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## AUTHORS

### ***Maths the Write Way, Teacher Guide Level 2***

Dr Brian E. Enright is an author and a national mathematics education consultant.

Dr Robert Gyles is the deputy superintendent for Community School District #4 in New York City.

Maxine Leonescu is the director of mathematics for Community School District #11 in New York City.

Fred I. Remer is the director of mathematics, science, and technology for Community School District #9 in New York City.

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## ★ TO THE TEACHER ★

One of the most important aspects of teaching maths is communication. Writing, speaking, explaining or drawing can help your students internalise what they have learned and clarify their own thinking. Communication can also act as a powerful tool for you to assess the thinking of your students.

Your students should be encouraged to use strategies that foster the art of communication. We have incorporated many of the following strategies for your students in ***Maths the Write Way***.

- ★ Write your own problems
- ★ Communicate orally
- ★ Identify key words and explain their importance
- ★ Create your own game, puzzle, picture, poem or rap
- ★ Summarise your work
- ★ Investigate to find other ways to solve a problem
- ★ Make predictions and draw conclusions
- ★ Work with a group to share ideas and solve problems

***Maths the Write Way*** contains seven lessons. Each lesson includes two Investigations and two Extensions to the Investigations. Hints are included to provide clues to the solutions. Each lesson also has four Assessments, two with open-ended responses and two with a multiple-choice format. Vocabulary activities, following Lesson 3 and

Lesson 7, emphasise the importance of mathematical language. Finally, two mini-reviews and a Final Review will help you assess the work of your students.

In ***Maths the Write Way***, we have provided a forum for you to instruct as well as assess. We encourage students to look for a variety of ways to solve problems. The process—not just the solution—must be emphasised. Working and sharing ideas in cooperative groups will enhance understanding and communication.

The Teacher Guide includes:

- ★ Listing of lesson objectives and necessary materials
- ★ Key vocabulary and concepts for the lesson
- ★ Suggestions for discussing key mathematical concepts
- ★ Sample solutions to all Investigations, Extensions and Assessments
- ★ Suggested strategies for solving problems
- ★ Reproducible pages for use with selected activities

This program will work with a variety of instructional approaches—whole class, small groups or individuals. Make sure students understand what they are supposed to do for each activity. Depending on your students' abilities, you may want to read aloud the text as students work on each lesson. Before students begin, read and discuss the authors' introduction on page I of the student book.

We are sure you will find ***Maths the Write Way*** a valuable resource for supplementing and enhancing your mathematics instructional program.

Brian E. Enright  
Robert Gyles  
Maxine Leonescu  
Fred I. Remer

## Pages 2–5

**Objectives**

- ★ To understand place value through 999
- ★ To compare 3-digit numbers
- ★ To use inequality symbols with fractions
- ★ To find fractional parts of a group or figure

**Materials**

- ★ Reproducible 1: *Digit Cards*
- ★ Reproducible 2: *Size Cards*
- ★ Crayons

**Vocabulary**

Before beginning the lesson, you may wish to review the following maths terms: *digits, is equal to (=), fraction, is greater than (>), is less than (<), place value.*

**Teacher Notes**

Understanding our system of numeration is critical in building number sense. Students can benefit from varied practice with numeration concepts. By presenting these concepts in a game format, you can provide motivation as well as a tool for learning. Games can help to heighten students' interest in mathematics.

Primary students need many real-world experiences with fractions. Looking at fractional parts of a whole and then fractional parts of a set can be very confusing. In order for students at this level to gain a sense of fractions, it is important to include the use of manipulative materials as part of the instructional process.

Answers to Investigations, Extensions, and Assessments will vary. Sample solutions are provided.

**Part A**

## Pages 2–3

**Investigation 1**

Suggest that students write the three digits on separate slips of paper. Students can place the digits in different positions until they are certain they have formed the largest number possible.

José's answer is not correct. The largest number that can be made using the digits 6, 8 and 2 is 862. The largest digit must be in the hundreds place. The next largest digit must be in the tens place. The smallest digit must be in the ones place.

**Extension**

Distribute copies of Reproducible 1 and Reproducible 2 to student groups. Have them cut out the cards. Help students understand the rules of the game, modelling one turn if necessary. You might also introduce one word card at a time. Suggest that all players check the numbers formed during each student's turn. If everyone agrees that the answer is correct, the player calculates the score.

Answers will vary. You may want to check students' numbers and scores recorded in the Solution.

**Assessment 1**

700

**Assessment 2**

Make sure that students understand which areas on the target board are worth 1 point, 10 points and 100 points. Explain that each dot on the board is worth the number of points assigned to that area.

The score for the target board equals 233. First add the ones (3), then the tens (30), and finally the hundreds (200). Then add these numbers:  $200 + 30 + 3 = 233$ .

**Part B**

## Pages 4–5

**Investigation 2**

If students have difficulty understanding fractions, allow them to use manipulatives. They can cut out figures such as squares or circles which are divided into 2, 3 and 4 equal parts. Students can cut out the parts and physically compare the sizes.

