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Morteza Shafii-Mousavi* (mshafii@iusb.edu), Mathematical Science, Indiana University South Bend, PO Box 7111, South Bend, IN 46634-7111, and Kochanowski Paul (pkochano@iusb.ed), School of Business & Economics, Indiana University South Bend, PO Box 7111, South Bend, IN 46634-7111. The Use of Spreadsheets to Illustrate Statistical and Mathematical Concepts.

In the Indiana University system, as well as many other schools, finite math is a prerequisite for most majors. Statisticians Moore, Peck, and Rossman articulate a set of goals for math prerequisites: including instilling an appreciation of the power of technology and developing skills necessary to use appropriate technology to solve problems, developing understanding, and exploring concepts. The paper describes the use of Excel spreadsheets in the teaching and learning of finite math concepts in the linked courses Mathematics in Action: Social and Industrial Problems and Introduction to Computing taught for business, liberal arts, science, nursing, and education students. The goal is to encourage an appreciation of math and promote writing as students see an immediate use for it in completing actual real-world projects. We emphasize learning and writing about math and the practice of computer technology applications through completion of actual industrial group projects. Through demonstration of concepts using Excel, we stress synergies between math, technology, and real-world applications. These emphasize the learning goals such as quantitative skill development, analytical and critical thinking, information technology, creative reasoning, and writing across the curriculum. (Received July 24, 2009)