Maths Circle India

TIFR-STCS Maths Circle Team

Session 5: June 24, 2022

1   A Problem of Parity

Credits: Anna Burago, Mathematical Circles Diaries

Arun has a table with two rows and two columns (so that it has a total of four cells). He wants to put one of two numbers, either 0 or 1, in each cell, in such a way that the sum of the numbers in each row, as well as in each column, is even. In how many ways can he do this?

What if he started with a table with three rows and three columns? Four rows and four columns? Six rows and six columns?