|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **5-6** | **3-4** | **1-2** | **0-1** |
| **Identifies and organises relevant information** | Identifies the underlying assumptions related to the relevant mathematics of an investigation.  Part C – conclusion clearly addresses the problem. | Identifies suitable variables and constant parameters related to various aspects of an investigation.  Part C – identified appropriate variables for modelling | Identifies the key mathematical content related to various aspects of an investigation in a given context.  Part A and B – using the correct content from the given problem | Identifies some mathematical content of an investigation.  Part A and B – using some of the correct content from the given problems |
|  | **6-7** | **4-5** | **2-3** | **0-1** |
| **Chooses effective models and methods and carries the methods through correctly** | Produces results, carries out analysis and generalises in situations requiring investigative techniques.  Part C – correct maths used to generate results, analysis of results conducted | Attempts to analyse and calculate specific cases of generalisation in situations requiring investigative techniques.  Part C – graphs are used in analysis | Selects appropriate numerical, graphical, symbolic and statistical methods to carry out a thread of reasoning in situations requiring invest. techniques.  Part A and B – use of first and second derivatives, produced accurate graphs | Some attempt to select appropriate numerical, graphical, symbolic and statistical methods in situations requiring invest. techniques.  Part A and B – graphs incorrect or not provided. |
|  | **3-4** | **2** | **1** | **0** |
| **Follows mathematical conventions and attends to accuracy** | Selects, extends and applies mathematical and/or statistical procedures to investigate a problem.  Part C – Choice of model is appropriate, correct mathematics used to generate results, including first and second derivatives | Selects and applies mathematical and/or statistical procedures previously learnt to investigate a problem.  Part C – choice of model is appropriate to chosen scenario, first and second derivatives used. | Selects and applies, with direction, mathematical and/or statistical procedures previously learnt to investigate a problem.  Part A and B – maths used correctly | Attempts to apply, with direction, mathematical and/or statistical procedures previously learnt to investigate a problem.  Part A and B – correct maths used but with errors |
|  | **6-7** | **4-5** | **2-3** | **0-1** |
| **Links mathematical results to data and contexts to reach reasonable conclusions** | Considers the strengths and limitations of an investigation and refines the results to make sensible conclusions.  Part C – conclusions are clear and supported by their results, and refer to their scenario. | Uses examples in mathematical analysis of an investigation and draws valid conclusions related to a given context.  Part C – Clear discussion of results | Makes inferences from analysis and uses these to draw conclusions related to a given context for investigation.  Part A and B – answers with no errors. | Draws some conclusions from the results of an investigation.  Part A and B – Answers with some errors |
|  | **5-6** | **3-4** | **1-2** | **0-1** |
| **Communicates mathematical reasoning, results and conclusions** | Communicates investigation findings with a comprehensive interpretation of mathematical results in the context of the investigation.  Part C - | Communicates investigation findings in a systematic and concise way using mathematical language and relating the solution to the original problem or statement.  Part C - | Communicates investigation findings in a systematic way using some mathematical expression and everyday language.  Part A and B – all key points made. | Offers simple conclusions that are not supported by data or calculations  Part A and B – Limited key points |