

Problem sheet 10

Problems will be discussed at the problem class on **January 18, 2017**.

Problem 20.

Calculate $\chi_k(H(T))$ for each $k \geq 2$ and each rooted tree T .

Problem 21.

For each integer n give a finite 2-colored set of at least n points in \mathbb{R}^2 such that none of the color classes is collinear (in particular is not empty) and

- a) every ordinary line contains a point from either color.
- b) every ordinary line contains two points of the same color.

Puzzle 10.

What is the largest integer n such that any set of n dots on the table can be covered with no more than n non-overlapping coins of the same size?