A Contemporary Approach to Intermediate Algebra

A contemporary approach to intermediate algebra focuses on two major goals (1) developing problem-solving skills and (2) developing students to become effective learners. The primary medium for addressing these goals is to establish a problem solving process to solve realistic word problems and to emphasize “learning how to learn” mathematics. Homework exercises are presented in word problem format. Strong emphasis is placed on modeling word problems, interpreting solutions, interpreting charts and graphs, and questioning. The course is designed to prepare students for college algebra as well as for the mathematics students’ encounter in the social and biological sciences. The objective is to prepare students to integrate mathematics into their other courses and to engage them in mathematics that is critical to their being an informed citizen, not to force them into a calculus track. The recommended pedagogy is to “flip” the traditional lecture-homework pattern so that encountering and studying new material is central to homework assignments while class time is reserved for questioning, small group activities, and student presentations. (Received September 07, 2014)