

Mathcamp 2024 — Week 5 Schedule

		Tuesday 7/30	Wednesday 7/31	Thursday 8/1	Friday 8/2	
9:10–10 am	M103	Mandatory Assembly (McIntyre 103)	T171	Philosophy and mathematics 🍷 (Athina)	Perfect numbers 🍷🍷 (Mark)	
			T197	Medians, Convex Sets and Partitions 🍷🍷🍷 (Arya)		
			T387	n^{n-2} proofs of Cayley's tree theorem 🍷 (Zach)	Problem solving: lecture theory 🍷 (Misha)	
			W218	Fourier series 🍷🍷 (Alan Chang)		
			W402	Cantor's leaky tent 🍷🍷 (Ben)	No class	
10:10–11 am	T171	Philosophy and mathematics	Ultrafilters and voting 🍷 (Krishan)	Monoids in the category of endofunctors 🍷🍷🍷 (Della)	MCSP: Mermaids Contained in Swimming Pools (Gershgorin Circle Theorem) 🍷 (Kailee)	
	T197	Medians, Convex Sets and Partitions	Fermat is False in Finite Fields (FFFF) 🍷🍷 (Travis)	4 dimensions is easy 🍷 (Travis)	Slaying the hydra 🍷 (Della)	
	T387	n^{n-2} proofs of Cayley's tree theorem	The most depressing theorem I know 🍷 (Mira)	Democracy can always be gamed 🍷 (Mira)	The politics of rounding fractions 🍷 (Mira)	
	W218	Fourier series	T193	A tour of Hensel's world 🍷 (Mark)	The fastest algorithm nobody uses 🍷🍷 (Shimon Schlessinger)	Statistical mechanics 🍷 (Max Misterka)
	W402	Cantor's leaky tent	No class			
11:10 am–noon	T171	The magic of determinants 🍷🍷 (Mark)			The Cayley-Hamilton theorem 🍷🍷 (Mark)	
	T197	Intro to knot theory (and to Alyona's undergrad thesis) 🍷 (Alyona)				
	T387	Unlikely maths 🍷🍷 (Misha)				
	W218	Foliation theory 🍷 (Katie Mann)			The seven circles theorem 🍷 (Zach)	
	W402	Proof that the universe has a beginning 🍷🍷🍷 (Laithy)				
Lunch						
1:10–2 pm	T171	Grammatical group generation 🍷 (Eric)		Elliptic curves with complex multiplication 🍷 (Chloe)		
	T193	Probabilistic programming: human intelligence as computation (hour 1 of 2) 🍷 (Vikash Mansinghka & Josh Tenenbaum)		Counting solutions to equations mod p 🍷🍷 (Kevin)		
	T197	Exploring the Catalan numbers 🍷 (Mark)	Wizards in hats 🍷🍷→🍷🍷 (Della)	Colorful puzzles & Dehn functions 🍷 (Sonya)		
	T387	Calculus without calculus 🍷 (Tim!)		The finite field Kakeya conjecture 🍷 (Narmada)		
	W402	The Eras Tour: Blank Space 🍷 (Glenn, Chloe, & Jennifer)	The Eras Tour: Begin Again 🍷 (Glenn & Jennifer)	The Eras Tour: Love Story 🍷 (Glenn & Jennifer)	The Eras Tour: All Too Well (50 Minute Version) 🍷 (Glenn & Jennifer)	
2:10–3 pm	T171	Determined to Determinant: Leibniz Edition 🍷 (Kailee)	Determined to Determinant: Perfect Matching Edition 🍷 (Kailee)	18446744069414584321 🍷🍷 (Eric)	Burnside's Lemma 🍷🍷 (William Burnside)	
	T193	Probabilistic programming: human intelligence as computation (hour 2 of 2)		Kursed Counterexamples 🍷 (Kevin, Krishan, & Zach)	Fractal Dimensions – \log_2 🍷🍷 (Hermann Minkowski)	
	T197	The cyclic polytope 🍷 (Sonya)		Problem solving: tetrahedra 🍷🍷🍷 (Misha)	The mathematics of polygamy (and bankruptcy) 🍷 (Rabbi Judah ha-Nasi)	
	T387	Spec of a ring 🍷🍷🍷 (Kevin)		The Putnam 🍷 (Mark)	A game you can't play (but would win if you could) 🍷 (Ernst Zermelo)	
3–4 pm	Thompson	TAU: Partial Interval				
4:10–5 pm	M103 (Colloquium)	From rotating needles to projections of fractals (Alan Chang)	Orderable groups (Katie Mann)	More PI (TAU)	Project fair (in Thompson)	

Evening Future of You

Team Problem Solving

Future of Mathcamp

Talent Show

Meals: Breakfast 7–9 am, Lunch 11:30 am–1:30 pm, Dinner 4:30–6:30 pm (Wheelock)

Key: M = McIntyre T = Thompson, W = Weyerhaeuser,