



EXAMINERS' REPORTS

LEVEL 3 CERTIFICATE IN STATISTICAL PROBLEM SOLVING USING SOFTWARE

SUMMER 2015

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<https://www.wjecservices.co.uk/MarkToUMS/default.aspx?!=en>

Online results analysis

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Annual Statistical Report

The annual Statistical Report (issued in the second half of the Autumn Term) gives overall outcomes of all examinations administered by WJEC.

STATISTICAL PROBLEM SOLVING USING SOFTWARE

Level 3 Certificate

Summer 2015

Principal Examiner: Kate Richards

The number of centres entering candidates for this qualification was small. However, the number of overall submissions was greater than the previous series.

The submissions covered the whole range of grades and investigations providing the opportunity to develop resources and feedback to support teachers in the future.

All the samples submitted had the assessment criteria, with comments, clearly marked on the candidate's work where these had been met.

All assessment sheets were fully completed and all criteria bands awarded were annotated to support the overall assessment. Teacher comments were concise and very helpful to the moderator and the marking was accurate. All candidates presented their findings in their written report and observation sheets were used for every student to evidence their use of statistical software.

Several candidates completed different investigations during the controlled assessment. The investigations were very interesting with real life context. These had been previously approved by the WJEC Principal Moderator.

The results were well presented, the problems being investigated were clearly stated, and the problem solving cycle was strictly followed with conclusions linking back to the original problems.

The marking was accurate and fair.

Although many candidates tackled the same problem, they collected different data by different methods and used different statistical methods to solve the problems. The standard of submissions was very good.

Improvements were: the reduction of repetition, assumptions of significance tests being noted and investigated by some students and results clearly related back to the original hypotheses.

AC 1.1, 1.2

All candidates stated the research question or problem they were investigating. The majority of candidates gave a detailed rationale to explain the purpose of the research.

AC 2.1, 2.2, 2.3, 2.4

All candidates explained the use of the statistical problem solving cycle to investigate a problem.

All candidates wrote a detailed plan that was easy to follow with little repetition.

The explanation on how data had been collected and why was covered extremely well in most candidate's work. Only a few students showed an understanding that their hypotheses related to the target population whereas they were analysing a sample.

Students stated their data source and how the data had been collected.

Statistical methods used were generally well explained, with some mention of assumptions for significance tests.

AC 3.1, 3.2

The evaluation of the collection of data was covered well by most candidates.

All candidates stated some strengths and weaknesses.

AC 4.1

All candidates used Minitab efficiently to analyse their data. Candidates correctly identified outliers but then removed these without further investigation. The outliers need to be investigated to ensure they are errors before being removed.

AC 5.1, 5.2, 5.3

All candidates referred to the initial problem when stating their conclusions.

The level of presentation was high. Also, charts and tables included in the candidates work were labelled clearly and referred to in the text. The charts were easy to read and interpret. All candidates evaluating the effectiveness of their conclusions and most commented on strengths and weaknesses. Points such as sample size, repeating the investigation with a different sample and using secondary data were mentioned by many candidates.

A general point: it would be very helpful if the pages were numbered.



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