

Use of calculators in Examinations 2012 - Update

Note :This document applies to examinations in 2012. As from May 2014, statistical tables will not be allowed in mathematics examinations, rather candidates should be using the statistical feature on their GDC. Thus some of the calculators currently recommended or approved may not have these features, and will no longer be suitable for use in examinations.

Calculator List

This document should be read in conjunction with the calculator section of the Handbook of Procedures, the Calculator Poster, and other information available on the Online Curriculum Centre. It provides examples of calculators that are recommended for use in IB examinations, calculators which are approved and those which are prohibited. This list will be updated as and when necessary. It should be noted that these are not definitive lists, and teachers should check other models against the information in the Handbook of Procedures. Schools should also ensure that all calculators used in examinations comply with the regulations.

Recommended models

The following models meet the minimum requirements for mathematics subjects and have updated and time-saving functionalities not found on other models.

Texas Instruments	TI 84 Plus silver edition	TI 83 Plus silver edition
	TI 84 Plus	TI 83 Plus
	TI Nspire (non-CAS), with 84 faceplate	
	TI Nspire (non-CAS) versions 1.3 or higher, in “Press to Test” mode, with the correct features blocked (see list below)	
Casio	CFX 9850 Plus	FX 9860 AU
	FX 9750 Plus	FX 9860 G
	CFX 9950 Plus	FX 9860 G SD
	FX 9860G II	FX 9860G II SD
	FX 9860 AU Plus	FX 1.0 Plus
	Graph 65 Plus	Graph 35 Plus
	Graph 85	Graph 85 SD
	Cg series/fxcg10_20	

TI Nspire “Press to Test” configurations.

Note: Candidates must upgrade their Nspire to the latest operating system to use the “Press to Test” properly. Nspires which have not been updated and put into the correct “Press to Test” mode are not allowed in the examinations. Further details about “Press to Test” can be found at the end of this document and on the TI website. Older versions may need two upgrades to enable the correct “Press to Test” mode.

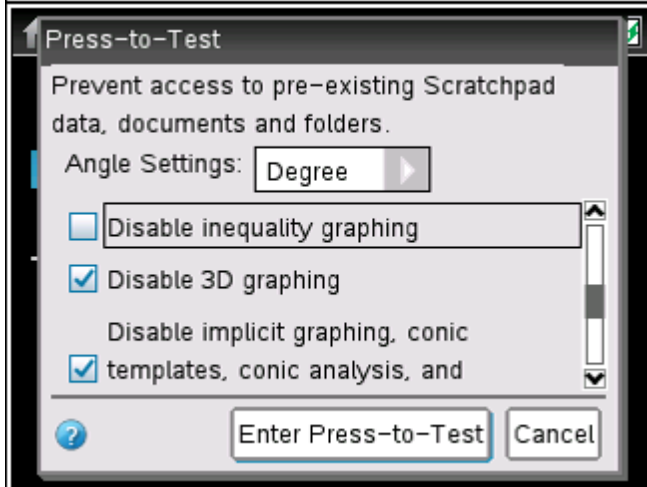
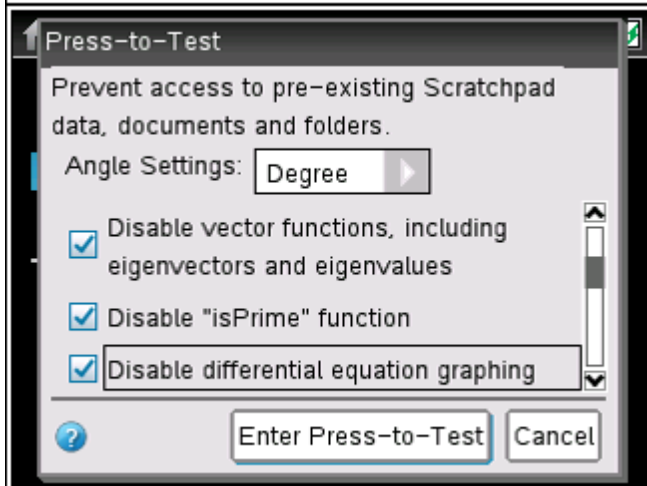
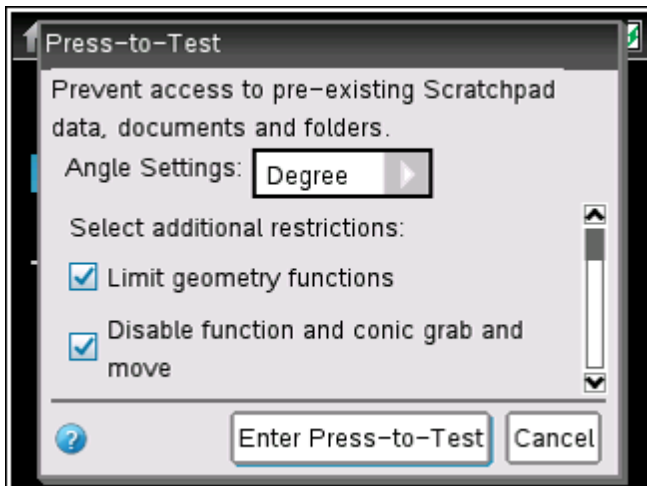
The following options in “Press to Test” mode must be **ticked** and therefore **blocked**.

- Limit geometry functions
- Disable function and conic grab and move
- Disable vector functions, including eigenvectors and eigenvalues
- Disable “isPrime” function
- Disable differential equation graphing
- Disable 3D graphing
- Disable implicit graphing, conic templates, conic analysis, and geometric conics

The following options in "Press to Test" mode must be **unticked** and therefore **allowed**.

- Disable inequality graphing
- Limit trigonometric functions
- Disable $\log_b x$ template and summation functions
- Disable Polynomial Root Finder and Simultaneous Equation Solver

The following screen shots show how to put the Nspire into the correct "Press to Test" mode.



Approved calculators

The following models do not meet the minimum requirements for mathematics subjects, as they do not have all the required functionality. They are allowed for use in examinations, but are not recommended for mathematics examinations.

Texas Instruments	TI 83 / 86 / 85 / 82
Casio	Non-plus models from the 9800 or 9700 series
Sharp	EL 9900, EL 9650, EL 9600

Prohibited calculators

The following models are not allowed in examinations under any circumstances.

Texas Instruments	TI Voyage 200 (all versions)	TI 89 (all versions)
	TI 92 (all versions)	TI Nspire CAS (all versions)
	TI Nspire (non-CAS) version 1.1 or version 1.2	
Casio	Classpad 300 FX 2.0 (all versions)	Graph 100 FX 9970 (all versions)

Extract from the Handbook of Procedures

Subjects	Calculators
Business and management Environmental systems and societies	A four-function calculator, scientific calculator or GDC is required for all examinations.
Biology Chemistry Design technology Physics	<p>Calculators are not allowed on paper 1.</p> <p>On paper 2 and paper 3, a calculator with the following minimum functionalities is required (a <i>GDC is recommended</i>):</p> <ul style="list-style-type: none"> decimal logarithms values of x^y and $x^{1/y}$ value of π (pi) trigonometric functions inverse trigonometric functions natural logarithms values of e^x scientific notation.
Mathematical studies SL Further mathematics SL	<p>A GDC with the following minimum functionalities is required on all papers:</p> <ul style="list-style-type: none"> draw graphs with any viewing window solve equations numerically add and multiply and find inverse matrices find a numerical derivative at a point find a numerical definite integral find p values.
Mathematics SL Mathematics HL	<p>Calculators are not allowed for paper 1.</p> <p>A GDC with the following minimum functionalities is required on all other papers:</p> <ul style="list-style-type: none"> draw graphs with any viewing window solve equations numerically add and multiply and find inverse matrices find a numerical derivative at a point find a numerical definite integral find p values (not required for mathematics SL)..
Mathematical studies SL Mathematics SL, HL Further mathematics SL	Examiners will set questions assuming that all candidates have a GDC with the minimum functionalities listed here. Candidates using only four-function or scientific calculators, or a less able GDC will be at a disadvantage

For examinations May 2012 onwards.

A. TI-83/TI-84 (Plus and SE) models

1. Reset all RAM memory.
2. Remove all Flash (ROM) applications (Apps) except those listed below.

Menu Name	Full program/Apps name and version	Description
CBL/CBR	CBL™ v1.0 © Texas Instruments	Connectivity/set-up of CBL™ data collection system (Other connectivity Apps for USB-type probes are also acceptable and do not need to be removed.)
Chinese	Chinese Help v1.01 © Inventec 1999	Chinese version of Catalog Help
CtlgHelp	Catalog Help v1.0 © Texas Instruments 2000	Catalog Help provides easy access to calculator function information
Dansk	Dansk v1.02 © Texas Instruments 1999	Danish language localizer—this App will translate all prompts, error messages and most functions into Danish
Deutsch	Deutsch v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into German
Español	Español v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into Spanish
Finance	Finance	Finance operations—part of the Operating System
Français	Français v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into French
Italiano	Italiano v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into Italian
Magyar	Magyar v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into Hungarian
Nederlan	Nederlan v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into Dutch
Norsk	Norsk v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into Norwegian
Polski	Polski v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into

		Polish
PolySmlt	Polynomial Root Finder and Simultaneous Equation Solver v. 1.0 © Texas Instruments 2001	Combination of two programs, one that finds polynomial roots and one that finds solutions to systems of equations
PolySmlt2	Polynomial Root Finder and Simultaneous Equation Solver v. 2.0 © Texas Instruments 2001	Combination of two programs, one that finds polynomial roots and one that finds solutions to systems of equations
Portug	Portug v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into Portuguese
Suomi	Suomi v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into Finnish
Svenska	Svenska v1.02 © Texas Instruments 1999	Language localizer—this App will translate all prompts, error messages and most functions into Swedish

B. TI-83 (non-plus)/ TI-82/TI-85/TI-86 models

1. Reset all RAM memory.
2. After a full memory reset, install the following RAM programs

Solver

Polynomial solver

Simultaneous Equation Solver

C. TI Nspire vs 1.3 and above

All versions must be in “Press to Test mode” with the correct features blocked (see above).

D. All other calculators.

Reset (TI)/initialize (Casio) all memory.