RAM MATHS CIRCLE - BANGALORE

Session 5

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Grids by Paper Folding

We start with a square piece of paper. Our challenge is to divide the sheet into various grids without using any tool of measurement. We must make the desired grid only by paper folding.

1. We are not allowed to alter the size of the sheet.
2. We are not allowed to use a scale, compass, or any other object to measure length.
3. You can draw lines on the sheet while working. But in the end, you should be able to make the grids only by folding.

Challenge 1: Divide the sheet into a 8 x 8 grid.

Challenge 2: Divide the sheet into a 3 x 3 grid.

Challenge 3: Divide the sheet into a 5 x 5 grid.

Challenge 4: Divide the sheet into a 7 x 7 grid.

Challenge 5: Find all the possible m x n grids that can be made by paper folding for all natural numbers m & n between 1 to 12.

End of problem sheet