



# The Scottish Mathematical Council

www.scot-maths.co.uk

## MATHEMATICAL CHALLENGE 2025–2026

### Golden Jubilee Year

**Entries must be the unaided efforts of individual pupils.**

**Solutions must include explanations and answers without explanation will be given no credit.**

**Do not feel that you must hand in answers to all the questions.**

*CURRENT AND RECENT SPONSORS OF MATHEMATICAL CHALLENGE  
ARE*

*The Edinburgh Mathematical Society, The Maxwell Foundation,  
The London Mathematical Society and The Scottish International Education  
Trust.*

The Scottish Mathematical Council is indebted to the above for their generous support and gratefully acknowledges financial and other assistance from schools, universities and education authorities.

Particular thanks are due to the Universities of Aberdeen, Edinburgh Napier, Moray House, St Andrews, Stirling, Strathclyde and to George Heriot's School and Gryffe High School.

### Primary Division: Problems 2

- P1.** Julie has a 12 hour clock which displays midnight and noon as 12 00. She looks at the clock in the morning and realises that the time: 8 08, is a palindromic number.

How many palindromic times are there in a day using Julie's 12 hour clock?

Tom's clock is in 24 hour mode (so it displays midnight as 00 00 and noon as 12 00). When he looks at the clock in the morning it shows 08 08 which is not a palindrome and in the evening 20 08, again not a palindrome.

How many palindromic times does Tom's clock show in a day?

- P2.** Some people were asked to donate £1 each to charity. They all used only silver coins (5p, 10p, 20p, 50p) to make up their pound and no two of them used the same combination. I also used only silver coins to donate my pound, but it was inevitable that my combination of coins would repeat one already used. When all the coins were sorted we found that we had a whole number of pounds of each coin value.

Which coins did I use to make my pound?

And how much was collected in all?

**Question P3 is on the next side**

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— — — — - **CUT ALONG HERE** — — — —

Please write your solutions on A4 paper and staple the above form to them.

**Primary Division: Problems 2 (continued)**

**P3.** Going into the staffroom a few days ago I found six teachers there. Four of them were playing bridge and the other two had their heads down over a game of chess.

The Physics teacher was sitting on Dr Reid’s left, and Mr Clayton was on Miss Masson’s left.

Mr Wilson was drinking his tea and Miss Masson was offering her bridge partner, the history teacher, a coffee.

The Chemistry and French teachers were sitting back to back.

The Maths teacher is a confirmed tea drinker.

Ms Smith was just removing one of the Geography teacher’s knights.

Dr Reid was the Chemistry teacher’s bridge partner.

Mr Clayton and Mrs Finlay were playing as bridge partners.

Draw a plan showing where the teachers sat and what subject they taught.

*Note: The 4 bridge players sit at a square table with partners opposite to each other.*

**END OF PROBLEM SET 2**

CLOSING DATE FOR RECEIPT OF SOLUTIONS : 21 November 2025

**Look out for Problems 3 in January 2026!**

## MATHS CHALLENGES ARCHIVES

There are archives on: [www.wpr3.co.uk/MC-archive/P/index-P.html](http://www.wpr3.co.uk/MC-archive/P/index-P.html)

Here is a shortcut for your smartphone or tablet



MC website  
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