Mathcamp 2019 Tentative Four-Week Schedule

Time	Week 1	Week 2	Week 3	Week 4
9:10	A Convoluted Process 🔥🔥🔥 (Ben)	Eigenstuff and Beyond 🔥🔥🔥 (Mark)	Fundamental Groups 🔥🔥🔥 (Kayla)	Long Live Determinants 🔥🔥🔥 (Will)
	Beyond Inclusion/Exclusion 🔥🔥🔥 (*John Mackey*)	Galois Correspondence of Covering Spaces 🔥🔥🔥🔥 (Apurva)	Induced Subgraphs 🔥🔥 (Pesto)	Musical Lattices 🔥🔥 (J-Lo)
	Harmonic Analysis on Finite Abelian Groups 🔥🔥🔥 (*Mike Orrison*)	Hedetniemi's Conjecture 🔥🔥 (*Yuval Wigderson*)	Systems of Differential Equations 🔥🔥🔥 (Mark)	Root Systems 🔥🔥 (Kevin)
	~~Intro to Number Theory 🔥🔥~~ (Gabrielle)	Intro to Algebraic Number Theory 🔥🔥🔥 (J-Lo)	The Weierstrass $\wp$ Function 🔥🔥🔥🔥 (Assaf)	The Mathematics of Fairness 🔥 (Mira)
	Knot Theory 🔥🔥 (Kayla)	[**HR**] Mathcamplandia 🔥 (*Luke Joyner*)	Young Tableaux and Combinatorics 🔥🔥 (Shiyue)	Tychonoff's Theorem 🔥🔥🔥🔥 (Ben)
10:10	Studying Betting Games with Other Betting Games 🔥🔥 (Bill)	Algorithms in Number Theory 🔥🔥 (Misha)	[**HR**] From High School Arithmetic to Group Cohomology 🔥🔥 (Apurva)	~~Game Theory 🔥 (Kayla)~~
	Homological Algebra 🔥🔥🔥🔥 (*Jeff Hicks*)	Functions of a Complex Variable (1/2) 🔥🔥🔥 (Mark)	Functions of a Complex Variable (2/2) 🔥🔥🔥 (Mark)	Reciprocity Laws in Algebraic Number Theory 🔥🔥🔥🔥 (Eric)
	Infinite Graphs 🔥🔥🔥 (*Mia Smith*)	[**HR**] Intro to Ring Theory 🔥🔥🔥 (Will)	~~Non-Euclidean Geometries 🔥~~ (Véronique)	Riemann Surfaces 🔥🔥🔥 (Apurva)
	[**HR**] Mathcamp Crash Course 🔥 (Kevin)	Sperner, Monsky, and Brouwer 🔥🔥 (*Laura Pierson*) / Cap Sets 🔥🔥 (*Elizabeth Chang-Davidson*)	[**HR**] Probabilistic Models and Machine Learning 🔥🔥🔥 (Mira)	TBA (*Zach Abel*)
	Problem-Solving Cornucopia 🔥→🔥🔥🔥 (Mark)	Take it to the Limit 🔥🔥🔥 (Ben) / Chaos in Voting 🔥 (Ben)	Units in Algebraic Number Theory 🔥🔥🔥 (Kevin)	Young Tableaux and Enumerative Geometry 🔥🔥🔥 (Shiyue)
11:10	Intro to Gerrymandering 🔥 (Assaf)	All About Quaternions (1/2) 🔥🔥🔥 (Assaf + J-Lo)	All About Quaternions (2/2) 🔥🔥🔥 (Assaf + J-Lo)	Bhargava's Cube 🔥🔥🔥 (*Dave Savitt*) / Magic 🔥🔥 (*Don Laackman*)
	Intro to Group Theory 🔥🔥 (Shiyue)	Discrete Derivatives 🔥🔥 (Tim!)	Math and Art (*Olivia Walch*)	Randomized Algorithms 🔥🔥 (Bill)
	Logic and Arithmetic 🔥🔥🔥🔥 (*Steve Schweber*)	Group Theory & Rubik's Cubes 🔥🔥🔥 (Gabrielle)	Measure Theory 🔥🔥🔥🔥 (Ben)	[**HR**] Representation Theory of Associative Algebra 🔥🔥🔥🔥 (Véronique)
	Multivariable Calculus Crash Course 🔥🔥🔥 (Mark)	[**HR**] Limits 🔥🔥 (Véronique)	~~Problem Solving: Induction 🔥🔥~~ (Misha)	The Hopf–Poincaré Index Formula 🔥🔥🔥 (Assaf)
	Why We Like Complex Projective Space 🔥🔥 (Will)	[**HR**] Multi-Coefficient Solving of Polynomials 🔥🔥🔥🔥 (Pesto)	Quantum Mechanics 🔥🔥🔥 (*Nic Ford*)	Zeta Functions 🔥🔥🔥 (*Sachi Hashimoto*)
1:10	Cluster Algebras 🔥🔥🔥 (Véronique)	~~Analysis with Prime Numbers 🔥🔥~~ (Eric)	Breaking Bad (RSA Encryption) 🔥🔥🔥 (Michael)	(Dys)functional Analysis 🔥🔥 (*Viv Kuperberg*)
	Infinite Trees (1/2) 🔥🔥🔥 (Susan)	Infinite Trees (2/2) 🔥🔥🔥 (Susan)	Everything You Ever Wanted to Know About Finite Fields 🔥🔥🔥 (Eric)	[**HR**] Counting Points over Finite Fields 🔥🔥🔥🔥 (*Aaron Landesman*)
	[**HR**] Linear Algebra 🔥🔥🔥 (Apurva)	The Probabilistic Method 🔥🔥🔥 (Bill)	~~Permutation Combinatorics 🔥🔥~~ (Bill)	Infinite-Ness 🔥🔥🔥 (Susan)
	Not Your Grandparents' Algorithms 🔥🔥 (*Sam Gutekunst*)	Topology 🔥🔥 (Kayla)	Polytopes (*Angélica Osorno*) / Fermat's Last Theorem 🔥🔥 (Gabrielle)	Matching Bears With Campers 🔥🔥 (Rice)
	Change Ringing 🔥🔥 (Eric + Tim!)	Young Tableaux and Representation Theory 🔥🔥🔥🔥 (Shiyue)	[**HR**] Quiver Representations 🔥🔥🔥🔥 (Will)	Unique and Nonunique Factorization 🔥🔥🔥 (Gabrielle)

Key: [**HR**]—Homework Required