

## B. [In-Person Exams Only] Guidelines for Calculators

### B.1. Overview

If you do not know whether your calculator is programmable or non-programmable, then check out the following guide. *You are responsible for ensuring that your calculator is appropriate.*

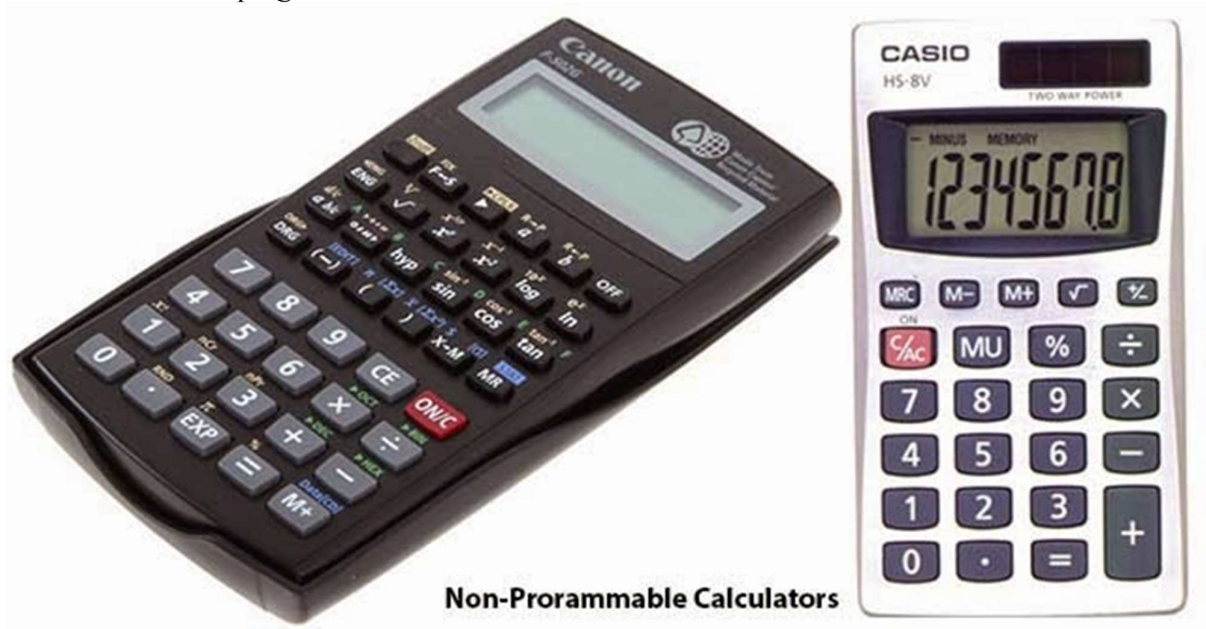
The examination invigilator will check your calculator during the examination. If your calculator is programmable, then it will be confiscated from you and you will be reported by the invigilator for unauthorised use of materials.

If you are unsure about your calculator, then ask the invigilator *before* the start of the examination. It may be possible to provide you with an alternative calculator if an element of doubt exists.

The main difference between a programmable and non-programmable calculator is that there are no function buttons on the non-programmable calculator. Another difference that can be noticed is that on non-programmable calculators, there are no *matrix* or *vector* functions on display.

### B.2. Calculators that are *not* programmable.

This is what a non-programmable calculator looks like:

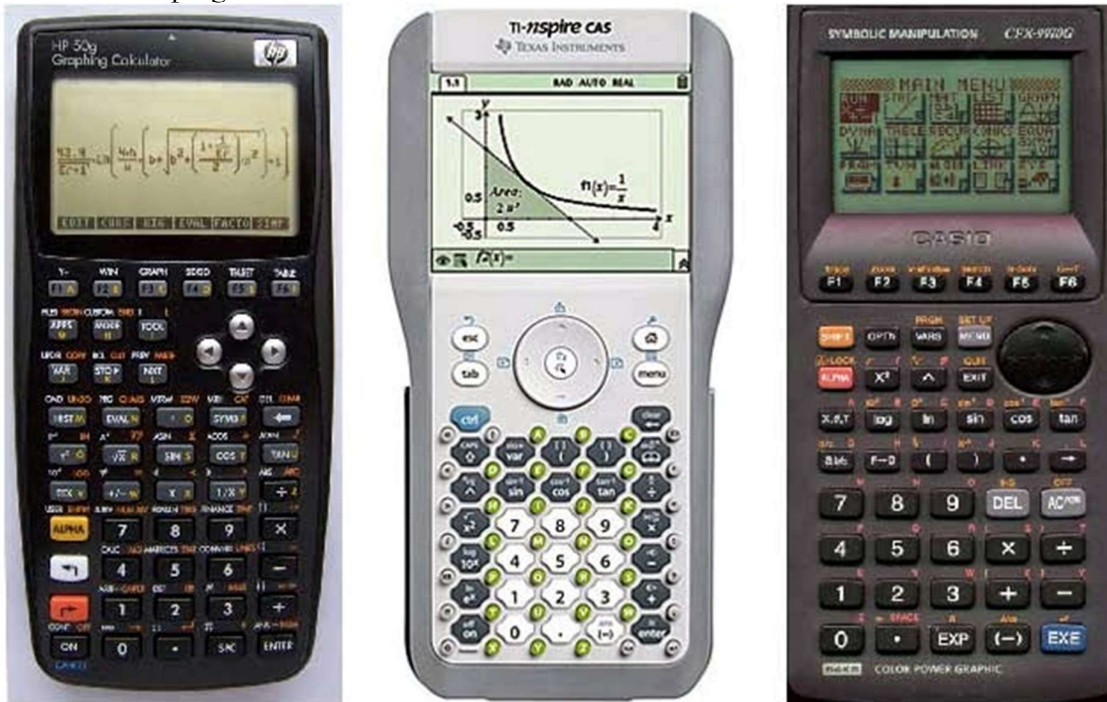


List of non-programmable calculators for some common brands:

<b>CASIO</b>		<b>SHARP</b>	<b>Other brands</b>	
fx-82 AU	fx-100 AU PLUS	EL-350MS	ABACUS	SX-II MATRIX
fx-82 AU PLUS	fx-100 D	EL-506H	CANON	F717SGA
fx-82 AU PLUS II	fx-100 S	EL-509L		F720
fx-82 D	fx-115 S	EL-509R		F720i
fx-82 ES	fx-115 WA	EL-509V	CEBAR	CD-402
fx-82 ES PLUS	fx-122 S	EL-509VM	CITIZEN	SR-135
fx-82 L	fx-220	EL-509W		SR-260
fx-82 LB	fx-220 PLUS	EL-509WS		SR-270
fx-82 MS	fx-270 MS	EL-509X	HEWLETT PACKARD	HP 8S
fx-82 NASER	fx-270 W PLUS	EL-510R		HP 9S
fx-82 PLUS	fx-300 ES	EL-520VA		HP 10S
fx-82 SX	fx-300 MS	EL-520WG		HP 10S+
fx-82 SUPER	fx-300 W	EL-531GH		HP 300S
fx-82 TL	fx-350 ES	EL-531HA	INSYSTEM	IN-82SC
fx-83 ES	fx-350 ES PLUS	EL-531LH	JASTEK	JasCS1
fx-83 ES PLUS	fx-350 HB	EL-531RH	KENKO	KK 82-TL
fx-83 GT PLUS	fx-350 MS	EL-531V		KK 87-MS
fx-83 GTX	fx-350 TL	EL-531VH		KK 350-TL
fx-83 MS	fx-550	EL-531W	KLT	FG-82BL
fx-83 WA	fx-550 S	EL-531WH	OFFICE ONE	720 3000
fx-85 ES	fx-570 AD	EL-531XH	RADIOSHACK	EC-4032
fx-85 ES PLUS	fx-570 S	EL-533V	RSB	FB-350MS
fx-85 GT	fx-580	EL-533X	SCHOLAR	DS-82MS
fx-85 GT PLUS	fx-820 MS	EL-546VA		KD-350MS
fx-85 GTX	fx-901	EL-W531	TANDY	EC-4032
fx-85 MS	fx-911 W	EL-W531G	TEXAS INSTRUMENTS	TI 30ECO RS
fx-85 SA	fx-911 WA	EL-W531H		TI 30SLR
fx-85 W	fx-911 Z	EL-W531HA		TI 30X IIB
fx-85 WA	fx-991	EL-W531HAB		TI 30X IIS
fx-92	fx-991 WA	EL-W531XH		TI 30XA
fx-95 MS	fx-992 S	EL-W532XH		TI 30XB Multiview
fx-96 SG PLUS				TI 34 Multiview
fx-100	HL4			TI 36X Solar
fx-100 AU	X INNUO FN-350TL		TI 40 College II	
			TEXET	Albert2 (TX-842) Albert3 (TX-890) Albert5 (TX-895) fx1000
			UBT	FA-83W

### B.3. Calculators that are programmable.

This is what a programmable calculator looks like:



**Programmable Calculators**

These calculator runs on a Computer Algebra System (CAS), which helps to make certain difficult algebraic functions automatic and less tedious. These calculators also have graphing capabilities.

A calculator with graphing capabilities is likely programmable. The easy way to tell if a calculator has graphing capabilities is if it has a larger screen than would be found on a scientific calculator.

#### **Features of programmable calculators:**

1. These calculators are capable of storing text or alphanumeric data input by a user.
2. These calculators are capable of storing, manipulating, or graphing functions entered in symbolic form.
3. These programmable calculators are capable of performing for operations such as differentiation, definite integration, algebraic expressions, binomial expansion, symbolic differentiation and the solution to system of equations.
4. These calculators are capable of external communication or Internet connectivity.
5. These calculators display a matrix and vector function key.
6. These calculators allow use of the full alphabet from A-Z.
7. These calculators tend to be bulky and heavy in comparison to non-programmable calculators.