

Additional Problems.

Problem 1.6. There are some coins laying flat on the table, each with a head side and a tail side. Fifteen of them are heads up, the others are tails up. You can't feel, see or in any other way find out which side is up, but you can turn them upside down. Split the coins into two piles such that there is the same number of heads in each pile.

Problem 1.7. For an experiment a researcher puts a dot of invisible ink on a piece of paper and also draws a square with regular ink on the paper. In the experiment, a subject will draw a visible straight line on the page and the researcher, who has on special eyeglasses for spotting the dot, will tell the subject which side of the line the dot of invisible ink is on. If the dot is on the line, the researcher will tell the subject it is on the line. What is the smallest number of straight lines the subject needs to draw to figure out for sure whether the invisible dot lies in the square?

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