

SINGAPORE EXAMINATIONS AND ASSESSMENT BOARD

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GUIDELINES ON THE USE OF ELECTRONIC CALCULATORS IN NATIONAL EXAMINATIONS

- 1. The scientific calculators used in the PSLE Mathematics and Foundation Mathematics examinations should have the following minimum features:
 - (a) four arithmetic operations $(+, -, \times, \div)$ including the order of operations and use of brackets:
 - (b) fractional function which retains the fraction in the form 'a/b' and 'a b/c';
 - (c) square root $(\sqrt{\ })$ and cube root $(\sqrt[3]{\ })$ functions; and
 - (d) value of Pi (π) .
- 2. The following guidelines are to be adhered to in the use of scientific calculators in national examinations.
 - (a) The calculator must be silent, with a visual display only.
 - (b) The working condition of the calculator is the responsibility of the pupil and a fault in a calculator cannot be used as a reason for seeking special consideration for the user.
 - (c) Calculators must not be borrowed from other pupils in the course of the examination for any reason.
 - (d) External storage media, e.g. card, tape, and plug-in modules, must not be in the possession of pupils during the examination.
 - (e) No unauthorised materials, e.g. instructions leaflets, formulae printed on the lid or cover of a calculator or similar materials, must be in the possession of pupils during the examination (where the instructions cannot be removed they should be securely covered).
 - (f) No programmable calculators are allowed.
 - (g) No calculators with permanent features of a programmed kind are allowed, e.g. calculators capable of numerical integration, numerical differentiation, and/or expressing in irrational number form.
 - (h) No calculators with special communication features are allowed, e.g. calculators with the capability of remote communication via infra-red or blue-tooth with other machines.
 - (i) No calculators with capabilities for storing and displaying visual and verbal information are allowed.
- 3. Graphic calculators are allowed for use <u>ONLY</u> in subjects examined at H1, H2 and H3 Levels of the GCE A-Level Curriculum. Candidates are to note the following:
 - (a) No prepared programs may be taken into the examination room. Information (including text or formulae) and/or programs stored in the calculator's memory must be cleared before the examination.
 - (b) No calculators with built-in symbolic algebra manipulations, symbolic differentiation or integration are allowed.
- 4. The use of any calculator with unacceptable features or for retrieval of information/programs during the examinations is an infringement of the regulations.
- 5. The list of approved models of scientific and graphic calculators can be found in Annex A.





LIST OF APPROVED SCIENTIFIC CALCULATORS

The following models of Scientific Calculators are suitable for :

- PSLE Mathematics and Foundation Mathematics Examinations
- GCE N(T), N(A), O and A Level Examinations

AURORA

SC 550

FIAMO

SC 6 SC 20

CANON

F-715S

CASIO

FX 82AU FX 82MS FX 85MS FX 95MS FX 95 SG Plus FX 350MS

FX 820MS FX 992S

HEWLETT PACKARD

HP 8S HP 9S HP10S

HOSEKI

H-1030 H-1031

SHARP

TEXAS INSTRUMENTS

TI 30XIIB TI 30XIIS TI 34 II

LIST OF APPROVED GRAPHIC CALCULATORS

The following models of Graphic Calculators are approved for use <u>ONLY</u> in subjects examined at H1, H2 and H3 Levels of the A-Level curriculum.

Note:

All graphic calculators are programmable and must be reset prior to any examination.

CASIO

CFX-9850GC PLUS FX-9860G FX-9860G slim

TEXAS INSTRUMENTS

TI-83 PLUS TI-84 PLUS Silver Edition