



SINGAPORE EXAMINATIONS AND ASSESSMENT BOARD

3 Geylang Bahru Lane, Singapore 339626

<http://www.seab.gov.sg>

GUIDELINES ON THE USE OF ELECTRONIC CALCULATORS IN NATIONAL EXAMINATIONS

- The calculators used in the national examinations should have the following minimum features:
 - four arithmetic operations (+, −, ×, ÷) including the order of operations and use of brackets;
 - fractional function which retains the fraction in the form 'a/b' and 'a b/c';
 - square root ($\sqrt{\quad}$) and cube root ($\sqrt[3]{\quad}$) functions; and
 - value of Pi (π).
- The following guidelines are to be adhered to in the use of calculators in national examinations.
 - The calculator must be silent, with a visual display only.
 - The working condition of the calculator (including the power supply) is the responsibility of the candidates and any fault in the calculator will not be considered as justification for special consideration.
 - Candidates are not allowed to share calculators during the examination.
 - No calculators with an external storage function which can allow users to input and store data via external storage media, e.g. cards, tapes, and plug-in modules, are allowed.
 - No calculators with wireless communication capability with other machines, e.g. infra-red communication capability, are allowed.
 - Any enclosed instruction leaflets containing any mathematical formula, conversion table or instructions are strictly prohibited, and must not be taken into the examination venue. Any such information on the calculator that cannot be removed must be securely covered.
 - The original model number and brand must be indicated clearly on the calculator for verification purposes.
 - No calculators with capabilities for storing and displaying verbal information are allowed.
 - Information (including text or formulae) stored in the calculator's memory must be cleared before the examination.

Additional guidelines for scientific calculators

- No programmable calculators are allowed.
 - No calculators with permanent features of a programmed kind are allowed, e.g. calculators capable of numerical integration and/or numerical differentiation.
- Graphing 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:
 - It is the candidates' responsibility to clear any information and/or programs stored in the graphing calculators before the examination.
 - 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.
 - No calculators with built-in symbolic algebra manipulations, symbolic differentiation or integration are allowed.
 - The use of any calculator with unacceptable features or for retrieval of information/programs during the examinations is an infringement of the regulations.
 - All previously approved calculators are allowed in the national examinations. The Singapore Examinations and Assessment Board reserves the right to withdraw the approval for these calculators in the examinations when there is a change in policy, syllabus or examination format.
 - The list of approved calculator models recommended for use in the national examinations is in Annex A.



LIST OF APPROVED SCIENTIFIC CALCULATORS¹

The following scientific calculator models are suitable for:

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

| S/N | Calculator Brand | Calculator Model | Approved Period |
|-----|------------------|------------------|-----------------|
| 1 | CASIO | FX 82MS | 2003 – 2021 |
| 2 | | FX 85MS | 2003 – 2021 |
| 3 | | FX 95MS | 2003 – 2021 |
| 4 | | FX 96SG Plus | 2013 – 2021 |
| 5 | | FX 97SG X | 2018 – 2022 |
| 6 | | FX 350MS | 2003 – 2021 |
| 7 | CANON | F-960SG | 2017 – 2021 |
| 8 | SHARP | EL W531S | 2010 – 2023 |
| 9 | | EL W531S II | 2018 – 2022 |
| 10 | | EL W531XM | 2014 – 2023 |
| 11 | | EL 533X | 2013 – 2024 |

LIST OF APPROVED GRAPHING CALCULATORS¹

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

Note: All graphing calculators must be reset prior to any examination.

| S/N | Calculator Brand | Calculator Model | Operating System | Approved Period ¹ |
|-----|-------------------|-----------------------------|--|------------------------------|
| 1 | CASIO | FX-9860GIIIs | OS 2.04 OS 2.09 | 2014 – 2022 |
| 2 | TEXAS INSTRUMENTS | TI-84 Plus | OS 2.43 | 2006 – 2024 |
| 3 | | TI-84 Plus Silver Edition | OS 2.53MP | 2006 – 2024 |
| 4 | | TI-84 Plus Pocket SE | OS 2.55MP | 2012 – 2021 |
| 5 | | TI-84 Plus C Silver Edition | OS 4.0 OS 4.2 | 2015 – 2023 |
| 6 | | TI-84 Plus CE | OS 5.0.1 OS 5.1.5 OS 5.2.0 OS 5.2.2 OS 5.3.0 OS 5.3.1 OS 5.4.0 | 2017 – 2024 |

¹ The calculator models on the list are in production and easily available for purchase. If there is no application for extension of the approved period for the calculator model, it will be moved to the list of previously approved calculators upon expiry. The onus is on the vendors to submit and apply for extension of the approved period if their models are still in production and easily available for purchase.

PREVIOUSLY APPROVED CALCULATORS THAT STILL CAN BE USED²**SCIENTIFIC CALCULATORS****Brand : CASIO**

| | | | | | | |
|----------------------------|----------|---------------|----------|----------|----------|------------|
| Previously Approved Models | FX 82AU | FX 82C | FX 82D | FX 82L | FX 82LB | FX 82SUPER |
| | FX 82SX | FX 82TL | FX 82W | FX 85N | FX 85S | FX 85V |
| | FX 85VH | FX 95 SG Plus | 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 500MS | FX 570AD | FX 570AV |
| | FX 570CD | FX 570CV | FX 570S | FX 570Z | FX 820MS | FX 901 |
| | FX 911S | FX 911SA | FX 911W | FX 911Z | FX 991D | FX 991N |
| | FX 991S | FX 991V | FX 992S | FX 992V | FX 992VB | |

Brand : CANON

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|----------------------------|-------|-------|-------|-------|--------|-------|
| Previously Approved Models | F 200 | F 401 | F 402 | F 500 | F 501 | F 502 |
| | F 601 | F 602 | F 604 | F 612 | F 715S | F 720 |

Brand : SHARP

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|----------------------------|----------|----------|----------|----------|---------|----------|
| Previously Approved Models | EL 506L | EL 509G | EL 509L | EL 509MS | EL 509R | EL 509V |
| | EL 509VM | EL 509W | EL 509WM | EL 509WS | EL 509X | EL 510R |
| | EL 520G | EL 520L | EL 531GH | EL 531LH | EL 531P | EL 531RH |
| | EL 531V | EL 531VB | EL 531VH | EL W531M | EL 546G | EL 546L |
| | EL 546LV | EL 546VA | EL 553 | EL 556G | EL 556L | |

Brand : TEXAS INSTRUMENTS

| | | | | | | |
|----------------------------|------------|----------------|------------------|-------------|-------------|---------------------|
| Previously Approved Models | BA II PLUS | BA REAL ESTATE | BA 35 SOLAR | TI 25 STAT | TI 30X | TI 30XA |
| | TI 30XIIB | TI 30XIIS | TI 30 CHALLENGER | | TI 30XSOLAR | TI 32 EXPLORER PLUS |
| | TI 34 | TI 34II | TI 35X | TI 36XSOLAR | | |

Brand : HEWLETT PACKARD

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|----------------------------|--------|-------------|--------|-------|-------|--------|
| Previously Approved Models | HP 6S | HP 6S SOLAR | | HP 8S | HP 9S | HP 10B |
| | HP 10S | HP 10S+ | HP 14B | | | |

Brand : AURORA

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|----------------------------|--------|--------|--------|--------|--------|--------|
| Previously Approved Models | SC 110 | SC 120 | SC 150 | SC 170 | SC 200 | SC 210 |
| | SC 260 | SC 500 | SC 550 | | | |

² All previously approved calculator models, including those that no longer appear on the current approved list, can continue to be used for all national examinations unless there is a change in policy, syllabus or examination format. Under any of these situations, the Singapore Examinations and Assessment Board (SEAB) may withdraw the approval for use of these calculators in the examinations.

Brand : FIAMO

| | | |
|----------------------------|------|-------|
| Previously Approved Models | SC 6 | SC 20 |
|----------------------------|------|-------|

Brand : HOSEKI

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|----------------------------|--------|--------|
| Previously Approved Models | H 1030 | H 1031 |
|----------------------------|--------|--------|

Brand : HUBBLE COMPUTING

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|----------------------------|--------|--------|
| Previously Approved Models | SC 10B | SC 10C |
|----------------------------|--------|--------|

Brand : KARCE

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|----------------------------|-------|-------|-------|---------|----------|
| Previously Approved Models | KC107 | KC108 | KC109 | KC S187 | KC S3500 |
|----------------------------|-------|-------|-------|---------|----------|

GRAPHING CALCULATORS

The following graphing calculator models are approved for use ONLY in subjected examined at H1, H2 and H3 Levels of the A-Level curriculum.

Note: All graphing calculators must be reset prior to any examination.

Brand : CASIO

| | | | |
|----------------------------|---------------|-----------------|----------|
| Previously Approved Models | FX 9860G Slim | CFX 9850GC PLUS | FX 9860G |
|----------------------------|---------------|-----------------|----------|

Brand : TEXAS INSTRUMENTS

| | |
|----------------------------|------------|
| Previously Approved Models | TI-83 Plus |
|----------------------------|------------|

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