



IrishMaths
Series



Maths: 2nd Class

- ✓ number and algebra
- ✓ fractions, decimals and money
- ✓ patterns and algebra
- ✓ shapes and units of measurement
- ✓ location and transformation
- ✓ chance and data

By Anita Green



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Author: Anita Green
Illustrator: Alison Mutton

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Teachers' Notes

Many of the questions and activities in this book are designed to be open-ended, however where appropriate answers or suggested answers are provided. The idea of keeping the questions and activities open-ended is to focus on processes and strategies and allow for greater differentiation. The activities enable all students of different abilities to be working on the same problem but allow students to tackle the problem at different levels. They can approach the task from their level and feel confident in being able to complete it.

To get the most out of these activities reflection time needs to be incorporated into each lesson. This doesn't need to be just at the end of the lesson but can be at various times throughout the lesson too. This gives the students time to share their strategies with the class and see how other students are solving the same problem. It's important for students to see that they all might have the right answer but there are many ways to get to that answer. Offering students this time means they can learn from each other and provides assistance to those students who might be struggling by giving them a strategy to try.

The book is divided into six sections:

Section 1: Number and Place Value

Section 2: Fractions, Decimals and Money

Section 3: Patterns and Algebra

Section 4: Shapes and units and Measurement

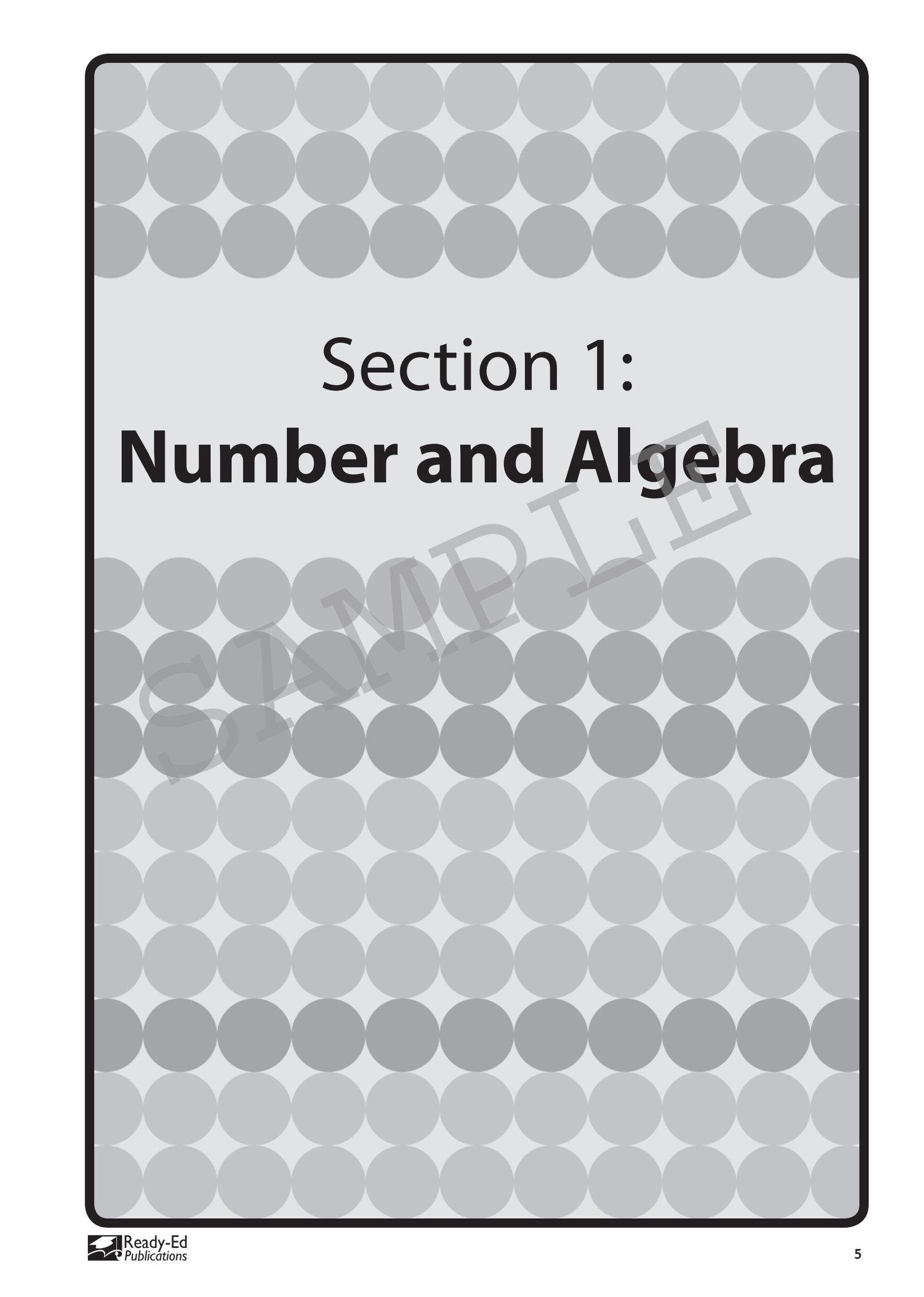
Section 5: Location and Transformation

Section 6: Chance and Data

As teachers, the questions we ask can help the students delve deeper and think more critically about their learning. Try using some of these questions in your lessons:

1. Is there another way you could work that out?
2. Have you found every possible answer?
3. What would happen if ... ?
4. Is there a pattern?
5. You and ... have different answers... who is right?
6. You and ... have the same answer but different working out. Share with each other what you did.
7. Can you prove it?

With the help of this book you can ensure you are making maths fun and engaging for your students.



Section 1:

Number and Algebra

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Stone collection

My Dad and I take a walk after dinner every night. I collect stones that I find on our walks. On Monday I collected 3 stones and then I collected 1 more stone every day for the rest of the week. Can you work out how many stones I have collected by Sunday?



Day	Stones Collected	Total
Monday	3	3

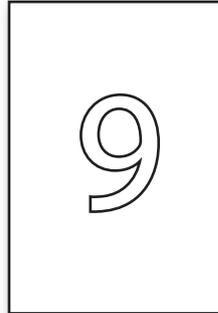
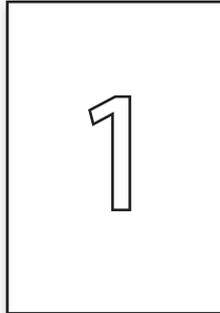
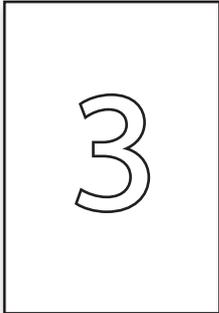
How many stones do I have at the end of the week?

Extension: How many stones will I have at the end of 2 weeks?

How many numbers?



Sam and his sister have just finished playing cards. Sam notices after they have packed up that there are still four cards lying on the floor under the table. They are:



1. How many different numbers can you make using these digits?

SAMPLE

2. Now come up with your own four numbers. (You could come up with these numbers using playing cards or dice.)

3. Using your four digits, how many different numbers can you make? Complete your working out on the back of this sheet.

What's the pattern? 1

Complete the patterns.

1. (75) () (65) () () (50) (45) (40) () () ()

Explain the pattern: _____

2. () (46) (44) () () (38) (36) (34) () () ()

Explain the pattern: _____

3. (140) () () (110) (100) () (80) () ()

Explain the pattern: _____

Choose a number of your own and then create three different patterns going backwards using your number.

My number: _____

4. () () () () () () () ()

5. () () () () () () () ()

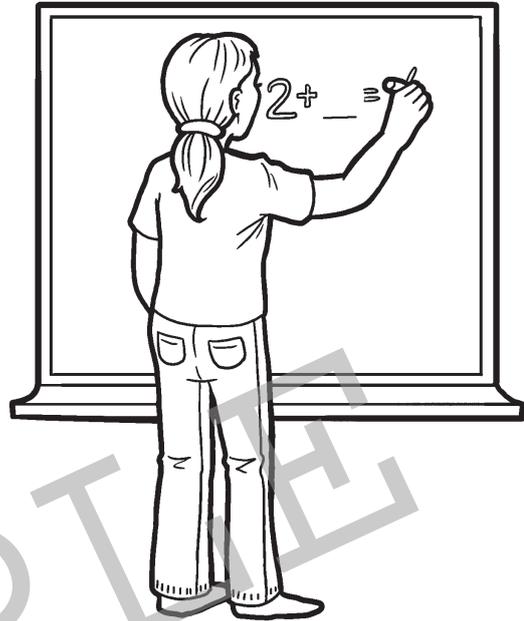
6. () () () () () () () ()

Adding strategies

- 1.** In class the teacher gave us this problem:

$$12 + \underline{\quad} = 19$$

Show how you would solve it:



- 2.** I noticed that my friend wrote in her book:

$$19 - 12 = \underline{\quad}$$

Why did she write it like this? Will it get her the right answer? How?

- 3.** How could we use the strategy in question 2 to solve other problems? Give an example.

Sharing

1. I have 12 sweets. How many people can I share them with evenly?



2. What if I have 24 sweets? How many people can I share them with evenly?



Extension

What if I have 36 sweets? Show your working out on the back of this sheet.

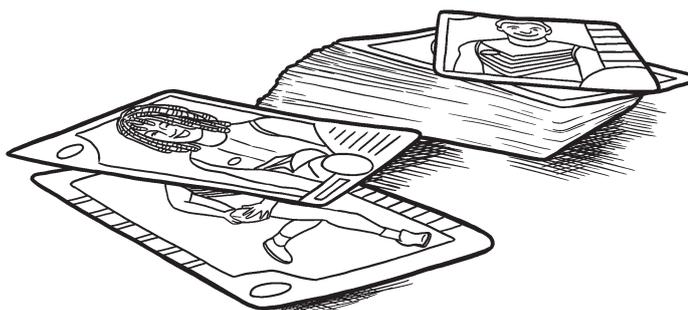


Doubles!

1. My friend Jake has a lot of football cards. He received so many for his birthday that he now has double the amount that he had before his birthday. How many cards do you think he had before his birthday and how many cards do you think he has now? Show your working out.



2. I only have half as many cards as Jake. How many cards do you think I have? Show your working out.



Near doubles

1. The teacher wrote this problem on the board:

$$8 + 9 = \underline{\quad}$$

Sarah said it was easy because it was a near double. What does she mean by near double?



2. Write some of your own near double equations.