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Regulars

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Testing times

Now that the summer weather has finally arrived and the sun streams into the PASS Maths offices it is inevitable that we turn our attention to exams and think of all the revision that is so hard to do when the rest of the world is outside enjoying itself.

There's only so much you can do with your text books, notes and old exercise books. Sometimes what you really need is some real practice at being *tested*. PASS Maths was therefore eager to find out about the new online tests featured on the BBC *GCSE Bitesize Revision* web site.

As you might expect from a site published by the BBC, the graphics and general layout of the site is clear and easy to use. So is it any use?

Firstly, the tests use a simple form-based page to obtain answers to a fixed set of questions, 5–10 per sub-topic. This format allows a wide range of readers to use the tests as it does not require sophisticated java-enabled browsers.

The theme of simplicity is, unfortunately, carried through to the mechanism used to mark the answers too. Mathematically correct, but unconventional answers are marked wrong. For example, expanding $a(b+c)$ to $ab+ca$ is not allowed. In some ways, if you know the system is *consistently* dumb then perhaps this isn't too restrictive. Anyway, what did we expect for nothing?

Trying to be clever about assessing algebraic and numeric input takes years of development. There's a tendency to think that just because we can put a full algebraic processing system inside a pocket calculator that assessing student input must be trivial. Well it's not.

Ten years ago, if you had asked us which subject was more likely to yield to automated assessment first, maths or history, we would have probably all said maths. After all, computers can "understand" maths. The syntax they use to represent it may leave something to be desired but provided we can communicate with them we feel confident that they "know" what we mean by x^2 .

And yet, researchers in America are suggesting that they have built an automated system for marking essays which can perform at least as consistently as human markers. The system uses elaborate pattern-matching

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techniques similar to those in the *Excite* Internet search engine to imitate the human markers that train it.

People sometimes criticise students of mathematics for simply "turning the handle" of their calculators in exams and not developing a true understanding of the concepts. However, perhaps in future years those students will be able to turn the tables on their critics. After all, if a computer can mark a history essay without even understanding what "history" means can we be sure the student is any better?

For more information see:

- [GCSE Bitesize Revision](#) – BCC Education.
- [Excite](#)



Plus is part of the family of activities in the Millennium Mathematics Project, which also includes the [NRICH](#) and [MOTIVATE](#) sites.