

Preface

The National Council of Teachers of Mathematics asked our task force to compile a collection of assessment items that support *Principles and Standards for School Mathematics* (NCTM 2000). This book, one of four in the series, focuses on classroom assessment in grades 9–12. The other three books, for teachers in prekindergarten–grade 2, grades 3–5, and grades 6–8, also contain practical examples and samples of student work aligned with the NCTM Standards. Each of the books contains multiple-choice, short-response, and extended-response questions designed to help classroom teachers identify problems specifically related to certain of the NCTM Standards and Expectations. Matrices with this information are contained in the appendix.

NCTM's *Assessment Standards for School Mathematics* (1992) tells us that classroom assessment should—

- provide a rich variety of mathematical topics and problem situations;
- give students opportunities to investigate problems in many ways;
- question and listen to students;
- look for evidence of learning from many sources;
- expect students to use concepts and procedures effectively in solving problems.

Our collection of examples was compiled from many sources including state and provincial assessments. We know that standardized assessment has a major impact on what educators do in the classroom. Because most formal assessments include multiple-choice items, we have included them in this Sampler. Owing to the limited amount of information to be gleaned from most multiple-choice items, we have added an “explain your thinking,” “justify your solution,” or “how do you know?” component to most multiple-choice items. We believe that if students are going to be prepared to answer multiple-choice questions on formal assessments, they need classroom experience in answering this type of item, but we also want to be sure that students can support their answers by showing their work.

We have included a variety of rubrics as examples of how extended-response questions might be scored. We believe that students who know in advance how their answers will be evaluated will strive to meet the expected criteria; we realize, however, that for many assessment instruments, students are not privileged to this information. For classroom assessment, though, we believe that students should be given the rubric as a component of the assessment.

We encourage you to use these items with your students and hope that you find the bibliography and resources sections useful as you work toward extending your own classroom repertoire of assessment items.