Introduction

Recognising and understanding patterns is an important skill in mathematics, and one which can be used in many ways. In this book you will learn how to recognise, extend and explain number sequences, using and applying known number facts. You will also learn some simple algebra which can be used to explain some of the patterns you find.

How to use this book

Before you start using this book, write your name in the name box on the first page.

Then decide how to begin. If you want a complete course on number patterns and simple algebra, you should work right through the book from beginning to end. Another way to use the book is to dip into it when you want to find out about a particular topic, such as fraction sequences. The Contents page will help you to find the pages you need.

Whichever way you choose, don't try to do too much at once – it's better to work through the book in short bursts.

When you have found the topic you want to study, look out for these icons, which mark different parts of the text.

Activities

This icon shows you the activities that you should complete. You write your answers in the spaces provided. You might find it useful to have some spare paper to work on for some of the activities. After you have worked through all the activities on the page, turn to pages 45–49 at the end of the book to check your answers. When you are sure that you understand the topic, put a tick in the box beside it on the Contents page.

On pages 10, 21, 28 and 34 you will find **Progress tests**. These contain questions that will check your understanding of the topics that you have worked through so far. Check your answers on page 50. It is important that you correct any mistakes before moving on to the next section.

On pages 41–44 you will find a **Final test**. This will check your understanding of all the topics. Check your answers on page 51.

Explanation

This text explains the topic and gives examples. Make sure you read it before you start the activities.

Did you know?

This text gives you useful background information about the subject.