



International Baccalaureate®
Baccalauréat International
Bachillerato Internacional

Calculators guidance for examinations booklet 2025



International Baccalaureate®
Baccalauréat International
Bachillerato Internacional

Calculators guidance for examinations booklet 2025

Calculators guidance for examinations booklet 2025

Published September 2024

Updated November 2024

Published by the International Baccalaureate Organization, a not-for-profit educational foundation of Rue du Pré-de-la-Bichette 1, 1202 Genève, Switzerland.

Website: ibo.org

© International Baccalaureate Organization 2024

The International Baccalaureate Organization (known as the IB) offers four high-quality and challenging educational programmes for a worldwide community of schools, aiming to create a better, more peaceful world. This publication is one of a range of materials produced to support these programmes.

The IB may use a variety of sources in its work and check information to verify accuracy and authenticity, particularly when using community-based knowledge sources such as Wikipedia. The IB respects the principles of intellectual property and makes strenuous efforts to identify and obtain permission before publication from rights holders of all copyright material used. The IB is grateful for permissions received for material used in this publication and will be pleased to correct any errors or omissions at the earliest opportunity.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the IB's prior written permission, or as expressly permitted by the [Rules for use of IB Intellectual Property](#).

IB merchandise and publications can be purchased through the [IB Store](#) (email: sales@ibo.org). Any commercial use of IB publications (whether fee-covered or commercial) by third parties acting in the IB's ecosystem without a formal relationship with the IB (including but not limited to tutoring organizations, professional development providers, educational publishers and operators of curriculum mapping or teacher resource digital platforms, etc.) is prohibited and requires a subsequent written licence from the IB. Licence requests should be sent to copyright@ibo.org. More information can be obtained on the [IB public website](#).

IB mission statement

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.



IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

As IB learners we strive to be:

INQUIRERS

We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

KNOWLEDGEABLE

We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

THINKERS

We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

COMMUNICATORS

We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

PRINCIPLED

We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

OPEN-MINDED

We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

CARING

We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

RISK-TAKERS

We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

BALANCED

We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

REFLECTIVE

We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

The IB learner profile represents 10 attributes valued by IB World Schools. We believe these attributes, and others like them, can help individuals and groups become responsible members of local, national and global communities.

Contents

Calculators guidance for examinations booklet 2025	1
1.0 Introduction	1
2.0 Groups and subjects	2
3.0 General restrictions applying to all calculators used in examinations	4
4.0 Responsibilities	5
Appendix	6
Updates to the publication	6

1.0 Introduction

This publication contains an overview of the use of calculators in IB examinations.

A graphic display calculator (GDC) is a calculator that is capable of displaying tabular, matrix, list, geometrical and graphical representations, in addition to having functions found on scientific calculators. GDCs can run programs and flash ROM applications (apps).

Not all programs or apps are suitable for use in examinations. Not all GDCs are suitable for use in examinations that require GDCs. The document *Use of calculators in examinations* is updated annually in February for the May and November sessions and can be found on the Programme Resource Centre, on the home pages of subjects that require calculators. This document contains examples of recommended and prohibited GDCs, along with required examination settings and approved apps. It is essential that invigilators have a copy of this document.

It is strongly recommended that students have access throughout the subject course(s) to a single GDC from the list of recommended models.

2.0 Groups and subjects

Calculators of the types indicated as suitable are allowed only in the subjects listed in the table below.

Subjects	Calculators
Business management Environmental systems and societies	A four-function (plus, minus, multiply, divide) calculator, scientific calculator or GDC is required for paper 2. A calculator may be taken into the examinations for paper 1 and paper 3 (HL only).
Economics	Calculators are not allowed for paper 1. For paper 2 and paper 3, while all questions requiring a calculator can be answered fully using a four-function calculator (plus, minus, multiply, divide), GDCs are allowed during the examination. The graphing functions on these calculators may assist students and it is therefore recommended that all students are familiar with the use of GDCs.
Astronomy Biology Chemistry Marine science Nature of science Physics	A calculator with the following minimum functionalities is required for all examinations (a GDC is recommended). <ul style="list-style-type: none"> • Decimal logarithms • Values of xy and $x1/y$ • Value of π (pi) • Trigonometric functions • Inverse trigonometric functions • Natural logarithms • Values of e^x • Scientific notation
Sports, exercise and health science	Calculators are not allowed for paper 1. On paper 2 and paper 3, a calculator with the following minimum functionalities is required (a GDC is recommended). <ul style="list-style-type: none"> • Decimal logarithms • Values of xy and $x1/y$ • Value of π (pi) • Trigonometric functions • Inverse trigonometric functions • Natural logarithms • Values of e^x • Scientific notation
Design technology	Calculators are not allowed for paper 1. A four-function calculator (plus, minus, multiply, divide), scientific calculator or GDC is required for SL/HL paper 2 and HL paper 3 examinations.

Subjects	Calculators
<p>Mathematics: analysis and approaches</p> <p>Mathematics: applications and interpretation</p>	<p>Calculators are not allowed for mathematics: analysis and approaches paper 1.</p> <p>On mathematics: analysis and approaches paper 2 and paper 3 and mathematics: applications and interpretation paper 1, paper 2 and paper 3, a GDC with the following minimum functionalities is required.</p> <ul style="list-style-type: none"> • Plot graphs with any viewing window and identify key features • Solve equations, graphically and numerically (real and complex solutions) • Solve systems of equations, graphically and numerically (real and complex solutions) • Find a numerical derivative at a point • Find a numerical definite integral • Financial (TVM) solver • Add and multiply matrices, find determinant and inverse matrices • Convert between Cartesian and modulus-argument (polar) form • Operations with complex numbers • Probability distribution functionality: <ul style="list-style-type: none"> normal distribution binomial distribution Poisson distribution t-distribution confidence intervals (for normal and t-distributions) • Find statistical values including: <ul style="list-style-type: none"> binomial coefficient ${}^nC_r, {}^nP_r$ 1 and 2 variable statistical values Pearson's product-moment correlation coefficient and coefficient of determination regression equations (linear, quadratic, cubic, exponential, power and sinusoidal) χ^2 test for independence (χ^2 values and p values) χ^2 goodness of fit test (χ^2 values and p values), varying the degree of freedom t-test (t values and p values) • Spreadsheets or recursion tools to find approximate solutions using Euler's method • Plot phase portraits for two numeric sequences

Different courses have different requirements, but the minimum requirements listed above are for all the mathematics courses. Some of these may not be relevant to every course. Statistical tables are not allowed in mathematics examinations. Students must have access to calculators that are able to find relevant statistical values.

3.0 General restrictions applying to all calculators used in examinations

Restrictions on the use of certain technology are in place to discourage malpractice and maintain fair and reasonable access to technology that is generally required in the good practice of teaching and assessment.

- Mobile/cell phones, smart watches, tablets, calculator watches, personal computers (PCs) and any other device that enables internet access are not allowed in any subject examinations.
- Only the manufacturer's operating system may be used.
- Computer algebra systems (CAS)-equipped calculators (symbolic manipulation, whether in-built or programmed) are not allowed in any subject examinations.
- Calculators with wireless/infrared communication are not allowed in any subject examinations.
- Examination questions must not be stored, or recorded, in the memory of a calculator.
- Peripheral hardware must not be taken into the examination room (for example, keyboards, link cables).
- Calculators must not be shared or exchanged during examinations.
- Calculator manuals must not be taken into the examination room.
- More than one calculator per student may be brought into the examination room. However, a spare set of batteries is a preferable alternative to several calculators.

4.0 Responsibilities

4.1 Coordinators and invigilators

The coordinator must ensure that these requirements are understood and are being followed by all students, teachers and invigilators. Schools are responsible for monitoring the use of calculators by students on a continuous basis.

During the examination, if a coordinator/invigilator finds that a student has used unauthorized material or technology, the matter should be reported in the same way as any other breach of examination regulations. During any inspection, the coordinator should expect to show visiting IB representatives that this checking procedure is being followed.

4.2 Teachers and students

Teachers of all Diploma Programme subjects that permit or require the use of calculators in examinations should make students aware of both the requirements and restrictions of use before the relevant examinations take place. The potential consequences of breaches of these requirements by students would be similar to consequences of any other breaches of examination regulations.

Teachers are responsible for monitoring the use of calculators by students throughout the course by informal conversation and by spot-checking calculators. Methods of monitoring individual calculators include manually checking, transferring memory to a PC or using tools provided by the calculator manufacturer.

Updates to the publication

This section outlines the updates made to this publication over the past two years. The changes are ordered from the most recent to the oldest updates. Minor spelling and typographical corrections are not listed.

Changes for November 2024

[Calculators guidance for examinations booklet 2025 > 2.0 Groups and subjects](#)

Removal of out-of-date or incorrect content.

Changes have been made to this table to reflect that biology, chemistry and physics now permit calculators in all examinations. This clarification ensures the table aligns with information in the science group subject guides.