the location of the measure was stated.
- ✗ ●¹³ Mark 13 was not awarded as there is no measure of variability (spread).
- ✓ ●¹⁴ Mark 14 was awarded because the candidate provided a label for the central location.

Analysis and Interpretation

Candidate 8

The candidate was awarded **1/4 marks**.

- ✗ ●¹⁵ Mark 15 was not awarded because the test was not appropriate for categorical data.

- ✓ ●¹⁶ Mark 16 was awarded because the candidate produced the results of a test.
- ✗ ●¹⁷ Mark 17 was not awarded because there is no interpretation of the confidence interval.
- ✗ ●¹⁸ Mark 18 was not awarded because the candidate's interpretation of p-value was not interpreted in context and null hypothesis is not stated anywhere.

Candidate 9

The candidate was awarded **2/6 marks**.

- ✓ ●¹⁵ Mark 15 was awarded because the candidate chose the correct test.
- ✗ ●¹⁶ Mark 16 was not awarded because R squared does not lead to $R = 0.537$.
- ✗ ●¹⁷ Mark 17 was not awarded as no evidence is provided.
- ✗ ●¹⁸ Mark 18 was not awarded because the candidate's interpretation of the R-value was incorrect (the candidate should have referred to the strength of correlation and not the fit).
- ✗ ●¹⁹ Mark 19 was not awarded because there was no mention of variability in their response.
- ✓ ●²⁰ Mark 20 was awarded because the candidate correctly interpreted both graphs.

Candidate 10

The candidate was awarded **4/4 marks**.

- ✓ ●¹⁵ Mark 15 was awarded to the candidate for stating 't-test' in the introduction to the further statistical analysis. The output shows that a 2 sample *t*-test has been performed.
- ✓ ●¹⁶ Mark 16 was awarded as the candidate performed the correct test and provided the output.
- ✓ ●¹⁷ Mark 17 was awarded because the candidate correctly interpreted the confidence interval and related it to the context of the question.
- ✓ ●¹⁸ Mark 18 was awarded to the candidate for correctly interpreting the *p*-value of the *t*-test and relating the result in context to the question.

Conclusion

Candidate 11

The candidate was awarded **4/4 marks**.

- ✓ ●²¹ Mark 21 was awarded because the candidate's answer to the research question was justified and they referenced the graphical displays correctly in context.

- ✓ ●²² Mark 22 was awarded because the candidate's answer to the research question was justified and they referenced all descriptive statistics correctly in context.
- ✓ ●²³ Mark 23 was awarded because the candidate's answer to the research question was justified and they referenced the additional statistics correctly in context.
- ✓ ●²⁴ Mark 24 was awarded because the candidate's final conclusion is correctly stated with reference to all of their graphical displays and statistics.

Candidate 12

The candidate was awarded **2/4 marks**.

- ✓ ●²¹ Mark 21 was awarded because the candidate's answer to the research question was justified and graphical displays were referenced correctly in context.
- ✗ ●²² Mark 22 was not awarded because the candidate did not reference all descriptive statistics correctly in context.
- ✓ ●²³ Mark 23 was awarded because the candidate's answer to the research question was justified and additional statistics were referenced correctly in context.
- ✗ ●²⁴ Mark 24 was not awarded because the candidate did not refer to all of their graphical displays and statistics.

Candidate 13

The candidate was awarded **1/4 marks**.

- ✗ ●²¹ Mark 21 was not awarded because the candidate's answer to the research question was not justified and they did not reference the graphical displays correctly in context.
- ✗ ●²² Mark 22 was not awarded because the candidate's response to the research question was not justified, they did not reference all descriptive statistics correctly in context.
- ✓ ●²³ Mark 23 was awarded because the candidate's answer to the research question was justified as they referenced the additional statistics correctly and in context.
- ✗ ●²⁴ Mark 24 was not awarded because the candidate did not refer to all of their statistics in context.