iBOrbit

FREE IB RESOURCE

MATHS IA · AA & AI · SL & HL

The Maths IA Topic-Finder.

Stop staring at a blank page. Find a topic you'll actually want to write about.

A copy-paste research prompt that finds **proven IA blueprints** connected to what you actually care about, then adapts them into something that's genuinely yours and rich enough for your level.

✓ THE FULL PROMPT ✓ HOW TO USE IT ✓ 6 FOLLOW-UP PROMPTS

Built by recent 44–45 IB scorers.

iborbit.com

READ THIS FIRST · ACADEMIC HONESTY

This is an ideation tool, not a shortcut. Use it to discover and shape a topic direction only. The IB's academic integrity policy is clear: any idea, text, or material produced with an AI tool must be **clearly acknowledged**, and AI-generated work must **never be presented as your own**. Submitting it as your work is academic misconduct and can cost you the diploma.

Do all of the actual maths, analysis, and writing yourself, verify every source the AI gives you (it can invent them), and check your school's and the IB's current guidance before you use any AI tool in your IA.

HOW IT WORKS

The idea behind it.

The best IA topics aren't invented from scratch. They're **proven explorations** (ones with a blueprint to build on), **adapted to something you care about**, with **real maths at your level**. This prompt does exactly that, in three moves.

1. **It searches for what's been done**
   It looks up existing Maths IA topics and real-world applications tied to your interests, so you adapt and improve, never copy.

2. **It hands you 5 ideas in a comparison table**
   Each with the blueprint to build on, your personal angle, the core maths, and an honest read on whether it's rich enough for your level.

3. **It picks one and plans backwards**
   It ranks them honestly, tells you which it'd choose, the conclusion to aim for, and the 4–5 method steps to get there.

Before you paste: fill these in

- Your course & level (AA / AI · SL / HL)
- Maths topics you're comfortable with
- Things you're genuinely into
- Maths topics you hate

Be honest in your inputs. The more specific your interests and the maths you actually like, the better the matches. Vague in → vague out.

COPY THIS

The prompt.

Paste it into your AI assistant of choice. Replace anything in **purple** with your details.

Maths IA Topic-Finder — PASTE & FILL THE BRACKETS

You are helping me find a topic for my IB Mathematics **[AA / AI]** **[SL / HL]** Internal Assessment (a ~20-page mathematical exploration). Our philosophy: the best IA topics are ones that have been explored before (so there's a blueprint to build on and improve), adapted to something I personally care about (so my engagement is genuine), and rich enough to require real maths at my level.

MY DETAILS
- Course and level: **[AA HL / AI SL etc.]**
- Things I'm genuinely interested in (hobbies, sports, games, music, anything): **[e.g. badminton, chess, basketball, music production]**
- Maths topics I'm comfortable with / want to use: **[e.g. calculus, vectors, statistics, trig]**
- Maths topics I HATE: **[...]**

STEP 1: SEARCH
- Search the web for existing Maths IA topics, explorations, or real-world applications connected to my interests. I want to see what's been done before so I can adapt and improve on it, not copy it.
- For each idea, find a real example or source where possible. Do not invent sources.

STEP 2: For each suggestion (give me 5), output a table:
| Idea | The "blueprint" (what's been done before I can adapt) | My personal angle | Core maths it would use | Level fit (is it rich enough for [HL/SL]?) | Why it's a strong IA |

STEP 3: For each, write the maths out honestly: if a topic only needs simple maths, say so and flag it as risky for HL. Rank them by how well they balance (a) personal relevance, (b) richness of maths at my level, (c) having a clear blueprint to build on.

Then tell me which ONE you'd pick if you were me, what conclusion I might aim toward, and the 4-5 method steps to get there (since planning backwards from the conclusion is the best way to start).

REMINDER: I'll verify any sources myself and the final maths must be my own work. Don't invent examples. Be honest if a topic is too thin for my level.

KEEP GOING

6 follow-ups once you've got your shortlist.

The first answer is the starting line, not the finish. Paste these next to turn a topic into a plan, and pressure-test it like an examiner would.

1. Take idea #[X] and give me the full structure of the exploration, *section by section*, with exactly what maths goes where.

2. What's the strongest mathematical result or "aha" I could aim for here, and what would I need to derive to get to it?

3. Play examiner. Score my proposed topic against the IA criteria *(A–E)* and tell me exactly where it's currently weak.

4. Give me 3 ways to make the maths *richer / harder* so it clearly earns HL-level marks.

5. What data would I need to collect, model, or simulate, and how do I get it *honestly*?

6. List the most common reasons IAs on this topic lose marks, so I can design around them from the start.

> **Golden rule:** the prompt finds and shapes the topic, but **the maths must be your own work**, and verify every source yourself before you cite it.

★ DON'T WRITE YOUR IA ALONE

Want a 45/45 scorer to pressure-test your IA?

See the moves, not just the marks.

Inside iBOrbit, recent 44–45 graduates break down real top-band IAs criterion by criterion, so you can see exactly how a 7 is built, in your subject, before you submit. Walkthroughs, marked exemplars, mark-system breakdowns, and weekly live Q&A.

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