



THE CSSE 11+ GUIDE BOOKS

Maths

for the CSSE 11+

Every topic on the CSSE Maths paper, one chapter each: what the question looks like, a method in five steps, a worked example with the mark scheme and the answers that lose marks, the traps, and ten questions with working space. Then a timed test of twenty questions and sixty marks, as the real paper.

19

chapters

190

practice questions

380

marks to earn

WHAT IS INSIDE

- One chapter for every topic on the paper
- A method in five steps, written to be said aloud
- A worked example with the mark scheme, and the answers that lose marks
- The three traps the setters rely on
- Ten questions a chapter with working space, out of 20
- A timed test of 20 questions and 60 marks, and every answer with its mark scheme

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For Year 5, with an easier start in every chapter so a Year 4 child can begin.
Every practice question checked twice: by machine, and by a person reading it.

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BEFORE YOU START

The CSSE paper, explained

What the paper is

CSSE, the Consortium of Selective Schools in Essex, sets the 11+ for the Essex grammar schools, including the Southend and Chelmsford schools. There are two papers, Maths and English, and this book is for the Maths paper.

It is a written paper, not multiple choice: twenty questions, sixty marks, sixty minutes, no calculator. The questions come with working space and the answer is written on the paper. Most questions have two or three parts, and many are worth two or three marks, with a mark for the method as well as the answer.

How it is marked

A mark scheme gives a method mark for working that is right as far as it goes, so a child who sets out the right steps and slips in the arithmetic still scores. It also gives follow-through marks: if part (a) is wrong but part (b) is done correctly from it, part (b) scores. This is why the working matters more on CSSE than on any multiple-choice paper. A right answer with no working gets the answer mark and nothing else, and a wrong answer with no working gets nothing at all.

Every question in this book carries its mark scheme, in the answers at the back, so that a parent can mark it as the real paper is marked.

Timing

A mark a minute. A one-mark question should take well under a minute; a three-mark problem can have three. The paper is long enough that most children do not finish, so the order matters: do every question you can do quickly first, mark the ones you skip, and come back.

What is in this book

Nineteen chapters, one per topic, from column arithmetic to charts and tables, in six sections. Every chapter uses the same frame: what the question looks like, a five-step method, a worked example with where the marks are and the answers that lose them, the three traps, then ten questions out of twenty marks. The first three questions are one mark each and easier than the paper; the next four are two marks; the last three are three-mark problems at exam level.

Every practice question was generated and checked by machine, so its answer is computed and not typed, and then read by a person. The puzzle questions, where three conditions pin down one number or three shapes stand for three numbers, were checked to have exactly one answer.

How to use this book

One chapter is one topic. Read parts 1 to 4 first, then do the ten questions in part 5 with a timer, writing the working in the space. Mark them from the answers at the back, giving the

method marks as the scheme says, and write the score on the progress page.

When every chapter has a score, sit the timed test at the end under exam conditions, and use the answers to see which chapters to read again.

Guessing

There is no penalty for a wrong answer. Never leave a question blank: write the first step, because the first step is often a mark.

SAMPLE CHAPTER

CHAPTER 1 · NUMBER

1 to 3 marks a question

Column arithmetic and missing digits

1 WHAT IT LOOKS LIKE

The paper opens with plain arithmetic: additions and subtractions into the thousands, a long multiplication, a division, and then the same sums with a digit missing, where you work back from the answer. Later, the same arithmetic hides inside word problems worth two or three marks.

Example, 1 mark

Work out $4715 + 86$

One mark: the answer alone is enough on a one-mark question, but write the sum in columns anyway. It is where the mark comes from on every other question.

Answer: **4801**

2 THE METHOD

- 1 Write every sum in columns, units under units, even the ones you could do in your head. On this paper the working is worth marks and a slip in your head is worth nothing.
- 2 Work from the units column to the left. Carry when a column adds to ten or more; exchange when the top digit is smaller than the one below.
- 3 For a missing digit, start in the units column and ask what digit would make it work. Then move left, remembering any carry or exchange the column before has caused.
- 4 For a word problem, decide the operations before touching a number: how many altogether is a multiplication; how many left is a subtraction. Write each step on its own line.
- 5 Check with an estimate: 24 boxes of 36 is about 25 lots of 40, so about 1000. If your answer is 8640 or 86, a digit has gone astray.

3 WORKED EXAMPLE

2 marks

Each $\square$ stands for a missing digit. Find the two missing digits.

$$9\square 2 - \square 57 = 385$$

- STEP 1** Units first: 2 take away 7 cannot be done, so a ten is exchanged: 12 take away 7 = 5. That matches the 5 in the answer, so the units are right and the tens column has lost one.
- STEP 2** Tens: the top digit is one less than the box. Box minus 1, take away 5, must give 8. That cannot happen without another exchange, so it is box minus 1 plus 10, take away 5, equals 8. Box minus 1 is 3, so the top box is 4.

STEP 3 Hundreds: 9 has lent one to the tens, so it is 8. 8 take away the bottom box gives 3, so the bottom box is 5.

STEP 4 Check the whole sum: 942 take away 557 is 385.

STEP 5 Write the answer: 4 and 5.

Where the marks are

M1 1 mark for either digit found by a correct column argument

A 1 mark for both digits, 4 on top and 5 below

Answers that lose marks

1/2 4 and 6 the exchange out of the hundreds was forgotten: it is 8 take away the box, not 9

1/2 3 and 5 the ten lent to the units column was forgotten, so the tens box came out one too small

1/2 5 and 4 the right digits in the wrong boxes: say which is which

4 THE THREE TRAPS

Losing a carry in a long multiplication. Write the carried digit small above the next column and cross it out when you have used it. A long multiplication with no small digits above it is usually wrong somewhere.

Working a missing-digit sum from the left. The units column decides whether the tens column has been exchanged from, and so on leftwards. Start at the right, always.

Answering the question you expected. “How many are left over?” wants the remainder; “how many full boxes?” wants the quotient. Both are in the same working and the mark is for the one asked.

WORKING SPACE for the ten questions on the next page: the working, every time

10 questions, 20 marks, 20 minutes

5 TRY IT

Questions 1 to 3 are one mark each and a little easier than the paper. Questions 4 to 7 are two marks and 8 to 10 are three: exam level. Write your working; it is where the marks are.

1 Work out $486 \div 9$

Answer (1 mark)

2 Work out 45×20

Answer (1 mark)

3 Work out $423 \div 3$

Answer (1 mark)

4 A library has 2291 books. It sends out 356 on Monday and 287 on Tuesday. How many are left?

Answer (2 marks)

5 Each $\square$ stands for a missing digit. Find the two missing digits.

$$75\square - \square 20 = 530$$

Answer (2 marks)

6 A warehouse has 1638 boxes. It sends out 288 on Monday and 254 on Tuesday. How many are left?

Answer (2 marks)

7 Each $\square$ stands for a missing digit. Find the two missing digits.

$$94\square - 2\square 8 = 645$$

Answer (2 marks)

8 A hall has 12 rows of 67 chairs. 546 people are sitting down. How many chairs are empty?

Answer (3 marks)

9 Bottles are packed in crates of 8. There are 1148 bottles.

(a) How many full crates can be packed?

Answer (2 marks)

(b) How many bottles are left over?

Answer (1 mark)

10 A stall has 36 trays of 64 apples. 1296 apples are sold. How many apples are left?

Answer (3 marks)