Maths Mastery Academy

# Your Child's Maths Challenge

*(Maths Mastery Academy Initial Assessment)*

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Many parents are proud of how well their child is doing in maths, but still worry they're not being fully challenged. When school feels too easy or repetitive, children may coast through... and lose the talent and confidence they once showed.

This short challenge is designed to stretch your child with real problem-solving. It tests how well they can apply their knowledge in unfamiliar situations, a skill essential for long-term success in maths competitions, exams, and top university pathways.

This page explains how to complete the assessment and what happens after submission.

## Instructions

- **Show clear working and explanations.** Use words, diagrams, or structured steps.
- **Use rough paper first** if helpful, then write a clear final version.
- **Use lined or grid paper.** Space between questions is tight.
- **Time:** Allow 45–60 minutes. Some questions will take more time — that's expected.

## What to Do Next

**1. Complete the assessment.** Set aside 45–60 minutes in a quiet space.

**2. Submit it via the link in your inbox or by scanning the QR code below.** This opens a WhatsApp to Marcus. Simply upload a photo or scan of your child's work.

**3. Get tailored feedback.** You'll receive personalised advice on their strengths, next steps, and whether they're ready to join the Maths Mastery Academy.

Submit Instantly via WhatsApp

**Scan this QR code to send your child's assessment directly to Marcus.**

Tap the camera on your phone and hold it over the code — it'll take you straight to WhatsApp.

1. What is the value of $2000 + 1999 \times 2000$?

2. Find the 100th digit after the decimal point in the decimal representation of $\frac{3}{7}$.

3. Find four integers whose sum is 400 and such that the first integer is equal to twice the second integer, three times the third integer and four times the fourth integer.

4. Pegs numbered 1 to 50 are placed in consecutive order in a row with number 1 on the left. They are then knocked over one at a time following these rules:

   1) Knock down alternate pegs, starting with the first peg

   2) Each time you reach the end of the row, repeat the previous rule for the pegs still standing.

   What is the number of the last peg to be knocked over?

5. In this figure $ADC$ is a straight line and $AB = BC = CD$. Also, $DA = DB$. Find the size of $\angle BAC$.