QMUL School of Mathematical Sciences 2023/24 Examination Guidelines

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1. Formats of Final Exams

The overwhelming majority of final exams for the 2023/24 academic year be held in-person on campus. Only a relatively small number of modules will still hold online final exams.

This year, all exams will be held over a timetabled 3-hour period (*note: this is in contrast to the previous schedules, which mainly consisted of 4 hours and 3 hours slots, with various formats*). More specifically:

- Level 4-7 in-person exams: You will have 3 hours to complete and submit your exam solutions.
- Level 4-7 online quiz exams: You will have 3 hours to complete and submit your exam solutions.
- Level 4-7 online exams with some handwritten component: You will have 3 hours to complete your exam, plus 30 minutes to scan and submit your solutions.

All the exams are designed to be completed comfortably by the set deadline.

Irrespective of the format (in-person or online) you must complete and submit your solutions by the set deadline. Notice that late submissions will not be accepted for any reason and under any circumstance. Late submissions will score a zero.

Additional information on the various exam formats are below. For details pertaining to a particular module, please contact the module lecturer.

1.1. In-Person Paper Exams

These are invigilated exams that will be held in a designated room on campus. Please notice that some exams are held in parallel in different rooms, so make sure to check your exam timetable in advance and to enter the correct exam room as indicated. The exam itself will be in paper form, and you will write your solutions either on the exam paper itself or in a separate answer booklet (depending on the module).

• Make sure to arrive at the exam room on time. *If you arrive more than 30 minutes after the start of an exam, then you will not be permitted to enter the exam room.*

Regarding resources allowed for the exam:

- Level 4-5 and Level 7 exams: These exams will be closed-book, and you will not be allowed to bring any notes or other resources into the exam room.
- Level 6 exams: These exams will be partially open-book. In particular, you will be able to bring in three A4 sheets of paper (front and back, 6 sides in total) as your own personal notes for the exam.
- Some exam papers will have a formula sheet that is included at the end of the paper itself. Any such formula sheet does not count towards the three A4 sheets limit.

No additional resources beyond the above (e.g. mobile phones, hidden material or writing) will be allowed, and any that are found will constitute an assessment offence.

Whether calculators are permitted for the exam will depend on the specific module:

- If calculators are prohibited, then using one will constitute an assessment offence.
- Otherwise, you should bring a **non-programmable calculator** with you to the examination room. (See Appendix B for details on which calculators are allowed.)

You should make sure that any writing that should be marked, including all rough work, are on your exam paper or answer booklet (depending on the module).

- If you run out of space in the main answer booklet, then let the invigilator know, and they will provide a supplementary answer booklet. *Make sure that all booklets that are used are available for collection by an invigilator at the end of the assessment.*
- Do remember to take spare pencils and pens to the exam.

1.2. Online Quiz Exams

These exams are set up as standard quizzes on QMPlus, which you have likely encountered in your coursework. These contain the usual question types supported by QMPlus (e.g. multiple choice):

- Quiz questions are answered within the quiz itself and hence do not require file submissions.
- You can do the quiz questions in any order. In particular, you are free to go back to earlier problems that you have already worked.

Some QMPlus quiz exams may be **hybrid**, in that they also contain (normally one, sometimes more than one) written components. For these written components, solutions must be submitted either as a handwritten PDF document or as text within the quiz (depending on the module). In the former case, the basic rules of Section 1.1 apply:

- *The submission <u>must</u> be handwritten* (on paper or tablet), not typed.
- *The submission <u>must</u> be as a single PDF file*. (See Appendix A for instructions.)
- It is recommended you also e-mail any PDF files to <u>maths@qmul.ac.uk</u> by the set deadline and from your QMUL email account, to safeguard against technical issues. (See Section 2 for submission issues.)

If your online quiz exam has a handwritten component, you will have to complete your exam within the allocated **3 hours** and you will have an additional **30 minutes** to scan and submit your handwritten solutions. Please consider that the additional **30 minutes** to scan and submit include the time needed to upload your solutions to QMPlus. Uploads from a domestic Internet connection can be slow, so you are encouraged to start uploading your solutions as early as possible. Notice that late submissions will not be accepted for any reason and under any circumstance, and that generic IT issues do not constitute sufficient ground for EC claims (see also Section 2.4). Late submissions will score a zero.

1.3. Online Handwritten Exam

These are online exams for which you will submit handwritten solutions (as a PDF file). These will be contained within a QMPlus quiz, with a single question containing both the exam document and the place where you submit your solution.

The solutions that you submit must be handwritten. In particular:

- The most common method is to submit a scan of your handwritten answers as a PDF file.
- You are allowed to submit work that was handwritten onto a tablet (such as an iPad).
- On the other hand, *typed solutions are not allowed and may be rejected or penalised* (unless they are exceptionally allowed under exam access arrangements).

Your submission must be as a single PDF file. In particular:

- Other formats besides PDF will <u>not</u> be accepted.
- You will <u>not</u> be able to submit multiple files.

• See Section A for instructions for scanning your handwritten work into a single PDF file.

Upon completing the exam, a copy of your exam solutions (as a single PDF file) should be sent to <u>maths@qmul.ac.uk</u> from your QMUL email account, in a single email, with your student ID and the module code in the subject line. This is mainly used as a safeguard against technical issues. Please note that sending such email to <u>maths@qmul.ac.uk</u> does NOT constitute a submission *per-se* as the material submitted through QMPlus is the only material that will be considered and marked. In any case and under all circumstances emails sent to <u>maths@qmul.ac.uk</u> must be sent by the set exam deadline. Any later email, or any email sent from a non-QMUL email account, will not be considered (See Section 2.3 for further details).

You will have to complete your exam within the allocated **3 hours** and you will have an additional **30 minutes** to scan and submit your handwritten solutions. Please consider that the additional **30 minutes** to scan and submit include the time needed to upload your solutions to QMPlus. Uploads from a domestic Internet connection can be slow, so you are encouraged to start uploading your solutions as early as possible. Notice that late submissions will not be accepted for any reason and under any circumstance, and that generic IT issues do not constitute sufficient ground for EC claims (see also Section 2.4). Late submissions will score a zero.

1.4. Online External Exam

For a few modules, the exams are delivered online through an outside system, e.g., MyLab or WebWork. In general, the question types are broadly similar to those in QMPlus quizzes (see Section 1.2). Please contact your module lecturer for additional details on any of these exams.

1.5. In-Person IT Lab Exam

These are invigilated exams that will be held in a designated IT lab on campus. The exam itself will be online, given either as a QMPlus quiz (as in Section 1.2) or via an external system (as in Section 1.4). However, *you will only be able to access and take the exam on a computer in this IT lab*.

• Make sure to arrive at the exam room on time. *If you arrive more than 30 minutes after the start of an exam, then you will not be permitted to enter the exam room.*

Regarding resources allowed for the exam:

- You will not be able to bring in any outside notes for the exam.
- The extent that the exam is open book will depend on the specific module. Any resources that are allowed will be accessible online through your IT lab computer.
 - In particular, calculators will not be allowed in the IT lab.

Note: Chat rooms, forums, mobile phones, and other communication tools are strictly prohibited.

In short, you should complete the exam in the same manner as you would an online exam, with the only difference begin that you will be in an invigilated IT lab.

2. Submission of Solutions

This section provides some details on submitting solutions to your final exams.

2.1. Exam Time Limit

Each exam will be held over a **3-hour** period:

- You will need to complete the exam and submit your solutions within this time window.
- Online exams with a handwritten component will allow additional 30 minutes to scan and submit the solution.

All the exams are set so they can be completed comfortably within the provided time period, and their structure and format is in line with past exams for the same module.

• Any students having exam access arrangements will receive additional time in their exam, as required by their needs, and will sit the exam in a separate room.

In-person exams: Time limits for exams will be enforced by invigilators. *Once the end of the exam time is announced, you must stop writing immediately.*

Online exams: Online exams in the format of QMPlus quiz or held on an external system will close at the end of the **3 hour** period, while online exams with a handwritten component will close at the end of **3 hours 30 minutes**, where the last 30 minutes are intended to be used to scan and submit your solutions. *After the deadline has expired, you will not be able to access the exam.*

- The exam period includes the time needed to upload your solutions. Thus, please ensure that *any handwritten parts are fully uploaded and submitted <u>before</u> the deadline.*
 - As before, all your work is automatically submitted at the deadline. However, you must still fully upload any files within the time limit for it to be included in your submission.
 - *No submissions will be accepted once the exam closes.* To be safe, *please give yourself plenty of time to upload your submissions*, so you finish within the allotted time limit.
- You will not receive extra time if you begin your exam late, so make sure to start on time.

Examiners will not be answering queries about the exam at any point in the exam period.

• If you have a query about the paper (e.g. you think there is a mistake), then you should make a note of this in your solutions and answer as best you can. The examiner will then take this into account when marking.

2.2 [Online Exams Only] Uploading Your Solutions

This part applies only to online exams.

Each handwritten part must be uploaded as a single PDF file.

- See Sections 1.2 and 1.3 for additional details.
- Handwritten exams will always only have one such part. In addition, most hybrid quizzes will only have one handwritten part as well.

To upload a PDF file for a handwritten part, you can do one of the following:

- Drag-and-drop the file into the upload window.
- Click to choose the file using the file picker.

You should then see your file in the upload window. By right-clicking on the file, you can download it again to check that it is the correct one, and you can delete and replace it if necessary.

When you have finished all the questions, you can submit by clicking "*Finish attempt*...", followed by "*Submit all and finish*". (Note: Even if you do not do explicitly do these steps, your attempt will still be automatically submitted at the deadline.)

- You will only have <u>one</u> opportunity to submit your assessment.
- You will not have the chance to alter your submission afterwards, so make sure everything is in order before you click to submit. Make sure you give yourself plenty of time to organise and submit your solutions.

Immediately after submitting, you should be able to see your attempt for a few minutes:

- In particular, you can see the responses you gave to all the exam questions.
- For handwritten parts, you can also see any PDF files that you uploaded. Here, you should *check again that you have uploaded the correct file(s)*.

If you notice a *technical* error at this point (e.g. corrupted or wrong file uploaded), then you should immediately send the correct version to <u>maths@qmul.ac.uk</u>–we can take this into account, provided your e-mail (with the PDF file) is received *before the deadline* (see Section 2.3).

• There will be no additional grace period for e-mail submissions, so please make sure your email submission is received prior to the deadline!

The combination of timed exams and single PDF submissions, along with the high-stakes nature of final exams, gives cause for some understandable concerns. Please note the following:

- All the exams are set so they can be completed comfortably within the provided time period, and their structure and format is in line with past exams for the same module. The extra 30 minutes at the end of the exam period in online exams with handwritten components are meant to be used **exclusively for scanning and submitting your solution.**
- There are relatively straightforward methods for scanning your handwritten solutions into a single PDF file. You are warmly encouraged to install and test any scanning software you plan to use **well before the exam.** See Appendix A for some additional details.
- Issues arising from *unexpected* tech-related incidents (e.g. QMPlus errors) *may* be taken into consideration **exclusively if the problem is known to be due to QMPlus, and has been verified and confirmed by the QMUL IT Services team. Any other technical issue (e.g., interruption of your Internet connection, laptop crashing, etc.) are NOT considered excusable technical issues, in accordance with Academic Regulations.** See Sections 2.3 and 2.4 below for additional details.

2.3. [Online Exams Only] Submission Deadlines and Backup

This part applies only to online exams with handwritten submissions.

For handwritten exams (see Section 1.3), you should e-mail a copy of your handwritten solutions to maths@qmul.ac.uk.

- The file should be in the same format as you would submit to QMPlus (a PDF file).
- In addition, the subject line should contain your student ID and the module code.

The above serves as a backup copy of your submission, in case of any technical issues.

You can send to <u>maths@qmul.ac.uk</u> backups of any handwritten parts in hybrid exams (see Section 1.2), however this is optional.

• Again, your backup file must be in the same format as you would submit to QMPlus.

• In addition, the subject line should contain your student ID and the module code.

The above serves as a backup copy of your submission, in case of any technical issues.

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Backup submissions must be received by <u>maths@qmul.ac.uk</u> before the end of the exam period.

- Any backup files received after the deadline will not be accepted.
- Do not send any backup submissions to the module organiser; only <u>maths@qmul.ac.uk</u> will accept such backup submissions.
- Make sure the file you send contains your full submission. You will not be able to "mix and match" parts of solutions from your QMPlus and e-mail submissions.

2.4. Extenuating Circumstances (ECs)

Some general points about extenuating circumstances (ECs) are as follows:

- The process of applying for ECs is the same as before, for coursework and midterm tests.
- Make sure that your claims are submitted by the EC deadline.
- If an EC is granted, then you will have the opportunity to take the exam as a first sit during the late summer resit period in August.
- The Education Services Team have sent information about ECs regularly, but if you have additional questions, then you should contact <u>maths@qmul.ac.uk</u>.
- Please consider that travel delays are not normally considered sufficient ground for EC claims. Students are responsible of making appropriate travel arrangements on the day of the exam, and of reaching the exam room in time.
- In general, personal IT-related issues are not acceptable as a ground for EC claims, as per Academic Regulations.

Online exams only: IT-related issues that are considered unexpected and that are due to the QMUL IT infrastructure will be taken into account collectively for an entire cohort sitting an exam. However, having to defer an exam because of tech-related issues is still unpleasant, and the School and the College will put in place all the required measures to ensure that Online exams will not be disrupted by IT issues.

In general, IT-related issues due to QMPlus which can interfere with the upload of your solution might be taken into account only in the case that such issues have been verified and confirmed by the QMUL IT Services team. Any other kind of technical issues (e.g., interruption of your Internet connection, laptop crashing, loss of files, etc.) are NOT considered excusable technical issues, in accordance to QMUL Academic Regulations. You are responsible for making sure that your Internet connection works properly for the duration of the exam, that your laptop has a reliable source of power for the intire duration of the exam, that you saved the correct version of your files, and so forth. EC Claims based on "IT Issues" are not excusable and will in general be rejected, in accordance with current Academic Regulations.

3. Academic Offences

In the interests of academic standards and fairness to all students, it is important that your work is entirely your own. The following sections provide further detail on what is allowed for exams, and what constitutes academic misconduct.

3.1. In-Person Exams

Here, the regulations are simple–*if you are found by an invigilator to be using any resource beyond what is allowed in the exam room, then this will be considered an academic offence.*

For **paper exams** (see also Section 1.1):

- Level 4,5,7 exams will be closed book, and you will not be allowed to bring any notes.
- For level 6 exams, you will be able to bring in three A4 sheets of paper (front and back).
- Some exams will also require you to bring a non-programmable calculator (see Appendix B for details). See your module organiser for further information.
- *Keep in mind that hidden material and communication devices (e.g. mobile phones) are not allowed. Any use of these will be considered an academic offence.*

For **IT lab exams** (see also Section 1.5):

- What resources are allowed will differ depending on module, but any such resources will be accessed online through the IT lab computer.
- In particular, you will not be allowed to bring any paper notes or calculators to the exam.
- *Use of any communications tools* (e.g. mobile phones, chat rooms, forums) *in the IT lab will be considered an academic offence*.

3.2. Online Exams

All online exams are *open-book*, which means that:

- Lecture notes and other digital and printed resources from the module are allowed, including past courseworks and worked solutions.
- Textbooks are allowed.
- Internet sources are allowed, *as long as such websites do not refer to the exam questions themselves or their solutions.*

In addition, you may use calculators (of any type) or computer programs, such as Excel.

• For handwritten questions, you must show full working to demonstrate that you understand the solution. This should be part of your PDF submission.

On the other hand, it is an academic offence to ask for, to accept, or to offer help. You should not communicate with anyone else about the exam or the module contents for the entirety of the period in which the exam is available. This means that:

- You are not allowed to ask anyone else to answer questions for you or even to give you a hint; you must refuse such help if it is offered.
- You are not allowed to discuss the exam or any related topics with other students (either in person or via online chat groups such as *WhatsApp* and *Discord*).
- You are not allowed to share or post exam questions on online forums (such as *chegg.com* or *bartleby.com*), or to request solutions via paid services.

• You are not allowed to copy or otherwise make use of any solutions to exam questions that are found on any online forum or via paid services.

The above should not be considered an exhaustive list of offences. If in doubt, please ask for further clarification.

3.3 Penalties

For details on academic misconduct and resulting penalties, see: <u>http://www.arcs.qmul.ac.uk/media/arcs/docs/students/appeals-office/assessment-offences/QMUL-Assessment-Offence-penalties-guidance.pdf</u>.

A. [Online Exams Only] Instructions for Single PDF Submissions

This section applies only to online exams with handwritten submissions.

The following subsections describe a number of methods for scanning your handwritten work into a single PDF file. While these steps are fairly straightforward, *it is important that you test the method you plan to use prior to your exams*!

(There are several other methods beyond what is described below. Of course, you are free to use any method that works for you.)

A.1. Office Lens

Microsoft Office Lens is an app, available for *iOS* (via the *Apple Store*) and *Android* (via the *Google Play Store*) systems, that can be used to photograph and scan documents into a single PDF file.

For more detailed instructions, you can also consult the following links:

- [Article] "Scanning to PDF" (Somerville College, University of Oxford)
 <u>https://blogs.some.ox.ac.uk/ict/scanning-to-pdf/</u>
- [Article] "How to scan printed documents with the free Microsoft Office Lens app" (TechRepublic)
 <u>https://www.techrepublic.com/article/how-to-scan-printed-documents-with-the-free-microsoft-office-lens-app/</u>
- [Video] "Producing a multiple page PDF in Office Lens" (Mr Smith's Physics online)
 <u>https://www.youtube.com/watch?v=H7ET9k01-Zc</u>
 - [Video] "Scanning tutorial: scan a PDF from your phone with Office Lens" (RGB Mathematics)
 <u>https://www.youtube.com/watch?v=Z7ztz3y8rMQ</u>

(Keep in mind that different versions of the *Microsoft Office Lens* app will work slightly differently, so the process for your device may be a bit different from what you find in the above.)

A.2. iOS Notes

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The basic *Notes* app that can be found on mobile devices running *iOS* (e.g. *iPhone*, *iPad*) can also be used to scan documents to a PDF file.

For more detailed instructions, you can also consult the following links:

- [Article] "How to use the document scanner in the Notes app on iPhone and iPad" (iMore)
 <u>https://www.imore.com/how-use-document-scanner-iphone-and-ipad</u>
- [Article] "How to scan documents and make PDFs using Notes on your iPhone or iPad" (Macworld)
 <u>https://www.macworld.com/article/3390539/how-to-scan-documents-and-make-pdfs-using-notes-on-your-iphone-or-ipad.html</u>
- [Video] "How to scan documents and make PDFs with iPhone or iPad" (TechBoomers)
 <u>https://www.youtube.com/watch?v=yEQRKnu4yLo</u>
- [Video] "How to Scan Documents as PDF in Notes App iPAD" (David Williams)
 - https://www.youtube.com/watch?v=UKI1a8GIOcA

(Keep in mind that different versions of the *Notes* app will work slightly differently, so the process for your device may be a bit different from what you find in the above.)

A.3. Tablet handwriting software

If you are using a tablet to produce handwritten solutions, then this should be fairly straightforward. All the standard note-taking apps (e.g. *Microsoft OneNote, Notability, GoodNotes, iOS Notes*) will allow you to export your handwritten document directly into a PDF file.

For details, see instructions for your favourite note-taking app.

A.4. Using laptops or desktop computers

Of course, if you have access to a digital scanner, then you can use that to scan your documents.

You could also photograph documents using your webcam, though this can be a bit awkward.

• For example, the web app "Create PDFs with a camera" from *PDF24* allows you to do this online from your web browser; see <u>https://tools.pdf24.org/en/scan-pdf</u>.

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:



Non-exhaustive list of non-programmable calculators for some common brands:

CASIO		SHARP	Other brands	
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	HP 8S
fx-82 NASER	fx-270 W PLUS	EL-510R	PACKARD	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
fx-85 ES	fx-570 AD	EL-531XH		3000
fx-85 ES PLUS	fx-570 S	EL-533V	RADIOSHACK	EC-4032
fx-85 GT	fx-580	EL-533X	RSB	FB-350MS
fx-85 GT PLUS	fx-820 MS	EL-546VA	SCHOLAR	DS-82MS
fx-85 GTX	fx-901	EL-W531		KD-350MS
fx-85 MS	fx-911 W	EL-W531G	TANDY	EC-4032
fx-85 SA	fx-911 WA	EL-W531H	TEXAS	TI 30ECO RS
fx-85 W	fx-911 Z	EL-W531HA	INSTRUMENTS	TI 30SLR
fx-85 WA	fx-991	EL-W531HAB		TI 30X IIB
fx-92	fx-991 WA	EL-W531XH		TI 30X IIS
fx-95 MS	fx-992 S	EL-W532XH		TI 30XA
fx-96 SG PLUS				TI 30XB Multiview
fx-100	HL4			TI 34 Multiview
fx-100 AU	X INNUO FN-350TL			TI 36X Solar
				TI 40 College II
			TEXET	Albert2 (TX-842)
				Albert3 (TX-890)
				Albert5 (TX-895)
				fx1000
			UBT	FA-83W

B.3. Calculators that are programmable.

TI-MSpire CAS INVERSION REALIZED ATTON CFX-9900G IP 50g Combing Calcula 40 111 RAD AUTO REAL f1(x)= 0.5 RASID · · · · F3 F4 F6 F6 In sin cos F-D () 9 8 4 5 6 3 2 0 EXP (-) EXE

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.

