



Free guide for parents

# Which IB maths option is right for my child?

Standard or Extended in MYP 4–5, Analysis and Approaches or Applications and Interpretation in the DP, and Standard or Higher Level: how to choose.



In short: choose **Extended** mathematics in MYP 4–5 and **Analysis and Approaches (AA)** in the DP if your child enjoys algebra and abstract reasoning or needs strong maths for university. Choose **Standard** mathematics and **Applications and Interpretation (AI)** if they learn best through real-world problems, data and technology. Take **Higher Level** only if maths is a strength and their university plans need it.

Schools set their own placement rules, so use this guide to prepare for the conversation with your child’s maths teacher or DP coordinator.

## MYP 4–5: Standard or Extended mathematics?

In MYP 4 and 5, many schools split maths into Standard and Extended. Both are assessed on the same four criteria. Extended adds topics and depth, mostly in algebra, functions and trigonometry. The IB gives schools a framework rather than a fixed list, so the exact topics vary from school to school.

|                          | Standard mathematics                       | Extended mathematics                                  |
|--------------------------|--------------------------------------------|-------------------------------------------------------|
| <b>What it covers</b>    | The core framework every MYP student needs | The core, plus extra topics and more abstract algebra |
| <b>Assessed on</b>       | Criteria A–D                               | Criteria A–D                                          |
| <b>MYP 5 eAssessment</b> | Mathematics                                | Extended mathematics                                  |
| <b>Often leads to</b>    | DP AA or AI at Standard Level              | DP AA at Higher Level, or any DP maths course         |

### **Standard may suit your child if they...**

- need more time to feel secure with algebra
- learn best through concrete, real-life examples
- are likely to take Standard Level maths in the DP

### **Extended may suit your child if they...**

- are secure and quick with algebra
- enjoy puzzles, patterns and abstract problems
- might want AA Higher Level or a maths-heavy degree

## **DP: Analysis and Approaches or Applications and Interpretation?**

The DP offers two maths courses, each at Standard Level (SL) and Higher Level (HL). They share some content, but the emphasis and the style of the exams are different.

|                            | <b>Analysis and Approaches (AA)</b>                      | <b>Applications and Interpretation (AI)</b>            |
|----------------------------|----------------------------------------------------------|--------------------------------------------------------|
| <b>Focus</b>               | Algebra, functions, calculus and proof                   | Modelling, statistics and technology                   |
| <b>Style</b>               | Abstract, analytical and algebraic                       | Applied, practical and data-driven                     |
| <b>Calculator</b>          | One paper without a calculator                           | Calculator on every paper                              |
| <b>Internal Assessment</b> | Mathematical exploration (20%)                           | Mathematical exploration (20%)                         |
| <b>Often suits</b>         | Maths, engineering, physics, computer science, economics | Social sciences, biology, psychology, business, design |

#### **AA may suit your child if they...**

- enjoy algebra and working without a calculator
- like knowing why a method works
- are considering a maths-heavy degree

#### **AI may suit your child if they...**

- enjoy data, statistics and real-world problems
- are confident with technology such as a graphing calculator
- want maths that supports another subject they love

## **DP: Standard Level or Higher Level?**

Higher Level covers more content in greater depth and has an extra exam paper. SL has about 150 teaching hours and HL about 240, so HL takes noticeably more time each week.

|                       | Standard Level (SL)                                 | Higher Level (HL)                                |
|-----------------------|-----------------------------------------------------|--------------------------------------------------|
| <b>Teaching time</b>  | About 150 hours                                     | About 240 hours                                  |
| <b>Exams</b>          | Paper 1 and Paper 2                                 | Papers 1, 2 and 3                                |
| <b>Choose it when</b> | Maths supports your child's plans but isn't central | Maths is a strength and university plans need it |

#### What our tutors see

The most common mistake is choosing a course for the name rather than the fit. Students who take AA HL because it "looks good" but don't need it for university often struggle, while students who would do well with modelling and data sometimes avoid AI because they think it's the "easy" option. It isn't. The best choice matches how your child thinks and what their next step needs.

## Questions to ask the school

- How do you decide Standard or Extended placement, and when?
- Which DP maths courses and levels do you offer, and what do you recommend for each?
- Can students change course or level after the DP starts, and until when?

## Common questions

### Should my child take Standard or Extended mathematics in MYP 4 and 5?

Extended mathematics suits students who are secure in algebra, enjoy abstract problems and may want DP Analysis and Approaches at Higher Level. Standard mathematics suits students who want a solid foundation and are more likely to take a Standard Level or Applications and Interpretation course in the DP. Schools make the final placement, often based on MYP 3 results.

### What is the difference between DP maths AA and AI?

Mathematics: Analysis and Approaches (AA) focuses on algebra, functions, calculus and proof, with one paper taken without a calculator. Mathematics: Applications and Interpretation (AI) focuses on modelling, statistics and using technology to solve real-world problems. Both are offered at Standard and Higher Level, and both include the Internal Assessment.

### Is AA harder than AI?

Not in general. They are different, not easier or harder. AA suits students who enjoy algebra and abstract reasoning; AI suits students who enjoy data, modelling and applied problems. At Higher Level both are demanding.

### Which DP maths course do universities want?

It depends on the degree and the university. Many competitive courses in mathematics, engineering, physics and computer science ask for AA at Higher Level. AI is accepted for many other degrees. Always check the entry requirements of the specific universities and courses your child is considering.

## Can my child change DP maths course after starting?

Many schools allow a change early in the first year of the DP, often from Higher to Standard Level. The rules and deadlines are set by each school, so ask the DP coordinator as soon as possible.

Always check the entry requirements of the specific universities your child is considering. Course details change over time, so your school's DP course guide is the final word.



### About the author

Rachel Bodily, M.Ed, is the founder of MYP Math Tutor. She taught at the International School of Amsterdam before starting MYP Math Tutor in 2022, and now leads a team of 25+ qualified IB teachers supporting 200+ students in 40+ countries.

[Meet the team](#)

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