Calculator Use in External Exams

Rules and Requirements

These rules set out what types of calculators are permitted in Tasmanian Assessment, Standards and Certification (TASC) exams for Level 3 and Level 4 courses.

The rules are designed to make sure calculator use in exams is:

- fair for all students
- consistent across Exam Centres
- aligned with current calculator technology.

These rules sit under the TASC External Assessment Policy and the TASC External Assessment Rules which are made under the *Tasmanian Assessment, Standards and Certification Act 2003*.

Calculator use

1. Students may bring calculators into exams as permitted in **Appendix 1**.
    a) Calculators must not be used in any way that breaches Exam Rules, including as a means of introducing subject notes or prepared answers.
    b) Instructions, magnetic cards or other associated materials for use with calculators are not permitted.
    c) Students may use their calculator to its full capacity, provided those functions comply with these rules.
2. Calculators must meet the following specifications:
    a) Must be handheld.
    b) Must use a self-contained power source and must not be connected to external power during the exam.
    c) Must operate silently.
    d) Must have wireless and Bluetooth connectivity disabled during the exam.
    e) Must not contain stored documents or solutions that allow students to enter a question and receive a worked answer. This is considered a prepared answer and is not permitted.
3. Students must ensure the calculator they bring is an approved type.
4. Students must ensure their calculator is working correctly. Calculators may not be borrowed or shared in the exam room. Malfunctions or flat batteries will not be taken into account by TASC.
5. Breaches of these rules will be treated in the same way as attempts to bring unauthorised written material into the exam room. See the TASC External Assessment Rules for more information.

TASMANIAN ASSESSMENT, STANDARDS & CERTIFICATION

Calculator classifications

For the purposes of these rules, calculators are classified according to their functionality. Different TASC-accredited senior secondary courses may allow different classifications of calculators in external assessments.

Basic calculator

This is a calculator with basic functions, e.g. addition, subtraction, division and multiplication. These calculators do not have the capacity to create or store programs or text.

Scientific calculator

This is a calculator with basic functions as well as dedicated buttons (e.g. '*e*' and '*pi*') and other functionalities.

Features allowed:

- calculate in scientific notation
- calculate powers and roots
- calculate reciprocals
- evaluate logarithms and exponentials
- calculate trigonometric and inverse trigonometric values
- calculate permutations and combinations
- convert between polar and Cartesian form
- perform basic statistical operation to obtain measures such as mean, median lower and upper quartiles and standard deviation
- perform linear regression.

Features **not** allowed:

- programmable – by having the ability to allow users to input a set of instructions and then save them for future execution
- the ability to graph, or capabilities of plotting data or storing, manipulating, and displaying functions graphically
- computer algebraic system (CAS) functionality and capabilities of performing symbolic mathematical operations, such as solving equations, simplifying expressions, and manipulating mathematical functions
- built-in financial features like computing depreciation, annuities, both simple and compound interest, and determining the break-even point.

Graphics or Computer Algebraic System (CAS) calculator

A graphics calculator provides functions for complex concepts (e.g. calculus and statistics) and allows students to work through algebraic equations and quadratics.

Features allowed:

- calculate in scientific notation
- calculate powers and roots
- calculate reciprocals
- evaluate logarithms and exponentials
- calculate trigonometric and inverse trigonometric values
- calculate permutations and combinations
- convert between polar and Cartesian form
- perform basic statistical operation to obtain measures such as mean, median lower and upper quartiles and standard deviation
- perform linear regression
- differentiation and integration, and the solution of equations
- symbolic manipulation such as addition of algebraic expressions and binomial expansion
- built-in financial features like computing depreciation, annuities, both simple and compound interest, and determining the break-even point.

Features **not** allowed:

- language translation
- communication with other machines, students or the internet.

Responsibilities

TASC

- TASC will publish and update the rules on calculator use in external exams.
- TASC will support Supervisor Coordinators and Exam Supervisors to apply these rules consistently.
- TASC will ensure Marking Coordinators and Markers are aware of the calculator rules that apply to their course, so that marking expectations are consistent with permitted calculator use.
- TASC must determine any alleged breaches of exam rules on a case-by-case basis.
- TASC must ensure that processes for managing breaches and appeals are clear and transparent.

Schools

- Schools must make sure students know these rules before their exams.
- Schools must ensure students have the correct type of calculator for their courses.
- Schools may provide some spare batteries for students, if needed.

Students

- Students must read and understand these rules before their exams.
- Students must follow the TASC External Assessment Rules, including the requirements about approved materials.
- Students must bring the correct type of calculator into the exam room, making sure it is charged and working.
- Students may bring spare batteries for their calculator.

Related documents

1. TASC External Assessment Rules
2. TASC External Assessment Policy

Appendix 1 – Calculators permitted in external exams

The lists below show the type of calculator permitted in the external exam for each TASC Level 3 and Level 4 courses.

Courses where Basic and/or Scientific calculators are permitted

Students may bring a basic calculator and/or a scientific calculator into the external exam for the following courses:

- Accounting
- Biology
- Business Studies
- Chemistry
- Computer Graphics and Design
- Computer Science
- Economics
- Electronics
- Environmental Science
- Food and Nutrition
- Geography
- Health Studies
- Housing and Design
- Physical Sciences
- Physics
- Sport Science

Courses where any of the approved calculators are permitted

(Basic, Scientific, Graphics or CAS calculators)

The following courses permit any calculator type that meets the specifications in these rules:

- General Mathematics
- Mathematics Methods – Foundation *(Section B only)*
- Mathematics Methods *(Section B only)*
- Mathematics Specialised

Courses where Basic calculators are optional

The following courses **do not require** a calculator for the external exam. However, students may bring a basic calculator (i.e. one with only simple arithmetic functions such as addition, subtraction, multiplication and division) if they wish:

- Ancient History
- Australia in Asia and the Pacific
- Chinese
- Drama
- English
- English Literature
- English as an Additional Language or Dialect
- French
- German
- Italian
- Japanese
- Legal Studies
- Media Production
- Modern History
- Music
- Outdoor Leadership
- Philosophy
- Psychology
- Sociology
- Studies of Religion

Courses where calculators are not permitted

The following exams **do not allow** the use of calculators:

- Mathematics Methods – Foundation *(Section A only)*
- Mathematics Methods *(Section A only)*