

The Othello Problem

Names of students in your group:

Submission: Each student must submit their answer in PDF form to Moodle by the end of the class. No email submissions are allowed. Google how to convert a Google doc to a PDF if you haven't done it before.

The Problem

You are in a completely dark room with Othello chips on the floor. These chips are black on one side and white on the other. You can feel around for the chips, but you cannot see which side is up because it is dark.

Question

There are 1017 Othello chips on the floor, and exactly 23 of them have the black side up. Divide the chips into two piles (every chip must be in one *and only one* of the piles) such that the two piles have the same number of chips with the black side up (they may have different numbers of chips with the white side up). How do you do it?