

RAM Maths Circle

Date: October 05, 2025
Krea University - TTK Road

The first session was about the questions that trigger further mathematical curiosity. The students were primed to ask questions as they work through a couple of well known board problems with some hidden challenges to discover. Kids got a toffee for every appropriate question they asked.

1 Some forms that questions take

- What if _____ ?
- What about _____ ?
- What happens when I do _____ ?
- I wonder _____ ?
- Is _____ true/false?
- How does _____ ?
- How many _____ ?
- Is there _____ ?

2 Problem 1 - Sudoku

Fill in the empty Sudoku board! (Figure 1) Write down each question that comes up to you. Call us and talk to us about them. Explore your questions. Share your findings with us.

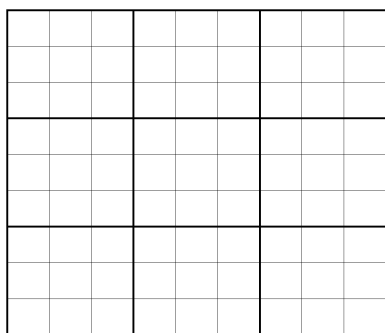


Figure 1: The empty sudoku board. Each column and row is expected to be filled with numbers 1-9 without repetition and so must each 3x3 box.

3 Problem 2 - Euler's board

Given an empty $n \times n$ grid, fill it with letter-number combinations $A_1, A_2, \dots, A_n, B_1, B_2, \dots, B_n$ and so on (there are $n \times n$ such unique letter-number combinations). The constraints are -

1. Each column and row should not repeat letters.
2. Each column and row should not repeat numbers.
3. All the $n \times n$ combinations must be used. i.e., no letter-number combination must be repeated on the board.

Work out the solutions for 2×2 , 3×3 , 4×4 , 5×5 , 6×6 and 7×7 .