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| --- | --- | --- | --- | --- |
|  | A (6 marks) | B (4 marks) | C (3 marks) | D (2 marks) |
| Identifies and organises relevant information | * Restates the question in own words with reasonable assumptions and explanation, * Includes modes of transport with reasonable assumptions and explanation * Includes additional costings that may be incurred with detailed reasoning | * Restates the question in own words with reasonable assumptions and some explanation, * Includes modes of transport based on assumptions and some explanation * Includes additional costings that may be incurred with some reasoning | * Restates the question in own words with reasonable assumptions, * Includes multiple modes of transport and has some explanation * Includes additional costings that may be incurred with one line of reasoning | * Does not state the question in own words, * Selects modes of transport with limited reasoning * Includes additional costings that may be incurred with no reasoning or does not include additional costings |
|  | A (12 marks) | B (9 marks) | C (7 marks) | D (4 marks) |
| Chooses effective models and methods | **Four intended destinations and routes are named with:**   * Routes chosen are realistic and have been clearly planned with no errors * Costs related to travel, accommodation, activities, and other reasonable costs like food and other consumables are clearly itemised * Sufficient time has been allocated for travel and selected activities and sites being visited * Data is presented in a table with clear headings   \*If remote locations have been chosen it may be better to use a hard copy map for the journey due to limitations of Google/Apple Maps in these locations  **Reasoning**   * Choice of transport and routes accompanied with calculated values supporting assumptions when it comes to transport by mass transit and/or public transport and can be verified with reference values | **Four intended destinations and routes are named with**:   * Routes chosen are realistic and have been clearly planned with minor errors * Costs related to travel, accommodation, activities, and other reasonable costs like food and other consumables are mostly itemised with some estimates * Sufficient time has been allocated for travel and but not for some selected activities and sites being visited * Data is presented in a table with some information missing   \*If remote locations have been chosen it may be better to use a hard copy map for the journey due to limitations of Google/Apple Maps in these locations  **Reasoning**   * Choice of transport and routes accompanied with calculated values supporting assumptions when it comes to transport by mass transit and/or public transport and can mostly be verified with reference values | **Four intended destinations and routes are named with:**   * Routes chosen are realistic and have been planned but lacks details to selected sites and activities * Costs related to travel, accommodation, activities, and other reasonable costs like food and other consumables are a mix of itemisation and estimates which can be verified * Sufficient time has been allocated for travel and but not for selected activities and sites being visited * Data is presented as a logical list   \*If remote locations have been chosen it may be better to use a hard copy map for the journey due to limitations of Google/Apple Maps in these locations  **Reasoning**   * Choice of transport and routes accompanied with calculated values and reasonable estimates when it comes to transport by mass transit and/or public transport and can mostly be verified with some reference values | **Four intended destinations and routes are named with:**   * Routes chosen are realistic and are planned in a general nature * Costs related to travel, accommodation, activities, and other reasonable costs like food and other consumables are estimates or unable to be verified * Sufficient time has not been allocated for travel and/or activities. * Data is not presented logically   \*If remote locations have been chosen it may be better to use a hard copy map for the journey due to limitations of Google/Apple Maps in these locations  **Reasoning**   * Choice of transport and routes accompanied are poorly supported or not supported by calculated values or reasonable assumptions or estimates |
|  | A (10 marks) | B (7 marks) | C (6 marks) | D (4 marks) |
| Follows mathematical conventions and accuracy | * Calculations are complete and presented in a logical format without errors. * Suitable mathematical strategies chosen to compare the costs of all different modes of transport and to select the most efficient * Calculation of time, distance, and cost related to the trip are without errors and correct units of measurement used * All values chosen for calculations can be verified with provided reference sources | * Calculations are complete and presented in a logical format with minor errors. * Suitable mathematical strategies chosen to compare the costs of two different modes of transport and select the most efficient * Calculation of time, distance, and cost related to the trip are with minor errors and most units of measurement are correct * Most values chosen can be verified with provided reference sources | * Calculations are complete and presented in a logical format with minor errors. * One mathematical strategy chosen to compare the costs of two different modes of transport and select the most efficient * Calculation of time, distance, and cost related to the trip are with errors and some units of measurement missing * Some values chosen can be verified with reference sources | * Calculations are incomplete and/or not presented in a logical format with many errors. * Limited use of mathematical strategy to compare the costs of two different modes of transport to select the most efficient * Calculation of time, distance, and cost related to the trip are with errors and units of measurement missing or are mostly incorrect * Values chosen are difficult to verify with reference sources |
|  | A (6 marks) | B (4 marks) | C (3 marks) | D (2 marks) |
| Links mathematical results to data and contexts to reach reasonable conclusions | * Explains with detail how assumptions and chosen journey is reflective of a realistic journey. * Considers the current context of COVID-19 restrictions in the community and suggests a costed plan if a snap lockdown arose * Uses calculated values as evidence to support conclusions * Demonstrates whether the budget is reasonable. If additional funds are required, a reasonable source of income is suggested. | * Discusses with some detail whether assumptions and chosen journey is reflective of a realistic journey. * Considers the current context of COVID-19 restrictions in the community and states what would need to be done if a snap lockdown was called with an estimate of cost. * Uses calculated values as evidence to support most conclusions * States whether the budget is reasonable. If additional funds are required, an amount is suggested. | * States whether assumptions and chosen journey is reflective of a realistic journey with one line of reasoning. * Considers the current context of COVID-19 restrictions in the community and states what would need to be done if a snap lockdown was called with no estimate of cost * Uses calculated values as evidence to support some conclusions * States whether the budget is reasonable and whether another source of income is required. | * States whether assumptions and chosen journey is reflective of a realistic journey with limited or no reasoning * Does not consider current context of COVID-19 restrictions in the community. * Conclusions are supported with limited calculations * States whether the budget is reasonable. |
|  | A (6 marks) | B (4 marks) | C (3 marks) | D (2 marks) |
| Communicates mathematical reasoning, results, and conclusions | * Concluding statement stating the final costs and preferred travel methods with calculated values * Maps labelled clearly and correctly * Report set out systematically with comprehensive interpretations * Reference section included | * Concluding statement that outlines the costs and preferred travel methods, * Maps included have minor errors * Report set out systematically * Reference section included. | * Concluding statement that outlines either the costs or preferred travel methods * Maps are easy to read but contain errors * Report set out logically but needs improvement, * References are listed | * No concluding statement that outlines the costs or preferred travel methods * Mapped journey is not easy to follow * Unclear structure of the report * References are incomplete |