

## IB Math AI Internal Assessment guide - IA checklist

### Criterion A. Mathematical Presentation

|                                                                                        | Absent | Partial | Complete |
|----------------------------------------------------------------------------------------|--------|---------|----------|
| Title and candidate code are clearly included.                                         |        |         |          |
| The aim is clearly stated in the introduction and remains the focus throughout.        |        |         |          |
| Mathematical expressions and diagrams are embedded properly and support understanding. |        |         |          |
| It addresses the target audience at all times.                                         |        |         |          |
| Mathematics outside the syllabus is clearly explained.                                 |        |         |          |
| The structure of the IA is coherent and logically organized.                           |        |         |          |
| The exploration includes a relevant and effective conclusion.                          |        |         |          |
| Formatting is consistent and enhances clarity.                                         |        |         |          |
| Repetitive calculations are found in the appendix                                      |        |         |          |

## Criterion B. Mathematical Communication

|                                                                                                              | Absent | Partial | Complete |
|--------------------------------------------------------------------------------------------------------------|--------|---------|----------|
| Mathematical notation is correct and consistently used.                                                      |        |         |          |
| All variables and parameters are clearly defined when introduced                                             |        |         |          |
| Mathematical language, symbols, and terminology are used correctly (approximation signs are used adequately) |        |         |          |
| Visuals are used effectively to support the mathematics.                                                     |        |         |          |
| Equations are properly formatted and not copied as images. (e.g., equation editor used).                     |        |         |          |
| Graphs and diagrams are appropriately labeled (e.g., Figure 1, Table 2) with units.                          |        |         |          |
| Degree of accuracy is specified and consistent throughout.                                                   |        |         |          |
| Pages are numbered                                                                                           |        |         |          |
| The bibliography is on a separate page.                                                                      |        |         |          |
| Tables are not split. If too long are found in the appendix.                                                 |        |         |          |

### Criterion C. Personal engagement

|                                                                                        | Absent | Partial | Complete |
|----------------------------------------------------------------------------------------|--------|---------|----------|
| There is evidence the student chose the topic based on personal interest or curiosity. |        |         |          |
| Independent thinking or creative approaches are demonstrated                           |        |         |          |
| Student demonstrates ownership of the investigation                                    |        |         |          |
| Alternative approaches or original perspectives are evident.                           |        |         |          |
| Challenges are acknowledged and addressed personally                                   |        |         |          |
| The student makes the mathematics feel personal and meaningful.                        |        |         |          |

### Criterion D. Reflection

|                                                                          | Absent | Partial | Complete |
|--------------------------------------------------------------------------|--------|---------|----------|
| Interpretations of mathematical findings are provided (not just results) |        |         |          |
| Limitations of models or assumptions are acknowledged.                   |        |         |          |
| Reflection is integrated throughout, not confined to the end             |        |         |          |
| Critical evaluation of mathematical choices is provided.                 |        |         |          |
| restates the original aim of their exploration.                          |        |         |          |
| Suggestions for improvement or further exploration are included.         |        |         |          |

**Criterion E. Use of Mathematics.**

|                                                                                      | Absent | Partial | Complete |
|--------------------------------------------------------------------------------------|--------|---------|----------|
| Mathematics is appropriate for the level (SL/HL) and is the focus of the exploration |        |         |          |
| Mathematical reasoning is accurate and well-explained                                |        |         |          |
| Key steps and processes are clearly shown, not skipped                               |        |         |          |
| The exploration goes beyond just applying known methods; some depth is present.      |        |         |          |
| The mathematics contributes directly to achieving the aim.                           |        |         |          |
| The student demonstrates understanding, not just application.                        |        |         |          |
| The mathematics is precise.                                                          |        |         |          |