

The New HP Prime: Full Review

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HP Prime will be launched in September ready for the new school year. HP Prime's lead designer is GT Springer. GT has been central to most of the major innovations in graphing calculator design and he has put all of that experience into a genuinely wonderful new device. The HP Prime looks very smart indeed, with a brushed aluminium front and a smooth bright screen. The colour is bright and very sharp with extremely clear detail and you just have to keep reminding yourself that it is a touch screen and that you can drag and move objects and navigate drop down menus. The touch is smooth and very accurate. It is very well made and feels sleek and smooth all round. It is about 300g which feel sufficiently heavy to be solid but easy to hold and it balances really nicely in two hands. You really feel you are holding a classy piece of kit. So, tech savvy young people will want one and schools will be proud to show off that they bought them. So, what does it do?

Wireless Connectivity

The biggest headline is: wireless connectivity. If you plug a small USB dongle (which you purchase separately) into the top of the PRIME, it will immediately be recognised on the teacher's computer in class. Files and settings can then be transferred wirelessly. (Only from PRIME to PC not from PRIME to PRIME). More than that, the PRIME screen can be shown on the teacher's screen. There will be class polling functions allowing the teacher to set a question from her computer and students to offer responses from their PRIMES with the results shown in table and chart form. Just like the polling systems many schools are getting which only do this. The critical point is that this is a plug-and-play system; no set up.

Software

The software is a massively up-rated version of the HP39gII so, anyone who has used an HP39gII will get started immediately. However, there are three new Apps which make a big difference. A mathematical spreadsheet, a dynamic geometry system and the advanced graphing app. Together these represent a major advance in providing a

space to explore mathematical ideas. A major new feature is the Computer Algebra System. There is no CAS/non-CAS option. A mathematical machine must speak algebra and this one does. There are two home screens; a CAS screen which deals with exact objects and the traditional home screen which deals with approximate objects. The Apps can use the last object from each of these screens and the choice is always there; CAS screen or Home screen. This recognition of the fundamental pure/applied, exact/approximate distinctions is central to an underlying philosophy which has the potential to transform the way we think about exploring mathematics. For me, this is the thing that will determine future research into maths education technology.

Exams

So could you use HP Prime in an exam? The machine includes a comprehensive menu driven exam mode. This allows a vast range of features to be turned on or off including the CAS. The system is password protected and the user is unable to use functions switched off. For school use, the teachers selects the settings they want e.g. turn off the CAS, creates a password and then beams this setting to all of the connected PRIMES, wirelessly. A series of bright LEDs light up in the same sequence while exam mode is engaged. It is immediately clear to the exam secretary that the machine has only those facilities allowed in exams.

I've always been a fan of calculators as a learning tool. I've said elsewhere that tablets are exciting, but you don't work and think in one space, you need different technological tools for different functions and the resilience of the calculator as a form factor is remarkable. It's a highly portable, personal thinking space. I am really excited about PRIME because it has all of the maths you could possibly want with an intuitive touch driven interface and wireless connectivity to support proper classroom dialogue in a package that everyone will want to own.

For further information, classroom materials and teacher support visit www.hpgraphingcalc.org