

ZMATH 2004b.01661

O'Sullivan, Bernie

Spreadsheets, graphing calculators and the line of best fit.

Spreadsheets Educ. 1, No. 1, 58-65 (2003).

The advent of the hand-held graphing calculator has produced its own mini revolution within the Mathematics classroom. The ability for students to now perform complex mathematical procedures quickly and accurately has pushed back the boundaries of content coverage that is possible within senior Mathematics courses in much the same way as the introduction of the scientific calculator did in the late 70's. There has been much quality debate and research into the best way to incorporate this new technology, and what balance should be reached between 'by hand' methods and hand-held technology. For a discussion on the incorporation of computer algebra systems (CAS), see Flynn et al. One technique that can now be done, almost mindlessly, is the line of best fit. Both the graphing calculator and the Excel spreadsheet produce models for collected data that appear to be very good fits, but upon closer scrutiny, are revealed to be quite poor. This article will examine one such case. I will couch the paper within the framework of a very good classroom investigation that will help generate students' understanding of the basic principles of curve fitting and will enable them to produce a very accurate model of collected data by combining the technology of the graphing calculator and the spreadsheet.

Classification: K44 R74 K84 U74

Keywords: curve fitting