Year 12 Essential 2021 Statistical Investigation 2 (Simulations) marking rubric

Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /22 marks

**Clarify Problem**

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| Restate question (states the context). | (2 marks) |  |
| States requirement to run a simulation to demonstrate number of students. | (1 mark) |  |

**Design and Implement a plan**

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| Design of simulation shows detail in steps to be able to be repeated.  (Designs simulations) (Explains how it works) | (2 marks) |  |
| Simulation design includes at least 2 of the following details from task sheet:  (2000 students in total) (Average class size 23 students) (6 classes) | (2 marks) |  |
| Uses probability | (1 mark) |  |

**Select and Apply appropriate graphical techniques**

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| Organise data into table/s | (2 marks) |  |
| Analysis of data (average number of students across trials/classes that need a lunch program) | (1 mark) |  |
| Calculation of number of students requiring a lunch program. | (1 mark) |  |
| Tables and calculations have appropriate headings. | (1 mark) |  |

**Interpret the results and analyse**

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| Comparison made between students requiring a lunch program based on simulation to expected probability.  (Calculation of expected probability) (Compares to simulation result) | (2 marks) |  |
| Statement about the requirement for or against a lunch program.  (Yes/No) (Reason provided) ( states number of meals) | (3 marks) |  |
| Statement about biases of simulation/ improvements that could be made to reduce biases.  (Pros for simulation over other methods) (Biases listed) (How could method be improved) | ( 3 marks) |  |

**Communicate findings**

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| Report is neat and able to be read easily. | (1 mark) |  |