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Math in Your Dorm Room - from Calculus to Number Theory - with Sage. Preliminary report.

An ideal way to capitalize on a novel demo, interactive or otherwise, is to have students continue to explore with it in new directions as part of their homework assignment. Often this is done with problem-specific applets, but this is not comprehensive; on the other hand, asking students at institutions without a site license for a commercial program to go to one of the few copies in a remote computer lab is also not ideal. Here, we describe using the free mathematical software package Sage to take classroom demonstrations in the full range of math courses into the dorm room, via a use-anywhere web browser interface. We discuss student response to the sort of non-routine (even quite exploratory) assignments and labs this made possible, as well as to the technology itself. (Received September 16, 2008)