

Introduction

This book is one of two designed to bring awareness to various international perspectives on mathematical topics taught throughout the world. Classroom activities herein showcase topics discussed at the International Congress on Mathematical Education (ICME–12) held in Seoul, South Korea, in July 2012.

ICME meets once every four years and is organized under the auspices of the International Commission on Mathematical Instruction (ICMI), an international body with representatives from around the world. The aim of ICME is to present current states and trends in mathematics education research and to examine current practices of mathematics teaching at all levels. Each ICME includes a wide range of participants, including mathematics education researchers, teacher trainers, practicing teachers, mathematicians, and others interested in mathematics education.

This book features activities for students ages thirteen through eighteen, while the companion book features activities for students ages five through thirteen. As we collected activities for the books, it became abundantly clear to us that different countries give different meanings to and have different ideas about what an “activity” is. These differences led to our massaging the submitted activities into a truly international model that has remained primarily true to the original while infusing a degree of commonality for the purposes of these books. Classroom-tested activities were sought to exemplify some standard or guideline in different countries. Where possible, those standards are noted along with the Common Core State Standards for Mathematics in the United States.

The general features of an activity include the following: mathematical content; materials needed; setting the scene for the activity, including both country and classroom; teacher notes; extensions; research notes with references; and activity sheets. These features vary, depending on the age of students. We have tried to keep the country flavor of the activities by including native languages in some instances and by using currency and measures of the country, or even symbolism and idiomatic language in others, if the language was important in the country of the writers.

Research notes in the activities place the mathematics topics in an international setting, with some sources in different languages. As editors, we have tried to make the research notes consistent throughout. What we found is that most activities can be centered in a wider setting than in a single country. What the user will see, however, is that some activities for one country would never be used in other countries at the age or grade level given but might be used either earlier or later.

The activities presented are ordered by age level in the country where they are used and by content if there is more than one activity in an age level. Activity sheets are available for download at NCTM’s More4U website (www.nctm.org/more4u). Check the title page in this book for your access code.

The audience for the book is classroom teachers, teacher educators, math coaches, secondary school mathematics specialists, and those who provide professional development.

We'd like to thank the twelve reviewers who worked with us in the selection process for the activities. They made very important contributions to the activities themselves as well as helping in the selection of the activities for the book. They are as follows:

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