**Investigation 4 - Orbits**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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|  | **VALIDATION TASK** | | | | **Part A** |
|  | **Interpret task** | **Identify skills** | **Application of skills** | **Verification Communication** | **Research** |
| **5** | Identifies information that is concentrate or from multiple sources. | Chooses the appropriate maths to solve a range of problems in unstructured but familiar situations | Applies information and calculates accurate solutions for multi-step problems. Modifies calculated results or conclusions when conditions are changed. | Compares situations, and explains or justifies solutions and conclusion to multi-step problems. Links responses to original question or context. | Clearly researches the mathematical constructs and clearly rationalises the choice of sine vs cosine. |
| **4** | Identifies and links more that one piece of information. | Chooses the appropriate maths to solve problems in mostly familiar and sometimes unstructured but familiar situations. | Applies information and calculates accurate solutions for problems with limited steps. Check calculated results and make adjustments where necessary | Expresses or justifies solutions to limited step problems using a range of maths language with some link to original question. | Provides mathematical discussion regarding features of the orbits that impact on the curves. |
| **3** | Identifies relevant information, | Chooses the appropriate maths to solve straight forward given problem | Applies information and calculates mostly accurate solutions for single step problems. | Expresses solutions or conclusions to single step problems using simple maths language or routine statement. | Provides appropriate evidence of sin function and evidence or calculations to plot and define. |
| **2** | Identifies relevant information that is narrow in scope. | Chooses some appropriate maths when supported by scaffolding or prompts. | Applies information from simple tables graphs and text to answer structured questions that require short calculations or where an example is supplied | Provides some detail with limited use of mathematical language, in interpretation or presenting a conclusion when prompted | Provides limited evidence of methods or calculations used to answer a familiar problem. Would lack more than one graph |
| **1** | Some attempt to identify information. | Some attempt but chooses inappropriate maths to find a solution. | Some attempt to apply information, but makes errors in most calculations. | Provides answers only with little use of mathematical language required. | Provides some data from co-ordinates |
| **0** | No evidence provided | No evidence provided | No evidence provided | No evidence provided | No evidence provided |