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HAWKER BROWNLOW
E D U C A T I O N

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ISBN 1 74025 201 2 Code #6054

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★ TO THE TEACHER ★

Book 4, CSF Level 3

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 a variety of strategies for your students to utilise in Maths the Write Way. These include asking the students to:

- Write their own word problems
- Communicate orally
- Identify key words and explain their importance
- Create their own games, puzzles, poems
- Summarise their work
- Investigate 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 four Investigations, two Extensions and four Assessments. Two Assessments are with open-ended responses whilst two utilise multiple choice format.

Vocabulary activities, following Lessons 3 and 7, emphasise the importance of mathematical language. Two mini-reviews and a Final Review will help you to 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 co-operative 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 and Assessments
- Suggested strategies for solving problems
- Reproducible pages for use with selected activities

The program will with a variety of instructional approaches. You may want to complete some activities with the whole class. Others may be more appropriate for individuals or small groups. Depending on your students' reading abilities, you may want to read aloud the directions for each activity before assigning it. Most investigations end with an oral explanation and/or writing activity. If students are not ready to write, you may want to record their answers on an experience chart. The oral explanations and writing activity are crucial to the Investigations, as they help students clarify thinking.

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

★ INVESTIGATION 1 ★

The Caribbean Sea lies between North and South America, with Mexico and Central America to the west. Bordering the Caribbean Sea are several small island nations, territories and other areas.

Step 1: Look at the chart below.

Small Island Nations		
Nation	Area in Square Kilometres	To Nearest Hundred
Antigua/Barbuda	442	400
St. Lucia	616	600
Barbados	429	400
St. Kitts/Nevis	269	300
Dominica	751	800
Grenada	344	300
St. Vincent/ Grenadines	388	400

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

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 ★

Some of the Caribbean islands are larger and even closer in size to the countries of Central America.

Step 1: Look at the chart below.

Larger Nations		
Nation	Area in Square Kilometres	To Nearest Thousand
Belize	22,965	23,000
Bahamas	13,939	14,000
El Salvador	21,041	21,000
Jamaica	11,424	11,000
Trinidad/Tobago	5,128	5,000

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

Hint: To explain your rule, it might be helpful to write your own set of numbers. Round these numbers to the nearest thousand to test your rule.

Solution:

★ EXTENSION ★

Find the set of all whole numbers that equal 5,400 when rounded to the nearest hundred. Write an explanation of how you found your answer.

Hint: What are the highest and lowest whole numbers that equal 5,400 when rounded to the nearest hundred?

Solution:

Assessment 1

Which of these numbers does not equal 7,500 when rounded to the nearest hundred?

- A. 7,549
- B. 7,482
- C. 7,530
- D. 7,429

Assessment 2

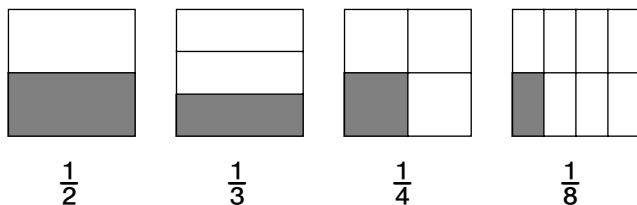
Mr Taylor says that his whole number weight, when rounded to the nearest kilogram, is 100. What could his true weight be? Write an explanation of how you found your answer.

Solution:

Part B

★ INVESTIGATION 3 ★

Look carefully at the drawings below.



Step 1: Compare each of the shaded parts. Read the fraction with each drawing.

Step 2: Compare the fractions and drawings in as many ways as you can. Write your ideas.

Hint: Think about the size of the shaded part of each square.

Solution:

Step 1: In each circle below, place the symbol that makes the number fact true.

★ INVESTIGATION 4 ★

× ÷

- A. $7 \bigcirc 8 = 56$
B. $8 \bigcirc 7 = 56$
C. $56 \bigcirc 7 = 8$
D. $56 \bigcirc 8 = 7$

Step 2: Write an explanation of how you found the answers to items B and C.

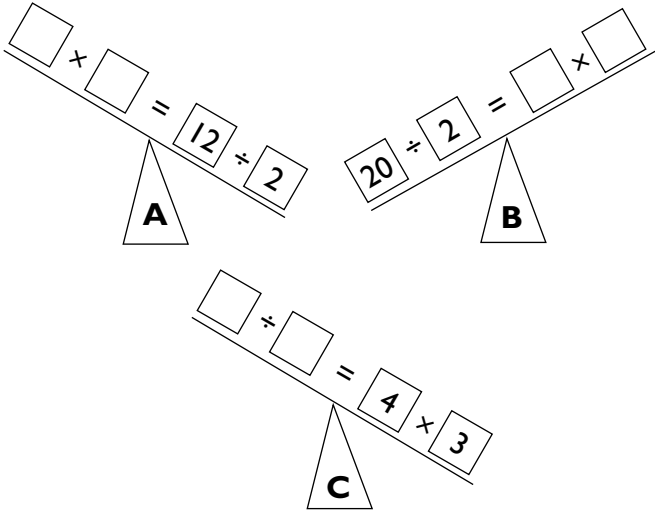
Hint: Look at the equals signs in each number sentence. Compare the numbers to the left and right of the equals sign.

Solution:

Step 1: Each scale below is not balanced.

★ EXTENSION ★

Balance each scale by finding the missing numbers.



Step 2: Write an explanation of how you found your answers.

Hint: Is there more than one way to balance each scale?

Solution:

- A. _____
- B. _____
- C. _____
- _____
- _____
- _____

Assessment 1

Which number sentence would you use to check the answer to $45 \div 5 = \square$?

A. $\square \times 45 = 5$

B. $5 \times \square = 45$

C. $\square \div 5 = 45$

D. $\square \div 45 = 5$

Assessment 2

Arrange the fractions below in order from least to greatest. Write a statement that explains why your answer makes sense.

$$\frac{1}{3} \quad \frac{1}{10} \quad \frac{1}{5} \quad \frac{1}{8}$$

Solution:
