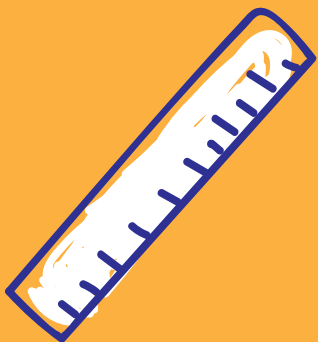




**EXAM PAPERS PLUS**

THE COMPLETE  
ILLUSTRATED GUIDE  
TO 7+ MATHEMATICS



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# ABOUT THE GUIDE



# NOTE FOR PARENTS, TEACHERS AND TUTORS

The purpose of this study guide is to help your child develop the key skills they will need to succeed in the 7+ maths exam.

In the exam, your child will be asked to complete a series of questions that will test a range of mathematical skills. The exams vary in length depending on your choice of school, as do the number of marks available. It is important that your child is able to read, understand and answer a range of questions, making intelligent choices about the most efficient strategies to use to solve problems.

This guide covers how to approach the maths exam and the key skills that will enable your child to become a competent and confident mathematician, whilst fulfilling the required criteria for the 7+ exam.

The guide is broken up into sections, with a handful of skills being developed in each one. Your child is accompanied through the guide by a team of characters: Mattie the Math-a-Magician, Lucy Lightbulb, Charlie Challenge and Tanya Teamwork. These characters are designed to help make the exercises fun, engaging and enjoyable.

Where children see Tanya Teamwork, they are encouraged to work with a friend or family member so that they can discuss what they have read or written, complete a paired activity or check their answers. However, you are strongly encouraged to work with your child through as much of the guide as possible. This will allow you to monitor their progress effectively, provide plenty of encouragement and hopefully enjoy the journey too!

If there are any skills that your child finds difficult, or if you feel they would benefit from further preparation, there is an 'Extra Practice' section (page 206) towards the end of the guide.

The 'Charlie's Challenge' section (page 241) contains extension questions, activities and guidance to further develop your child's skills if and when they are ready for it. In terms of your child's preparation for the 7+ exam, it is not essential that they complete this section. However, even if your child is only able to complete parts of it, their exam preparation will be improved by doing so.

It is worth noting that children sitting the 7+ maths exam are not expected to get every question correct. This is because the levels of some of the questions can exceed age-related expectations. Encouragement to prepare well and do their best, whilst reinforcing the message that it is ok to find some questions difficult, is the key to keeping your child motivated.

### *Keep in mind*

It is very important that your child gets used to reading questions, answering them and checking their answers in a set amount of time. Therefore, the 'Skills Check' exercises in this guide require the use of a timer or stopwatch. Other resources needed are a ruler, pencil, rubber, a deck of cards and a standard 1-6 dice.



# MEET THE TEAM

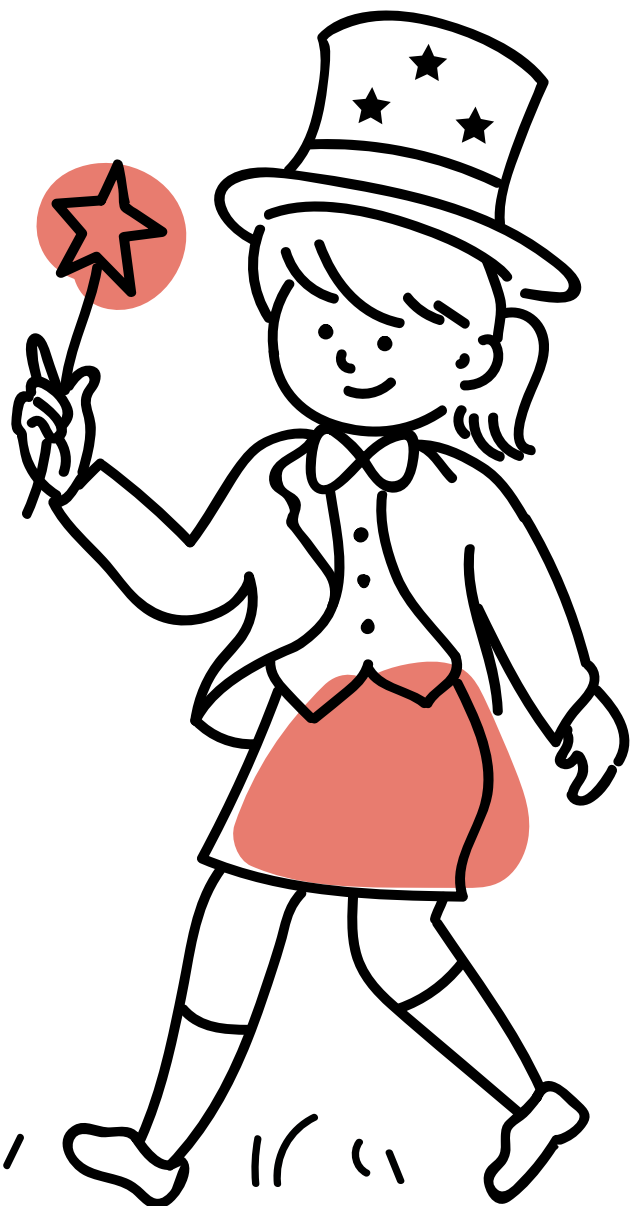
Hey there! Have you come to join me on a math-a-magical journey through this 7+ maths study guide? I do hope so!

I'd better introduce myself. My name is Matilda, but my friends call me Mattie, and I'm a math-a-magician! I'm magic at all things maths and I'm looking forward to teaching you as much as I can!

We'll cover everything you need to know for your 7+ maths exam one topic at a time. If you get stuck at any point, be sure to read the explanations carefully. You could also ask a friend or family member to help you read the explanations.

Don't try to do everything at once - work through the guide in small chunks, maybe one or two activities at a time.

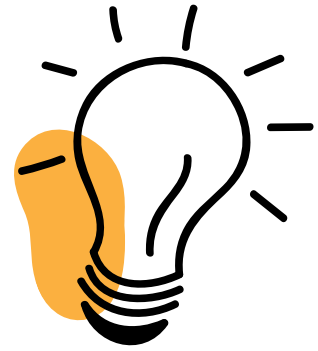
On this journey, we're going to be accompanied by my three assistants. They're keen to help you do your best in the 7+ exam!



|| | \_\_\_\_\_ |

## Lucy Light Bulb

Lucy is full of useful hints and top tips that will make your journey easier. You'll see her shining on certain pages – be sure to pay close attention to what she has to tell you.



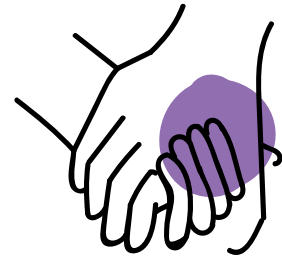
## Charlie Challenge

Charlie loves activities that get his brain working harder. If you feel like giving your brain an extra workout, look out for the 'Charlie's Challenge' section (page 241).



## Tanya Teamwork

Tanya Teamwork loves working with other people and, whenever you see her along your journey, she is letting you know that it would be a good idea to read or complete the activity with a friend or family member.



Now that you've met the whole team, let's start by learning all about the 7+ maths exam. We will then move on to the maths activities and, before you know it, you'll be a math-a-magician too!



# THE 7+ MATHS EXAM

**Mattie says:** In the 7+ maths exam, you will have to answer questions that test lots of different maths skills. Some questions might test your number skills, some might test your calculation strategies and others might test your knowledge of geometry (shape and space), measures or data (charts and graphs).



There will also be some problem-solving questions. To answer these questions, you will have to decide on the best way to solve the problem and which knowledge and skills to use. At the end of each section in this guide, there are problem-solving questions for you to answer so that you can put all your skills into practice in a variety of ways.

Different schools set different numbers of questions and different time limits for the 7+ exam. It is very important to practise reading the questions, answering them and then checking your answers under timed conditions. We will practise this skill as we work through the guide.

## *Lucy Light Bulb says*

One useful tip for sitting a timed maths exam is not to spend too long trying to work out the answer to a question you are unsure about. If you come across a question that you don't know how to answer, don't waste valuable minutes that could be spent gaining marks on other questions that you do know how to answer. A good exam technique is to miss out the question that you are unsure about and come back to it at the end of the exam if you have time.



**Mattie says:** The 7+ maths exam includes different types of questions. A few may be multiple choice, where you have to select the correct answer from several options. Some questions might simply ask for an answer, whereas others might ask you to show your working out or 'explain' your answer. You will have to use full sentences to answer these particular questions.



We will practise all the different types of questions and look at how to get maximum marks for them as we work through the guide.

At the start of each topic, there is a 'Vocabulary Station'. Use this to check the key words that we will be using. If you are not sure of any of the words, look them up in the glossary (page 317) before starting the questions. This will help with your understanding of the topics.

There is a 'Skills Check' at the start of each topic. You can use these questions to show off your existing knowledge and skills and identify areas that you need a bit more help with. Don't worry though, once you have completed each 'Skills Check', I will go through all of the answers with you and guide you through the knowledge and skills that you need. Each 'Skills Check' has a time limit so that you get used to working under time pressure. Use a timer to help stay on track during these activities.

At the end of the guide there is an 'Extra Practice' section and a 'Charlie's Challenge' section. Use these sections to practise your skills further or challenge yourself with some more difficult maths.

Phew! What a lot of information. After all that, I think it is time to get started on our first maths topic – see you at the start of Section 1!



# SECTION 1

# NUMBER

## **Skills covered**

Odd and even numbers

Multiples of 2, 5 and 10

Counting

Sequences

Place value

Reading and writing numbers

Comparing and ordering numbers

The equals sign

Rounding

Fractions

Numbers and problem solving

