|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | A (6 marks) | B (4 marks) | C (3 marks) | D (2 marks) |
| Identifies and organises relevant information | **Identifies the underlying assumptions related to the relevant mathematics of an investigation.**  Restates the problem in own words and includes reasonable assumptions made and explains why.  Lists the following and explains the context:   * Simple interest * Percentage loss * Depreciation using a spread sheet | **Identifies suitable variables and constant parameters related to various aspects of an investigation.**  Restates the problem in own words and includes assumptions made but does not explain reasoning.  Lists the following with some explanation of the context   * Simple interest * Percentage loss * Depreciation | **Identifies some mathematical content related to various aspects of an investigation in a given context.**  Restates the problem that is being solved in own words. Lists the following with no explanation of the context   * Simple interest * Percentage loss | **Identifies limited mathematical content of an investigation.**  Does not state the problem being solved in own words  States requirements as a list or in an unclear manner.  No assumptions made to support the mathematical thinking process |
|  | A (12 marks) | B (8 marks) | C (6 marks) | D (4 marks) |
| Chooses effective models and methods | **Produces results, carries out analysis and generalises in situations requiring investigative techniques.**   * Compares the cost of multiple cars and choose the with reasoning the better option. * Selects car with an affordable price for the situation. * Researches and references the average depreciation rate of type of car | **Attempts to analyse and calculate specific cases of generalisation in situations requiring investigative techniques.** Compares the cost of 2 cars and chooses the better option  * Selects a car with an affordable price for the situation * Researches the average depreciation rate of type of car | **Select appropriate methods to carry through a single thread of reasoning in situations requiring investigative techniques.** Selects a car to purchase with reasons as to why this car was picked  * Selects an affordable car | **Makes some attempt to select appropriate methods in situations requiring investigative techniques.** Selects a car  * Includes the cost of the car |
|  | A (10 marks) | B (7 marks) | C (5 marks) | D (3 marks) |
| Follows mathematical conventions and accuracy | **Selects, extends and applies mathematical and/or statistical procedures to investigate a problem.**   * Uses a spreadsheet to calculate the selling price of the car after 5 years. Applying depreciation to show the value of the car after each year of owning it. * Accurately calculate the percentage loss on the car at the end of the 5 years * Use simple interest in a spreadsheet to accurately calculate the amount Dustin owes parents | **Selects and applies mathematical and/or statistical procedures previously learnt to investigate a problem**.   * Calculates the selling price of the car after 5 years. Applying depreciation to show the value of the car after each year of owning it * Accurately calculates the percentage loss on the car at the end of 5 years * Use simple Interest to accurately calculate the amount Dustin owes his parents | **Selects and applies, with direction, mathematical and/or statistical procedures previously learnt to investigate a problem.**   * Calculates the selling price of the car after 5 years of ownership using percentage decrease. (doesn’t do it yearly) * Calculates the percentage loss on the car at the end of 5 years * Use simple interest to calculate the amount Dustin owes his parents. | **Attempts to apply mathematical and/or statistical procedures to a problem.**   * Calculates the selling price of the car * Attempts to calculate the percentage loss at the end of 5 years * Show evidence of using the simple interest formula to calculate the amount Dustin owes his parents. |
|  | A (6 marks) | B (4 marks) | C (3 marks) | D (2 marks) |
| 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.**   * States whether Dustin can afford the car referring to amount he will owe parents and value of the car after 5 years with reasoning. | **Uses examples in mathematical analysis of an investigation and draws valid conclusions related to a given context.**   * States whether Dustin can afford the car referring to amount he will owe parents or value of the car after 5 years with reasoning. | **Make inferences from analysis and uses these to draw conclusions related to an investigation.**   * States whether Dustin could afford the car with reasons. | **Draws some conclusions from the results of an investigation.**   * States whether Dustin could afford the car. |
|  | A (6 marks) | B (4 marks) | C (3 marks) | D (2 marks) |
| **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 way using mathematical language and relating the solution to the original problem or statement.** | **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** |

Overall Feedback:

Mark: \_\_\_\_\_\_\_/40