

The **regulations for the use of calculators in examinations** can be found in the Joint Council for Qualifications (JCQ) booklet "**Instructions for conducting examinations (1 September 2014 to 31 August 2015)**", which in turn can be found on the JCQ website at www.jcq.org.uk.

Using calculators

For question papers where the use of calculators is allowed, candidates are responsible for making sure that their calculators meet the awarding bodies' regulations.

The instructions set out in this section apply to all examinations unless stated otherwise in the appropriate awarding body's subject-specific instructions.

Candidates should be told these regulations beforehand.

Calculators must be:

- of a size suitable for use on the desk;
- either battery or solar powered;
- free of lids, cases or covers.

Calculators must not:

- be designed or adapted to offer any of these facilities:
 - language translators;
 - symbolic algebra manipulation;
 - symbolic differentiation or integration;
 - communication with other machines or the internet.
- be borrowed from another candidate during an examination for any reason (an invigilator may give a candidate a replacement calculator)
- have retrievable information stored in them - this includes:
 - databanks;
 - dictionaries;
 - mathematical formulas;
 - text.

The candidate is responsible for the following:

- the calculator's power supply;
- the calculator's working condition.

Advice:* An invigilator may give a candidate a replacement calculator.

Where access is permitted to a calculator for part of an examination, it will normally be acceptable for candidates to place their calculators on the floor under their desks in sight of the invigilator(s) for the non-calculator portion of the exam.

Note that the regulations above say that "calculators should not have retrievable information in them - this includes... mathematical formulas and text." Thus many models will need to have their memory cleared before they can be taken into the examination. In the case of the Texas TI-84, for example, they have a built in press-to-test feature designed specifically for this purpose. If you or another teacher enable the feature before the exam the student won't be able to disable it, without connecting to a second handheld, or computer. You can find more information at http://education.ti.com/sites/US/downloads/pdf/press_to_test_ti84p.pdf.

The crucial **prohibitions** above are to do with calculators which can perform **symbolic algebra manipulation and/or symbolic differentiation or integration**; these calculators are still quite expensive and the ones I know about include:

Casio: Algebra FX2.0, Algebra FX2.0 PLUS, ClassPad 300 (all models)
Hewlett Packard: HP 40G, HP 40GS, HP 48G, HP 48G II, HP 49G, HP 49G PLUS, HP 50G, HP Prime
Texas Instruments: TI-89, TI-89 (Titanium), TI-92, TI-92 PLUS, Voyage 200, TI-*n*spire CAS

This isn't an official list, it's based on what I know of these calculators and my interpretation of the JCQ rules. There is no list of calculators which *can* be used, though it can probably be assumed that any calculator that is not on the list above is permissible. This includes graphical calculators, those which can perform numerical differentiation and integration, manipulate matrices, change bases, etc.

Wherever possible we try to set questions which obviates any advantage a student may obtain from such calculators - a basic scientific calculator should be considered sufficient for the demands of the AS and A level papers.

Note also that these regulations apply to GCE, GCSE and International GCSE Mathematics examinations.

I hope you find this helpful,

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