# **External assessment equipment list**

External assessment 2023

Supervisors will check equipment before students enter the assessment room.

# Approved equipment for all assessments

- black or blue pens
- 2B pencils, sharpener and eraser
   Note: 2B pencil is only required for multiple choice questions and drawing graphs or diagrams.
   Black or blue non-erasable pens must be used for all other written responses
- highlighters students should not highlight their responses but may highlight stimulus or questions when permitted by the supervisor
- a clear plastic ruler
- water in a clear unlabelled bottle
- asthma inhaler.

You may use a clear plastic container or ziplock bag to carry your equipment if needed.

# **QCAA**-approved calculators

Only calculators approved for use in assessments are permitted. Scientific and graphics calculators must:

- meet the requirements set out in the Scientific calculator list and Graphics calculator list
- be handheld and solar or battery powered
- be cleared of memory before entering the assessment room.

For assessments that permit the use of a non-programmable calculator (Accounting, Economics, Geography, Legal Studies), the calculator must be handheld and solar or battery powered. It should be able to perform addition, subtraction, multiplication, division, square roots and powers. It must not allow access to a computer algebra system (CAS), spellchecker, dictionary, thesaurus or translator.

For Aerospace Systems, a QCAA-approved flight calculator is required.

# Student devices

A student device is a battery-powered laptop or tablet. For assessments that require the use of a student device, students will bring their own or a device will be provided by their school. Schools should advise students of the arrangements that apply to devices for their assessments.

Students should have:

- individual access to a device on which they can listen to and/or view digital stimulus as many times as they need to throughout the assessment session
- the latest version of a media player that plays MP3 and MP4 files installed on the device





• wired earphones/headphones consistent with the guidelines for academic integrity (Bluetoothenabled earphones/headphones are not permitted).

Students, supervisors and relevant teachers should be confident using the device and media player.

## Subject-specific equipment

Subject	Additional approved subject-specific equipment
Aboriginal & Torres Strait Islander Studies	• nil
Accounting	non-programmable calculator
Aerospace Systems	<ul> <li>QCAA-approved scientific calculator</li> <li>QCAA-approved flight calculator</li> <li>protractor</li> <li>ruler or plotter</li> </ul>
Agricultural Science Agricultural Science AS	• QCAA-approved calculator permitted; must meet the requirements set out in the Scientific calculator list or the Graphics calculator list
Ancient History Ancient History AS Ancient History SEE	• nil
Arabic SEE	<ul> <li>monolingual and/or bilingual print dictionaries in one or two volumes (written examination only)</li> </ul>
Biology Biology AS	• QCAA-approved calculator permitted; must meet the requirements set out in the Scientific calculator list or the Graphics calculator list
Business	• nil
Chemistry Chemistry SEE	• QCAA-approved calculator permitted; must meet the requirements set out in the Scientific calculator list or the Graphics calculator list
Chinese Chinese SEE	<ul> <li>suitable wired earphones/headphones (cannot be Bluetooth)</li> <li>student device</li> </ul>
Dance	<ul><li>suitable wired earphones/headphones (cannot be Bluetooth)</li><li>student device</li></ul>
Design Design AS	<ul> <li>black ink pens</li> <li>black felt-tip pens</li> <li>2B pencils, sharpener and eraser</li> <li>ruler</li> <li>a set of coloured pencils or pens</li> </ul>
Digital Solutions	• nil
Drama Drama AS	• nil

Subject	Additional approved subject-specific equipment
Earth & Environmental Science	• QCAA-approved calculator permitted; must meet the requirements set out in the Scientific calculator list or the Graphics calculator list
Economics	<ul><li>ruler free from markings other than measurement indicators</li><li>non-programmable calculator</li></ul>
Engineering	<ul><li>QCAA-approved scientific calculator</li><li>protractor</li><li>ruler</li></ul>
English English SEE	• nil
English & Literature Extension	• nil
English as an Additional Language	• nil
Film, Television & New Media	<ul><li>suitable wired earphones/headphones (cannot be Bluetooth)</li><li>student device</li></ul>
Food & Nutrition	• nil
French	<ul><li>suitable wired earphones/headphones (cannot be Bluetooth)</li><li>student device</li></ul>
French Extension	• nil
General Mathematics General Mathematics SEE	QCAA-approved scientific calculator
Geography Geography AS	<ul> <li>non-programmable calculator</li> <li>coloured pencils</li> <li>ruler free from markings other than measurement indicators</li> <li>lead pencils</li> <li>eraser</li> </ul>
German	<ul> <li>suitable wired earphones/headphones (cannot be Bluetooth)</li> <li>student device</li> </ul>
German Extension	• nil
Health	• nil
Indonesian SEE	<ul><li>suitable wired earphones/headphones (cannot be Bluetooth)</li><li>student device</li></ul>
Italian	<ul> <li>suitable wired earphones/headphones (cannot be Bluetooth)</li> <li>student device</li> </ul>
Japanese	<ul> <li>suitable wired earphones/headphones (cannot be Bluetooth)</li> <li>student device</li> </ul>
Korean SEE	<ul> <li>suitable wired earphones/headphones (cannot be Bluetooth)</li> <li>student device</li> </ul>

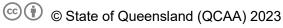
Subject	Additional approved subject-specific equipment
Latin SEE	• dictionary
Legal Studies Legal Studies AS	non-programmable calculator
Literature	• nil
Marine Science	• QCAA-approved calculator permitted; must meet the requirements set out in the Scientific calculator list or the Graphics calculator list
Mathematical Methods — Paper 2 (Technology-active)	<ul><li>QCAA-approved graphics calculator</li><li>QCAA-approved scientific calculator (permitted)</li></ul>
<b>Note:</b> Paper 1 is Technology- free; no calculator or technology of any type is permitted.	
Mathematical Methods SEE — SEE 1	<ul> <li>QCAA-approved graphics calculator</li> <li>QCAA-approved scientific calculator (permitted)</li> </ul>
Mathematical Methods SEE — SEE 2 Paper 2 (Technology- active)	<ul><li>QCAA-approved graphics calculator</li><li>QCAA-approved scientific calculator (permitted)</li></ul>
<b>Note:</b> SEE 2 Paper 1 is Technology-free; no calculator or technology of any type is permitted.	
Modern Greek SEE	<ul> <li>monolingual and/or bilingual print dictionaries in one or two volumes (written examination only)</li> </ul>
Modern History Modern History AS Modern History SEE	• nil
Music Music AS	<ul><li>suitable wired earphones/headphones (cannot be Bluetooth)</li><li>student device</li></ul>
Music Extension	<ul> <li>suitable wired earphones/headphones (cannot be Bluetooth)</li> <li>student device</li> </ul>
Philosophy & Reason	• nil
Physical Education Physical Education AS	• nil
Physics Physics AS Physics SEE	QCAA-approved calculator permitted; must meet the requirements set out in the Scientific calculator list or the Graphics calculator list
Polish SEE	<ul> <li>monolingual and/or bilingual print dictionaries in one or two volumes (written examination only)</li> </ul>
Psychology	• QCAA-approved calculator permitted; must meet the requirements set out in the Scientific calculator list or the Graphics calculator list

Subject	Additional approved subject-specific equipment
Punjabi SEE	• monolingual and/or bilingual print dictionaries in one or two volumes (written examination only)
Russian SEE	• monolingual and/or bilingual print dictionaries in one or two volumes (written examination only)
Spanish	<ul><li>suitable wired earphones/headphones (cannot be Bluetooth)</li><li>student device</li></ul>
Specialist Mathematics — Paper 2 Specialist Mathematics AS — Paper 2	<ul> <li>QCAA-approved graphics calculator</li> <li>QCAA-approved scientific calculator (permitted)</li> </ul>
<b>Note:</b> Paper 1 is Technology- free; no calculator or technology of any type is permitted.	
Study of Religion	• nil
Tamil SEE	<ul> <li>monolingual and/or bilingual print dictionaries in one or two volumes (written examination only)</li> </ul>
Vietnamese SEE	<ul><li>suitable wired earphones/headphones (cannot be Bluetooth)</li><li>student device</li></ul>
Visual Art Visual Art AS	• nil

## **Prohibited materials**

The items below are prohibited in any assessment room, except if specifically approved as an AARA, or listed as approved subject-specific equipment for an assessment, e.g. for a subject that requires students to use a device or permits the use of a dictionary.

- mobile phones
- smart watches and fitness trackers
- any other electronic device that stores, retrieves, displays or communicates digital information
- correction fluid or correction tape
- dictionaries
- erasable pens
- blank paper, notes, any printed/written material
- tissues brought by students. (Note: The room must have tissues available for student use.)



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# Scientific calculator list

General Senior Syllabus external assessment — updated 2023

### Purpose

To provide teachers and students with:

- an up-to-date description of the types of calculators that may and may not be used by students sitting a General Senior Syllabus summative external assessment that permits the use of a scientific calculator
- instructions for how calculators must be used in the external assessment.

## **Approved calculators**

Calculators used by students in the summative external assessment must be handheld and solar or battery powered.

Below is a list of calculators approved for use in General Senior Syllabus summative external assessments that permit the use of a scientific calculator (or a non-programmable calculator). For subject-specific information, refer to the relevant senior syllabus and the external assessment equipment list.

Brand	Models
Abacus	SXIIMATRIXa SXII-MATRIXn
Anko	Scientific calculator
Canon	F717SGA F-720 F-720i
Casio	fx-82AU fx-82AU PLUS fx-82AU PLUS II fx-82AU PLUS II 2 <sup>nd</sup> Edition fx-8200 AU fx-100AU fx-100AU PLUS fx-100AU PLUS 2 <sup>nd</sup> Edition
Hewlett-Packard (HP)	HP 8s HP 10s HP 10s+ HP 300s
Scholar	DS-82MS KD-350MS D1-5 SC-150MX

Approved scientific calculator list





	SC-250MX
Sharp	EL-531TH EL-531THB-WH EL-531WH EL-531X EL-531XH EL-W532THBW
Texas Instruments (TI)	TI-30XB MultiView TI-30X Plus MathPrint

## Other calculators

Any calculator not listed above may be used as long as it meets the requirements listed below. This includes calculators with more limited features such as basic (pocket and desktop) calculators.

## Features that are permitted

Calculators should be able to perform addition, subtraction, multiplication, division, square roots and powers. Scientific calculators also typically have access to the following features:

- trigonometric functions and inverse
- fractions and percentages
- statistical operations, such as standard deviation, mean and linear regression.

### Features that are NOT permitted

Calculators must not allow access to the following features:

- retrievable information, including databanks, dictionaries, mathematical formulas and text
- displaying a graph
- matrix operations
- symbolic algebra manipulation
- programmability
- communication with other machines, students or the internet
- language translation.

Calculator emulation software or equivalent applications running on computers, laptops, tablets, iPads or mobile phones are not permitted.

### Use of calculators in external assessment

Students are responsible for:

- bringing their own approved calculator
- the working condition of their calculator
- setting their calculator in the correct mode

• adhering to all instructions related to the use of approved calculators.

Students should be familiar with their model of calculator.

Calculators must be silent, handheld and solar or battery powered.

Students must ensure their calculator has adequate power. Where models allow, students can bring in spare batteries and change them. USB-rechargeable calculators should be fully charged prior to the assessment and have sufficient capacity to be used for the duration of the assessment. Any power failure or other issue with a calculator during an assessment will not be taken into consideration.

Unless otherwise stated, students may use a maximum of two approved calculators of any model in an assessment that allows them, e.g. two approved scientific calculators, or one approved scientific calculator and one basic (pocket or desktop) calculator.

Calculators must be free of lids, cases and covers that have printed instructions or formulas, and external storage media.

Students may not borrow a calculator from another student after entering the assessment room.

Any apps or programs that have features that are not permitted must be deleted or inaccessible.

Calculators must not be able to communicate wirelessly.

The calculator's memory must be cleared prior to the assessment.

Supervisors will check that calculators meet the specifications outlined in this document prior to the assessment.

Calculator use will be monitored throughout the assessment.

On completion of the assessment, calculators must be cleared so that students are not able to use them to store assessment questions and/or answers.

## More information

If you would like more information, please phone (07) 3864 0444 or email the Mathematics learning area at Maths@qcaa.qld.edu.au.

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# **Graphics calculator list**

General Senior Syllabus external assessment — updated 2023

### Purpose

To provide teachers and students with:

- an up-to-date description of the types of calculators that may and may not be used by students sitting a General Senior Syllabus summative external assessment that permits the use of a graphics calculator
- instructions for how calculators must be used in the external assessment.

## Approved calculators

Calculators used by students in a summative external assessment must be handheld and solar or battery powered.

Below is a list of calculators approved for use in General Senior Syllabus summative external assessments that permit the use of a graphics calculator. For subject-specific information, refer to the relevant senior syllabus and the external assessment equipment list.

### Approved graphics calculators

Brand	Models
Casio	CFX-9850GC Plus fx-9860GAU Plus fx-CG20AU fx-CG50AU fx-CG50
Hewlett-Packard (HP)	HP39Gii HP Prime (updated to the latest firmware in 'Exam Mode' with the correct features blocked)
Texas Instruments (TI)	TI-84 Plus TI-84 Plus CE TI-84 Plus CE Python TI-84 Plus Silver Edition TI-84 Plus C Silver Edition TI-Nspire CX TI-Nspire CX TI-Nspire CX II TI-Nspire CX II TI-Nspire CX II CAS (updated to the latest firmware in 'Press to Test' with the correct features blocked)





## Calculators not permitted

Calculator emulation software or equivalent applications running on computers, laptops, tablets, iPads or mobile phones are not permitted.

Below is a list of calculators that are not approved for use in a General Senior Syllabus summative external assessment that permits the use of a graphics calculator.

Brand	Models
Casio	ClassPad 300 ClassPad 330 ClassPad 330 Plus Algebra FX 2.0 (all versions) CFX-9970 (all versions) fx-CP400 (ClassPad II)
Hewlett-Packard (HP)	HP 38g (all versions) HP 40g HP 50g HP Prime (not in 'Exam Mode' with the correct features blocked)
Texas Instruments (TI)	TI-Nspire CX CAS TI-Nspire CAS with touchpad TI-89 Titanium TI-Nspire CX II CAS (not in 'Press to Test' with the correct features blocked) Voyage 200

Graphics calculators NOT permitted

### **Other calculators**

Any calculator not listed may be used as long as it meets the requirements listed below. This includes calculators with more limited features such as scientific and basic (pocket and desktop) calculators, or older models of graphics calculators. Review the calculator's user manual or contact the manufacturer for further advice about available features.

### Features that are permitted

Calculators should be able to perform addition, subtraction, multiplication, division, square roots and powers. Graphics calculators also typically have access to:

- drawing graphs with any viewing window; displaying table information; finding zeros, local minimum and maximums, and intersection points
- solving equations numerically, including system of linear equations
- determining a numerical derivative at a point
- determining a numerical definite integral
- determining statistical values, including normal and binomial distributions, <sup>*n*</sup>*P<sub>r</sub>*, <sup>*n*</sup>*C<sub>r</sub>*, one- and two-variable statistics
- performing statistical calculations including regression
- performing matrix, vector and complex number operations.

#### Features that are NOT permitted

Calculators must not allow access during the examination to:

- language translation
- symbolic algebra manipulation
- symbolic differentiation or integration
- communication with other machines, students or the internet
- retrievable information, including databanks, dictionaries, mathematical formulas and text.

A calculator that has any of these features (inbuilt or downloaded) must be put into a test mode that prohibits access to these features during the examination. If the calculator cannot be put into a test mode that prohibits access to these features, a different calculator that meets the requirements must be used.

#### Older models of calculators

Older models of calculators, including those listed as 'Approved', may have reduced speed and functionality. The calculators listed below are still able to be used in external assessments that permit the use of a graphics calculator. However, students that elect to use these calculators must be aware of their reduced speed and functionality.

Brand	Models
Casio	fx-9860G fx-9860GAU
Texas Instruments (TI)	TI-83 Plus TI-73 Explorer

### Use of calculators in external assessment

Students are responsible for:

- bringing their own approved calculator
- the working condition of their calculator
- setting their calculator in the correct mode
- adhering to all instructions related to the use of approved calculators.

Students should be familiar with their model of calculator.

Calculators must be silent, handheld and solar or battery powered.

Students must ensure their calculator has adequate power. Where models allow, students can bring in spare batteries and change them. USB-rechargeable calculators should be fully charged prior to the assessment and have sufficient capacity to be used for the duration of the assessment. Any power failure or other issue with a calculator during an assessment will not be taken into consideration.

Unless otherwise stated, students may use a maximum of two approved calculators of any model in an assessment that allows them. For example, two approved graphics calculators, or one approved graphics calculator and one approved scientific calculator.

Calculators must be free of lids, cases and covers that have printed instructions or formulas, and external storage media.

Students may not borrow a calculator from another student after entering the assessment room.

Any apps or programs that have features that are not permitted must be deleted or inaccessible.

Calculators must not be able to communicate wirelessly.

The calculator must be reset and/or cleared prior to the assessment as outlined below.

Supervisors will check that calculators meet the specifications outlined in this document prior to the assessment.

Calculator use will be monitored throughout the assessment.

On completion of the assessment, calculators must be reset and/or cleared such that students are not able to use them to store assessment questions and/or answers.

### Instructions for approved calculators prior to external assessment

Brand	Models	Reset/Initialise process
Casio	CFX-9850GC Plus	<ul> <li>From the Main Menu launch the Memory App (press F)</li> <li>Select Reset</li> <li>Press EXE</li> <li>Press F1</li> </ul>
	fx-9860GAU Plus fx-CG20AU fx-CG50AU fx-CG50	<ul> <li>From the Main Menu launch the System App (press G)</li> <li>Select Reset (F5)</li> <li>Select Next Page (F6)</li> <li>Select Initialize All (F2)</li> <li>Select Yes (F1)</li> <li>Select Yes (F1) (Note: If Add-ins are not installed, this step is not included.)</li> <li>Press EXIT</li> <li>Calculator will restart.</li> </ul>
Hewlett- Packard (HP) HP 39Gii HP Prime	HP39Gii	<ul> <li>Press and hold ON, F1 and F6 simultaneously</li> <li>Release all keys in the reverse order</li> <li>See</li> <li>www.calcsplus.com.au/site/DefaultSite/filesystem/documents/data sheets/HP39gII_1.pdf (p. 311)</li> </ul>
	HP Prime	<ul> <li>Prepare the calculator for the examination by updating to the latest firmware in Exam Mode. Ensure:</li> <li>memory is erased</li> <li>CAS functionality is disabled</li> <li>See www.hp.com/united-states/ExamMode_Whitepaper.pdf</li> </ul>

Toyoo	TI 04 modele	
Texas Instruments	TI-84 models	To clear RAM:
(TI)		• 2nd MEM (+)
		• 7: Reset
		• 1: All Ram
		• 2: Reset
		Calculator will display 'RAM cleared'.
		To clear Archive:
		• 2nd MEM (+)
		• 7: Reset
		<ul> <li>Press the right arrow to move from RAM to ARCHIVE</li> </ul>
		• 1: Vars
		• 2: Reset
		Calculator will display 'Arc Vars Cleared'.
		See https://education.ti.com/en-au/resources/calculator-set-up
	TI-Nspire CX	To restore all system variables and memory to default settings:
	TI-Nspire with	Home 2 (to open the My Documents file browser)
	touchpad	Menu (to open the context menu)
	TI-Nspire CXII	<ul> <li>Delete All (you may need to arrow down)</li> </ul>
		• OK
		Note: This process must be executed regardless of whether the
		Document folder is empty.
		See https://education.ti.com/en-au/resources/calculator-set-up
	TI-Nspire CXII CAS	Calculator must be updated to the latest firmware, have all system variables and memory restored to default settings, and be placed in Press-to-Test mode with <b>CAS functionality disabled</b> .
		See https://education.ti.com/en-au/software/update/ti-nspire- software-update to update to latest firmware.
		To restore all system variables and memory to default settings:
		Home 2 (to open the My Documents file browser)
		Menu (to open the context menu)
		<ul> <li>Delete All (you may need to arrow down)</li> </ul>
		• OK
		<b>Note:</b> This process must be executed regardless of whether the Document folder is empty.
		To place in Press-to-Test mode with CAS functionality disabled:
		• Ensure the handheld is turned off.
		• Press and hold down the esc and on keys.
		<ul> <li>Do not release the keys until the Press-to-Test screen is displayed.</li> </ul>
		<ul> <li>For CAS Mode, select Exact Arithmetic.</li> </ul>
		Untick all restrictions.
		Press enter or click Enter Press-to-Test.
		Press enter or click OK.
		Calculator will switch off and restart automatically.
		See https://education.ti.com/en-au/resources/calculator-set-up
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## More information

If you would like more information, please phone (07) 3864 0444 or email the Mathematics learning area at Maths@qcaa.qld.edu.au.

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