

# Application for Approval of Calculators

5/6/2024

#### 1. Approvals for calculators to be used in the national examinations

- 1.1 Distributors/vendors seeking approval for new models of scientific or graphing calculators to be used in the national examinations or seeking extension of validity on existing models of scientific or graphing calculators that are expiring at the end of this year i.e. 2024 will need to submit their applications to Singapore Examinations and Assessment Board (SEAB) between 5 June and 5 August 2024. Applications received after 5 pm, 5 August 2024 will not be considered.
- 1.2 Each approval (new application or extension of validity) that is awarded to a specific model of calculator is **valid for only five (5) years**. The five-year period starts from the examination year, after the year of approval.
- 1.3 For **new** application, please submit the completed <u>FormSG</u> online and the required items below personally at our office (298 Jalan Bukit Ho Swee, Singapore 169565):

#### \*Required Items

- i) one set of the calculator and its packaging,
- ii) user manuals in English,
- iii) one photocopied image of the front and back of the calculator and its packaging,
- iv) any additional information to support the application e.g. Authorisation of Distribution.
- 1.4 For **extension of validity for calculators**, please submit **only** the completed <u>FormSG</u> and any additional information to support the application.
- 1.5 The following fees will apply, where applicable:

New Application		
	Scientific Calculator	Graphing Calculator
Application Fee	\$250.00	\$450.00
9% GST	\$ 22.50	\$ 40.50
Nett Amount Payable (inclusive of GST)	\$272.50	\$490.50

<u>Re-approval</u>		
	Scientific Calculator	Graphing Calculator
Administrative Fee	\$100.00	
9% GST	\$ 9.00	
Nett Amount Payable (inclusive of GST)	\$109.00	

#### 1.6 **Payment Method**:

Via Paynow or Credit Card. All payments made are non-refundable.

1.7 Distributors/vendors will be informed of the outcome of their 2024 applications by **29 November 2024**.

#### 2. Criteria for Evaluation of Calculators submitted

#### 2.1 General Criteria for Evaluation

#### 2.1.1 The calculator must:

- i) be silent, with a visual display only.
- ii) have the four arithmetic operations (+, -, ×, ÷) including the order of operations and use of brackets.
- iii) have a fractional function which retains the fraction in the form 'a/b' and 'a b/c'.
- iv) have the square root ( $\checkmark$ ) and cube root ( $^{3}\checkmark$ ) functions.
- v) be able to give the value of Pi  $(\pi)$ .

#### 2.1.2 The calculator must not have:

- i) 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.
- ii) wireless communication capability with other machines, e.g. infra-red communication capability.
- iii) any capability for capturing, storing and displaying digital and verbal information.

#### 2.2 Additional Criteria for Scientific Calculators

#### 2.2.1 The calculator must not:

- i) be programmable.
- ii) have any permanent features of a programmed kind, e.g. numerical integration calculations; numerical derivative calculations; matrix calculations; formula memory; table function; irrational number form.
- iii) be able to display graphical representation of functions or data, e.g. calculators with data banks or graphic displays.

#### 2.3 Additional Criteria for Graphing Calculators

- i) The calculator must have an option to clear all memory and be reset to factory setting.
- ii) The calculator must not have built-in symbolic algebra manipulations, symbolic differentiation and integration.

# 3. Obligations of vendors for the approval of calculators for use in National Examinations

#### 3.1 Approval given is subjected to the following conditions:

- i) no modification is to be made to the approved calculator and/or its packaging;
- ii) no formulae or instruction is to be printed on any part of the approved calculator;
- iii) the approved calculators can be easily purchased in shops in Singapore;
- iv) not to represent, hold out or market any other calculator model(s) as being identical with or similar to the above-mentioned calculator, (and vice-versa);
- v) contact information (phone and postal address) given to SEAB must be up to date. Vendor must respond to any queries from SEAB within two weeks;
- vi) vendor does not inform public of the approval before SEAB has permitted the vendor to do so; and
- vii) vendor is to inform SEAB of the calculators that are out of production so that an updated list of approved calculators can be maintained.

## 4. Withdrawal of Approval

4.1 Failure to comply with the above-mentioned obligations may result in the withdrawal of the approval. SEAB reserves the right to withdraw the approval if there is a need to do so due to a change in the policy, syllabus or examination format.

## 5. Contact Details and submission of Required Items

5.1 Please contact Mr Lim Yuxuan at <a href="mailto:lim\_yuxuan@seab.gov.sg">lim\_yuxuan@seab.gov.sg</a> and Ms Haslindah Atan at <a href="mailto:haslindah\_atan@seab.gov.sg">haslindah\_atan@seab.gov.sg</a> to submit the Required Items (stated under Para 1.3) or if there are further enquiries.