

Empowering Learners. Inspiring Excellence.

JACOBIAN SERIES

Mathematics Workbooks for Every Ambition

WAEC-BECE · WASSCE · Cambridge IGCSE · AS & A Level Digital SAT · AP Exams · IB Diploma Programme (IBDP)

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ABOUT JACOBIAN SERIES



Jacobian Series is a premier educational publishing initiative dedicated to producing high-quality, curriculum-aligned mathematics workbooks for students at every level — from foundational West African examinations to the most competitive international qualifications in the world. Rooted in a passion for mathematical excellence and driven by a commitment to equity in education, Jacobian Series bridges the gap between classroom instruction and examination success.

Founded and led by **Godfred N.A. Welbeck**, a certified IB Diploma Programme (IBDP) teacher with extensive classroom experience at the international level, Jacobian Series reflects a vision forged through years of teaching diverse student populations — from the average learner battling self-doubt in mathematics to the high-achieving student aiming for distinction in IBDP Higher Level examinations. The series spans both national West African curricula and globally recognised international programmes, making it a truly versatile and indispensable resource.

OUR WORKBOOK PORTFOLIO

Every Jacobian Series workbook is meticulously crafted to align with official syllabus specifications, past-paper question styles, and mark-scheme expectations. The portfolio covers:

WAEC-BECE & WASSCE

Targeted workbooks supporting Junior and Senior High School students across West Africa, covering Core and Elective Mathematics in alignment with WAEC syllabuses.

Cambridge IGCSE Extended Mathematics (0580)

Comprehensive topic-by-topic workbooks designed for the Cambridge IGCSE curriculum — ideal for students targeting Grade A* to C.

Cambridge AS & A Level Mathematics

Structured resources for Pure Mathematics, Statistics, and Mechanics, aligned with the latest Cambridge International AS & A Level specifications.

Digital SAT Mathematics

Practice-focused workbooks designed around the College Board's Digital SAT format, incorporating Desmos graphing calculator strategies and adaptive test-taking techniques.

AP (Advanced Placement) Examinations

Targeted preparation materials for AP Calculus AB/BC and AP Statistics, aligned with College Board standards.

IB Diploma Programme (IBDP) Mathematics

Specialised workbooks for IB Math Analysis & Approaches (AA) SL & HL and IB Math Applications & Interpretations (AI) SL & HL, incorporating Internal Assessment guidance and Technology integration.

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TECHNOLOGY INTEGRATION IN LEARNING

A defining feature of the Jacobian Series is its deliberate integration of approved technological tools into examination preparation, reflecting exactly what students encounter on exam day.

TI-84 Plus & TI-Nspire Calculators

Jacobian Series workbooks embed TI-84 Plus and TI-Nspire CX CAS calculator techniques directly into worked examples, exercises, and solutions. Students learn to exploit these tools for graphing functions, solving equations, performing statistical analyses, and verifying calculus results — skills that are essential in IBDP, AP, and Cambridge A Level examinations.

Desmos Graphing Calculator (Digital SAT)

The Digital SAT now provides Desmos as the built-in graphing tool. Jacobian Series Digital SAT workbooks train students to navigate Desmos efficiently under time pressure — plotting equations, finding intersections, and interpreting graphical data — giving them a critical competitive edge.

GDC & Technology in IBDP

All IB Mathematics workbooks incorporate GDC (Graphic Display Calculator) commands and screen outputs, ensuring students are fully prepared for the technology-permitted papers in both AA and AI courses.

VISION & MISSION

OUR VISION

To become the most trusted and widely used mathematics workbook series across West Africa and the international education community — a beacon of academic empowerment that transforms every student's relationship with mathematics, regardless of background, ability, or location.

OUR MISSION

To design, author, and publish rigorous yet accessible mathematics workbooks that align with the highest international and national examination standards; to equip students with conceptual understanding, procedural fluency, and problem-solving confidence; to support teachers and educators with structured classroom resources; and to champion mathematical literacy as a gateway to opportunity — especially for under-served and less-privileged learners across West Africa and beyond.

FOUNDER & LEAD AUTHOR

Godfred N.A. (G.N.A.) Welbeck is the founder and lead author of Jacobian Series. He holds a **Bachelor of Arts (BA) in Mathematics & Statistics** from the **University of Ghana, Legon**, and a **Post-Graduate Diploma in Education (PGDE)** from the **University of Education, Winneba** (Central Region, Ghana). He is a **Certified IB Diploma Programme (IBDP) Teacher** and currently serves as **Head of Mathematics** at the **International School of Accra (ISA), Roman Ridge, Borstal Avenue, Accra**.

Subjects Taught at ISA:

- Digital SAT Mathematics
- Cambridge IGCSE Extended Mathematics (0580)
- Cambridge IGCSE Additional Mathematics (0606)
- Cambridge IGCSE Geography
- IB Mathematics: Analysis & Approaches (AA) – SL & HL
- IB Mathematics: Applications & Interpretations (AI) – SL & HL

Mr. Welbeck's passion for mathematics education is most evident in his unwavering dedication to students who struggle with the subject. He has championed the cause of average and less-privileged learners who lose interest in mathematics during their Middle and Senior High School years, developing intuitive, step-by-step workbooks that rebuild confidence and ignite curiosity. His teaching philosophy — that every student can succeed in mathematics with the right guidance and resources — is the cornerstone upon which Jacobian Series is built.

THE JACOBIAN TEAM

Jacobian Series is supported by a team of highly qualified, certified international educators who bring expertise across multiple disciplines, ensuring the workbooks reflect best practices in pedagogy, curriculum alignment, and academic rigor.

Mr. Ambill Essandoh

Co-Author | IBDP Physics Teacher & Research Analyst

Mr. Essandoh is a certified IB Diploma Programme Physics teacher and a Research Analyst affiliated with ResearchGate. In addition to his role as a Jacobian Series co-author, he serves as the **Learning Support Coordinator** and **ManageBac Administrator** at the International School of Accra — ensuring that student academic records, learning support plans, and digital platforms are seamlessly managed for an optimal learning environment.

Miss Elizabeth Naa Odoley Odoi

Co-Author | IBDP Economics & Chinese Teacher | Cambridge Coordinator

Fondly known as **Miss Naa**, Miss Odoi is a certified IB Diploma Programme Economics and Chinese Language teacher. She holds the critical role of **Cambridge Coordinator** at the International School of Accra, overseeing the administration and delivery of all Cambridge International Examinations at the school. Her expertise in international curriculum coordination brings invaluable quality assurance and global standards alignment to the Jacobian Series authoring process.

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WHY CHOOSE JACOBIAN SERIES?

	Every workbook strictly follows the official syllabus of its t Cambridge, College Board, or IBO — so students practise
al Teachers	The entire Jacobian Series team holds internationally bringing classroom authenticity and examiner insight to e
	TI-84, TI-Nspire, and Desmos strategies are embedded t modern, technology-permitted examinations.
	Designed to serve all learners — from students in Ghan BECE to international students targeting IBDP HL — Jac should be left behind in mathematics.
	From Basic Education Certificate (BECE) to university-entr SAT), the Jacobian Series offers a complete mathematica
	Developed within a leading international school environn classroom dynamics, student misconceptions, and asse teachers can identify.

GET IN TOUCH

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Jacobian Series — *Empowering every learner, one workbook at a time.*

Available across West Africa and Internationally.