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Designing College Algebra To Serve Its Clientele Effectively.

College Algebra is commonly designed and taught as a “precalculus” course. The principal mathematical requirements of the client departments are not inconsistent with that, but they differ in emphasis. Students who take College Algebra overwhelmingly go into majors where the primary mathematical requirement is modeling and the solution of equations. Students must be able to represent relationships between variables in words, tables, graphs, and equations. That is the modeling part, and they can do it effectively if they have an excellent facility with a limited range of functional types. Further, they must be able to answer questions using these models, for which the most common method is the solution of equations, which is really the main theme of algebra. Topics and assessment techniques for this “modeling-based” College Algebra course are discussed. (Received September 13, 2000)