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Maths the Write Way, Level 5, was written by Brian E. Enright, Robert Gyles, Maxine Leonescu and Fred I. Remer.

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EDUCATION

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★ TO THE STUDENT ★

To solve maths problems, you usually follow a set of rules. You can probably remember the rules easily, but do you know why the rules were made in the first place? *How* you solve problems is what this program is about. Instead of just finding answers, you will think about the strategies you use to solve problems. You will also discover why rules are important.

The focus of ***Maths the Write Way*** is communication. Writing, speaking, explaining or drawing while learning about maths can help you gain a better understanding of what you are learning. When you share ideas with others, you strengthen what you already know and find out about different ways of thinking. All of these activities will give you a more complete understanding of maths concepts.

You will use the following effective strategies as you complete the activities in ***Maths the Write Way:***

★ Write your own problems

★ Communicate orally

★ Identify key words, and explain their importance

★ 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

Each lesson in ***Maths the Write Way*** includes four Investigations, two Extensions, and four Assessments. There are many hints to help you solve the problems. Whenever possible, discuss your ideas with classmates and with your teacher. It is important that you think about how you solve a problem, not just about the final solution.

You should be familiar with most of the skills and concepts presented in this book. However, when you work on the activities, you will likely discover ideas that you have not thought about before. We hope you enjoy the program and learn about maths the 'write' way.

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LESSON 1 *Numeration*

Part A

★ INVESTIGATION 1 ★

The Federal Government conducted a survey to find out how much money different states in Australia spent on each of its students for his or her education.

Step 1: Look at the chart below.

State	Dollars Spent per Child	To Nearest Thousand
WA	$9,248	$9,000
SA	$4,537	$5,000
VIC	$5,453	$5,000
TAS	$5,500	$6,000
NSW	$8,658	$9,000
QLD	$3,578	$4,000
ACT	$10,987	$11,000
NT	$6,358	$6,000

Step 2: Using the chart above, write a general rule that will show how to round any number to the nearest thousand.

Hint: Is each number in the chart rounded up or down? After answering this question, think about how place value is used in rounding.

Solution:

★ INVESTIGATION 2 ★

There are 26 countries that make up the region known as Central Africa, which is part of the African plateau. This region stretches from Cape Verde to the Seychelle Islands.

Step 1: Look at the chart below.

Area of Selected Countries in Central Africa

Country	Area (Square Kilometres)	To Nearest Ten Thousand
Senegal	196,720	200,000
Rwanda	26,337	30,000
Liberia	111,370	110,000
Ghana	238,539	240,000
Uganda	236,878	240,000

Step 2: Using the chart, write a general rule that will show how to round all numbers to the nearest ten thousand. Then share your rule with group members to see if they agree.

Hint: It might be helpful to write your own set of numbers in order to explain your rule. Round these numbers to the nearest ten thousand to test your rule.

Solution:

★ EXTENSION ★

Find the set of <u>all</u> whole numbers that equal 66,000 when rounded to the nearest thousand. Write an explanation of how you determined your answer.

Hint: Making a list will help you to find the range of numbers you are looking for. Remember to look at the rules you created.

Solution:

Assessment 1

50,499	50,500	49,501	50,501	49,500	49,499

How many of the numbers in the box above will equal 50,000 when rounded to the nearest thousand?

A. 3
B. 4
C. 5
D. 6

Assessment 2

Find the set of all whole numbers that equal 150,000 when rounded to the nearest ten thousand. Write a statement to explain how you determined your answer.

Solution: