

Combinatorics Reading Group

December 25, 2019

1 Objective

To learn about combinatorics beyond those in math olympiads in a more rigorous fashion. To do so, we finish *Applied Combinatorics* by April 2020.

2 Schedule

Weekly meetings are held on Saturdays 4-6 pm at Bahen to discuss previous problems and plan new problems. Members are expected to spend around 5 hours per week reading through the chapters and doing the planned problems at the end of chapter. For 2019, we plan to complete chapters 1-5.

3 Content

3.1 Week 1

Read **chapter 2, Strings, Sets, and Binomial Coefficients**. Do problems 7,8,16,17,18,20,21,22,26,29,30,31,32,33.

3.2 Week 2

Read **chapter 3, Induction**. Do problems 1,4,5,7,9,12,15,18.

3.3 Week 3

Read **chapter 4, Combinatorial Basic**.

3.4 Week 4

Read **chapter 5, Graph Theory**. Do problems 1,2,3,4,6,8,22,32,33.