Mathcamp 2021 Four-Week Schedule

Time	Week 1	Week 2	Week 3	Week 4
9 am	Better sleep through modeling 🌶️ (*Olivia Walch*) ‖ Better sheep through modeling 🌶️ (J-Lo)	A pair of fractal curves 🌶️🌶️ (Ben) ‖ The pirate game 🌶️ (Ben)	Curvature lies within 🌶️🌶️ (*Apurva Nakade*)	Archers at the ready! 🌶️🌶️🌶️🌶️ (Zoe)
	Insert geometry joke here 🌶️ (Zoe)	Euclidean geometry beyond Euclid 🌶️🌶️ (*Yuval Wigderson*) ‖ Algorithms on your phone 🌶️🌶️ (*Agustin Garcia*)	Finite fields and how to find them 🌶️🌶️🌶️ (Viv)	Causal inference: how can we prove that X causes Y? 🌶️ (*Mira Bernstein*)
	[HR] Introduction to group theory 🌶️🌶️ (Samantha)	Functions of a complex variable (1 of 2) 🌶️🌶️🌶️ (Mark)	Quadratic forms 🌶️🌶️ (Gabrielle)	The 17 worlds of planar ants 🌶️ (*Dror Bar-Natan*) ‖ The probabilistic method 🌶️🌶️ (Mia)
	Sparsest cut 🌶️🌶️🌶️ (Alan)	**[HR]** Model theory 🌶️🌶️🌶️ (Aaron)	The calculus of variations 🌶️🌶️🌶️🌶️ (Ben)	The derivative as a linear transformation 🌶️🌶️ (Alan) ‖ The inverse and implicit function theorems 🌶️🌶️🌶️ (Alan)
	Topics in number theory 🌶️🌶️ (Misha)	Representations of symmetric groups 🌶️🌶️🌶️🌶️ (Samantha)	The Schwarzschild solution 🌶️🌶️🌶️🌶️ (*Jon Tannenhauser*)	Trail mix 🌶️🌶️ → 🌶️🌶️🌶️ (Mark)
10 am	How to count primes 🌶️🌶️ (Viv)	Hilbert's 3rd problem 🌶️🌶️🌶️🌶️ (*Steve Schweber*)	Factoring large prime numbers 🌶️🌶️ (Linus)	Evolution of random graphs 🌶️🌶️🌶️ (Misha)
	Incidence combinatorics 🌶️🌶️🌶️ (Aaron)	Introduction to graph theory 🌶️🌶️ (Marisa)	Functions of a complex variable (2 of 2) 🌶️🌶️🌶️ (Mark)	Knot theory 🌶️🌶️ (Emily)
	Introduction to quantum computing 🌶️🌶️ (Jorge)	Sit down and (don't) solve SAT? 🌶️ (Zoe)	Lights, camera, group actions! 🌶️🌶️🌶️ (Emily)	Nonunique factorization in the Chicken McNugget monoid 🌶️🌶️ (Gabrielle)
	[HR] Mathcamp crash course 🌶️ (Assaf)	The special theory of relativity 🌶️🌶️🌶️ (Jorge)	Myth of the 13 Archimedean solids 🌶️🌶️ (Lizka) ‖ Lattices that make up the world 🌶️🌶️ (*Elizabeth Chang-Davidson*)	Nowhere differentiable but continuous functions are everywhere! 🌶️🌶️🌶️ (Charlotte)
	Multivariable calculus crash course 🌶️🌶️🌶️ (Mark)	Topology through Morse theory 🌶️🌶️🌶️ (*Kayla Wright*)	Surreal numbers 🌶️🌶️ (Aaron)	The fundamental theorem of algebra and its many proofs 🌶️🌶️🌶️🌶️ (Jorge)
Noon	A Combinatorial Proof of the Jacobi Triple Product Identity 🌶️🌶️🌶️🌶️ (Gabrielle)	Combinatorial species 🌶️🌶️🌶️ (Linus)	Graph colorings 🌶️🌶️ (Mia)	Finite Fourier analysis 🌶️🌶️🌶️ (Mike Orrison)
	Continued fractions 🌶️🌶️ (Ben)	Dirichlet's class number formula 🌶️🌶️🌶️🌶️ (Viv)	Kleinian groups and fractals 🌶️🌶️🌶️ (*Dan Gulotta*)	Learning online learning online 🌶️ (*Eric Neyman*)
	Cryptography and how to break it 🌶️🌶️🌶️ (Linus)	**[HR]** Introduction to analysis 🌶️🌶️ (Alan & Charlotte)	Noncommutative ring theory (1 of 2) 🌶️🌶️🌶️🌶️ (Susan)	Non-Euclidean geometries 🌶️ (Samantha)
	[HR] Introduction to linear algebra 🌶️🌶️ (Emily)	**[HR]** Introduction to ring theory 🌶️🌶️🌶️ (Susan)	Using the Cantor set to classify (infinite) surfaces 🌶️🌶️🌶️ (Assaf)	Noncommutative ring theory (2 of 2) 🌶️🌶️🌶️🌶️ (Susan)
	Kakeya sets over finite fields 🌶️🌶️ (Charlotte)	Problem solving: geometric transformations 🌶️🌶️ (Misha)	What are your numbers worth? 🌶️ (Eric)	PDEs part 1: Laplace's equation 🌶️🌶️🌶️🌶️ (Assaf)

Key: **[HR]**—Homework Required