The Russian cards problem
Project proposal

Group 11: s3249212, s3749185 and s3533603

1 Introduction

For our project, we created a solver that finds all possible solutions to variations of the Russian Cards problem. The Russian Cards problem describes a situation with three card players, called Alice, Bob and Eve, that have been given 3, 3 and 1 cards, respectively. The goal is for Alice to communicate to Bob via a public announcement the hand that Alice has, such that Bob understands which hand Alice has, but Eve does *not*. There are a number of possible announcements that Alice can make in logical form.

The Russian Card problem originally described this distribution of cards, denoted by 3-3-1, but can also be solved for different distributions, given some constraints. This is the version of the problem that we will consider in our project.

2 Theory

3 Results

4 Conclusion

5 Discussion