



N307-050029-007 V2

To : Principals of Primary Schools, Secondary Schools, Full Schools, Junior Colleges and Millennia Institute

Date : 2 Jan 2009

GUIDELINES ON THE USE OF ELECTRONIC CALCULATORS IN NATIONAL EXAMINATIONS

1. The use of scientific calculators will be introduced in the PSLE Mathematics and Foundation Mathematics examinations from 2009. Schools are to inform their pupils that the calculators must have the following minimum features:
 - (a) four arithmetic operations (+, −, ×, ÷) 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 ($\sqrt{\quad}$) and cube root ($\sqrt[3]{\quad}$) 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. Schools are to impress upon their pupils of the following:
 - (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 ONLY 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. A list of approved models of scientific and graphic calculators can be found in Annex A and Annex B respectively.
6. You may contact Mr Alwyn Pang at 6377 7647 or email him at alwyn_pang@seab.gov.sg if you need further clarification.

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Deputy Director, Assessment & Research 2
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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

EL 509VM EL 509 W EL 509WM EL 509WS EL 546VA

TEXAS INSTRUMENTS

TI 30XIIB TI 30XIIS TI 34 II

The following are some older models of Scientific Calculators which are suitable for GCE N(A), N(T), O and A Level Examinations

Note:

(1) *The following calculators are currently not in production and will no longer be reflected in this list from year 2010.*

(2) *The following calculators have not been evaluated for suitability for PSLE.*

AURORA

SC 110	SC 120	SC 150	SC 170	SC 200	SC 210
SC 260	SC 500				

CANON

F 200	F 401	F 402	F 500	F 501	F 502
F 601	F 602	F 604	F 612	F 720	

CASIO

FX 82C	FX 82D	FX 82L	FX 82LB	FX 82SX	FX 82SUPER
FX 82TL	FX 82W	FX 85N	FX 85S	FX 85V	FX 85VH
FX 100C	FX 100D	FX 100S	FX 100V	FX 100Z	FX 115D
FX 115N	FX 115S	FX 115V	FX 135	FX 350C	FX 350D
FX 350HA	FX 350HB	FX 350TL	FX 350TLG	FX 350W	FX D400
FX 451M	FX 570AD	FX 570AV	FX 570CD	FX 570CV	FX 570S
FX 570Z	FX 901	FX 911S	FX 911SA	FX 911W	FX 911Z
FX 991D	FX 991N	FX 991S	FX 991V	FX 992V	FX 992VB

HEWLETT PACKARD

HP 6S	HP 6S SOLAR	HP 10B	HP 14B
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KARCE

KC107	KC108	KC109	KC S187	KC S3500
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SHARP

EL 506L	EL 509G	EL 509L	EL 509MS	EL 509R	EL 509V
EL 510R	EL 520G	EL 520L	EL 531GH	EL 531LH	EL 531P
EL 531RH	EL 531V	EL 531VB	EL 531VH	EL 546G	EL 546L
EL 546LV	EL 553	EL 556G	EL 556L		

TEXAS INSTRUMENTS

BA II PLUS	BA REAL ESTATE	BA 35 SOLAR	TI 25 STAT
TI 30 CHALLENGER	TI 30X	TI 30XSOLAR	TI 30XA
TI 32 EXPLORER PLUS	TI 34	TI 35X	TI 36XSOLAR

List of Approved Models Of Graphic Calculators

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

Note:

*All graphic calculators are programmable. As such, all calculators must be reset prior to any examination. i.e. **ALL MEMORY** must be cleared, prior to any examination.*

CASIO

FX-6300G	FX-7400G	FX-7450G	FX-9750G
CFX-9850GB PLUS	CFX-9850GC PLUS	CFX-9950GB PLUS	FX-9860G
FX-9860G slim			

HEWLETT PACKARD

HP 9G

SHARP

EL-9400 EL-9650

TEXAS INSTRUMENTS

TI-73	TI-80	TI-82	TI-83	TI-83 PLUS	TI-84 PLUS
TI-84 PLUS Silver Edition		TI-85	TI-86		