 12 Apps Practical Application 4 Time Series: Marking Rubric

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|  | 4 | 3 | 2 | 1 | 0 |
| Explanation of the requirements requested | | | | | |
| **Introduction** | Formulates the problem with detailed explanation. | Formulates the problem with some explanation. | Rewrites the given problem. | Writes the question. | No introduction. |
| **Identifies and organises relevant information** | Clearly identifies the underlying assumptions related to the investigation. | Refers to assumptions of the investigation in a vague or general way. | Identifies only one assumption of the investigation | Identifies some mathematical content related to the investigation. | Makes no links to mathematical content of the investigation. |
| Data Analysis | | | | | |
| **Identifies and organises relevant information** | Range of data is current and referencing is sufficient in detail and is easy to verify.  Other sources, (beyond those suggested) are used for future forecasting included to account for indexation of wages and superannuation with clear explanation of relevance.  Displays clear and concise data:  Data is presented in tabular, diagrammatic or graphical form.  A typical week while Valerie is in a location is provided as a timetable | Range of data is current and referencing is not sufficient in detail or difficult to verify.  Future forecasting included to account for indexation of living expenses.  Displays weekly income, superannuation and expenses using mathematical representation.  Displays data clearly but is not concise:  Data is presented in tabular, diagrammatic or graphical form.  Description of a typical week while Valerie is in a location is provided | Range of data is current and but not referenced.  Displays data:  Data is presented in tabular, diagrammatic or graphical form.  Describes reasonable weekly income and expenses using mathematical representation.  Description of a typical day while Valerie is in a location is provided. | Range of data chosen does not consider current prices and relies on the source data.  Displays data using an inappropriate representation.  Describes reasonable weekly income and expenses.  Details of local attractions and activities are brief. | Does not display relevant data.  Does not clearly organise display of income and expenses.  Does not have a clear planned route for Valerie to take.  Does not assign time for Valerie to explore the local attractions of destinations |
| **Chooses effective models and methods and carries the methods through correctly** | Calculates income, expenses, and superannuation with indexation using information from more than one reputable source and financial institution | Calculates income, expenses, and superannuation with indexation based on advice from reputable sources and financial institutions | Calculates income, expenses, and superannuation without any indexation. | Considers one method of calculating income, expenses, and superannuation |  |
| Includes a thorough explanation with calculations behind choosing methodology for analysis.  Creates a correct mathematical algorithm or spreadsheet for Valerie to use to track her finances that is easy to use. | Includes a brief explanation with calculations behind choosing methodology for analysis.  Creates a partially correct mathematical algorithm or spreadsheet for Valerie to use to track her finances that is easy to use. | Includes calculations but with limited explanation of methodology.  Creates a mathematical algorithm or spreadsheet for Valerie to use to track her finances but is not easy to use OR the a mathematical algorithm or spreadsheet for Valerie to use to track her finances is missing required information. | Includes calculations but with no accompanying explanation of methodology.  Does not create a mathematical algorithm or spreadsheet for Valerie to use to track her finances. |  |
| **Follows mathematical conventions accurately** | Selects, extends and applies mathematical procedures to investigate a problem.  Detailed calculations are present and are easy to follow  Working out is thorough and is easy to follow.  Values are related to context.  Formulas or algorithms are shown and are correctly applied. | Selects and applies mathematical procedures previously learnt to investigate a problem.  Detailed calculations are present but hard to follow.  Working out is present but is difficult to follow.  Values are related to context.  Formulas or algorithms are shown and are mostly correctly applied. | Selects and applies, with direction, mathematical procedures previously learnt to investigate a problem.  Calculations are brief.  Working out is limited.  Formulas or algorithms are not evident. | Attempts to apply, with direction, mathematical procedures previously learnt to investigate a problem.  Calculations are limited or missing.  Working out is missing or is hard to follow.  No evidence of formulas or relevant algorithms |  |
| Meeting the Client’s Requests | | | | | |
| **Links mathematical results to data and contexts to reach reasonable conclusions** | Recognises implied conditions in real-life applications and defines and explains the limitations of models. | Identified specified conditions in real-life applications, recognises and rejects inappropriate solutions. | Identifies specified conditions in real-life applications. |  |  |
| Identifies a problem in the Valerie’s requests, and offers appropriate advice how to react to this problem. | Identifies a problem in relation to the Valerie’s requests, attempts a solution. | States a specific problem in relation to the context and attempts a solution. |  |  |
| Communication of Solution | | | | | |
| **Communicates mathematical reasoning, results and conclusions** | Communicates investigation findings with a comprehensive interpretation of mathematical results in the context of the investigation. | Communicates investigation findings in a systematic and concise was using mathematical language and relating the solution to the original problem. | Communicates investigation findings in a systematic way, using some mathematical expression and everyday language. | Offers simple conclusions that are not supported by data or calculations. |  |

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| **Overall Comment:**  **Total Mark: / 68** |