Iowa Algebra Aptitude Test

The *Iowa Algebra Aptitude Test* (IAAT) was developed to help teachers and counselors make the most informed decision possible regarding the initial placement of students in the secondary mathematics curriculum. It is widely recognized that many students first experience frustration and even failure in first-year algebra courses. As a result, many end up losing interest in mathematics and take only those high school math courses absolutely required. Perhaps this could be avoided if students were placed more accurately in accord with their abilities. Add to this concern the increasing importance of proficiency in mathematics in today's technological society, and it is clearly very important for students and society alike that as many students as possible pursue mathematical knowledge in upper level secondary mathematics courses. Thus, it is essential that students not be put in mathematics courses for which they are not ready. It is just as important that students not be placed in mathematics courses in which they will be unchallenged and bored. In either situation the outcome is the same: students drop out of the mathematics curriculum often before being given a fair chance to evaluate their interest and aptitude in this area.

Any decision regarding "readiness" is extremely difficult. Clearly, in making such a decision regarding mathematics course placement, the recommendations of former teachers must be given greatest weight. However, these cannot usually be the only determining factor. Typically a group of junior high or middle school students will have had many different teachers. It is unlikely that all of these teachers share common standards by which to judge students' mathematical abilities. Another obvious problem arises when new students move into a school district. It is very difficult to judge solely based on teacher recommendations. To address these problems, some schools have elected to use scores from standardized achievement batteries to aid in placing students. Usually these tests have not been validated for this purpose, and it is therefore not wise to use them in this manner. Other schools have created their own local screening tests. If such instruments are to be used with confidence, they must be held to the same level of scrutiny as standardized instruments regarding evidence of validity and precision of measurement.

Given that there is typically a desire for some objective evidence to augment teacher recommendations, there is an obvious need for a standardized measure specifically constructed to serve as an indicator of mathematics aptitude. It is precisely for this purpose that the IAAT is designed.

The latest edition of the IAAT was designed to align with the National Council of Teachers of Mathematics *Curriculum and Evaluation Standards for School Mathematics*. The primary author of the IAAT is Professor Harold Schoen, a member of the writing team for the NCTM *Standards.*

The IAAT is a short and reliable assessment instrument. Testing time is 36 minutes, and total administration time is 50 minutes.