Name:

Mathcamp 2004, week 1: Tuesday 13th July to Saturday 17th July						
Period	**Room**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Saturday**
~~9~~10	**L413**	Proof techniques * (Dan)	Proof techniques * (Dan)	Proof techniques * (Dan)	Proof techniques * (Dan)	Proof techniques * (Dan)
	A5	Sums of two squares ** (Brenda)	Primes on a chessboard ** (Brenda)	The slope problem ** (Brenda)	Math of Juggling ** (Anti)	Math of Juggling ** (Anti)
	M405	Abstract Algebra **-*** (Mark K, week 1 of 2)	Abstract Algebra **-*** (Mark K, week 1 of 2)	Abstract Algebra **-*** (Mark K, week 1 of 2)	Abstract Algebra **-*** (Mark K, week 1 of 2)	Abstract Algebra **-*** (Mark K, week 1 of 2)
	L302	Geometric Group Theory **** (Mark Sapir, week 1 of 2)	Geometric Group Theory **** (Mark Sapir, week 1 of 2)	Geometric Group Theory **** (Mark Sapir, week 1 of 2)	Geometric Group Theory **** (Mark Sapir, week 1 of 2)	Geometric Group Theory **** (Mark Sapir, week 1 of 2)
10:10-11:10	**M405**	Probability * (Kenny)	Probability * (Kenny)	Probability * (Kenny)	Probability * (Kenny)	Probability * (Kenny)
	A5	The Parallel Postulate ** (Irina Kogan)	The Parallel Postulate ** (Irina Kogan)	The Parallel Postulate ** (Irina Kogan)	The Parallel Postulate ** (Irina Kogan)	The Parallel Postulate ** (Irina Kogan)
	L302	Structures and languages **-*** (Alice)	Structures and languages **-*** (Alice)	Structures and languages **-*** (Alice)	Structures and languages **-*** (Alice)	Structures and languages **-*** (Alice)
	L413	Cryptography **** (Moses, wk 1 of 4)	Cryptography **** (Moses, wk 1 of 4)	Cryptography **** (Moses, wk 1 of 4)	Cryptography **** (Moses, wk 1 of 4)	Cryptography **** (Moses, wk 1 of 4)
11:20-12:20	**See class**	Complex numbers and quaternions * (Jim, **L302**)	Complex numbers and quaternions * (Jim, **L302**)	Complex numbers and quaternions * (Jim, **L302**)	Beginning Zome workshop * (Moses, **Leonard 101A**)	Beginning Zome workshop * (Moses, **Leonard 101A**)
	A5	Calculus ** (Anti, week 1 of 2)	Calculus ** (Anti, week 1 of 2)	Calculus ** (Anti, week 1 of 2)	Calculus ** (Anti, week 1 of 2)	Calculus ** (Anti, week 1 of 2)
	M405	Gems in Geometry *** (Yvonne)	Gems in Geometry *** (Yvonne)	Gems in Geometry *** (Yvonne)	Gems in Geometry *** (Yvonne)	Gems in Geometry *** (Yvonne)
	L413	The Mysterious Numbers of Prof. Hensel (Fernando Gouvêa)	The Mysterious Numbers of Prof. Hensel (Fernando Gouvêa)	The Mysterious Numbers of Prof. Hensel (Fernando Gouvêa)	The Mysterious Numbers of Prof. Hensel (Fernando Gouvêa)	The Mysterious Numbers of Prof. Hensel (Fernando Gouvêa)
Lunch		**Lunch**	**Lunch**	**Lunch**	**Lunch**	**Lunch and advisor meetings**
1:20-2:20	**L302**	Basic number theory *-** (Mark K, week 1 of 2)	Basic number theory *-** (Mark K, week 1 of 2)	Basic number theory *-** (Mark K, week 1 of 2)	Basic number theory *-** (Mark K, week 1 of 2)	**Advisor meetings, continued**
	L413	Linear Algebra ** (Anti/Yvonne, week 1 of 2)	Linear Algebra ** (Anti/Yvonne, week 1 of 2)	Linear Algebra ** (Anti/Yvonne, week 1 of 2)	Linear Algebra ** (Anti/Yvonne, week 1 of 2)	
	M405	Gauss **-*** (Dave, week 1 of 4)	Gauss **-*** (Dave, week 1 of 4)	Gauss **-*** (Dave, week 1 of 4)	Gauss **-*** (Dave, week 1 of 4)	
	A5	Turing Machines **-*** (Moses, week 1 of 2)	Turing Machines **-*** (Moses, week 1 of 2)	Turing Machines **-*** (Moses, week 1 of 2)	Turing Machines **-*** (Moses, week 1 of 2)	Most 1:20pm Tues-Fri classes continue in the same classrooms at 2:30pm Sat, in place of 2:30pm Tues-Fri classes
	M103	Olympiad Problem Solving **** (Dorin, week 1 of 5)	Olympiad Problem Solving **** (Dorin, week 1 of 5)	Olympiad Problem Solving **** (Dorin, week 1 of 5)	Olympiad Problem Solving **** (Dorin, week 1 of 5)	
2:30-3:30	**M405**	Measuring Earth * (Brenda)	Measuring Earth * (Brenda)	Measuring Earth * (Brenda)	Measuring Earth * (Brenda)	Basic number theory *-** (Mark K, week 1 of 2)
	L302	Introductory Problem Solving *-** (Dorin, week 1 of 5)	Introductory Problem Solving *-** (Dorin, week 1 of 5)	Introductory Problem Solving *-** (Dorin, week 1 of 5)	Introductory Problem Solving *-** (Dorin, week 1 of 5)	Linear Algebra ** (Anti/Yvonne, week 1 of 2)
	A5	Combinatorial Game Theory ** (Alfonso, week 1 of 4)	Combinatorial Game Theory ** (Alfonso, week 1 of 4)	Combinatorial Game Theory ** (Alfonso, week 1 of 4)	Combinatorial Game Theory ** (Alfonso, week 1 of 4)	Powers and Strings *** (Brenda, **M405**)
	L413	Combinatorial Topology *** (Jim/Chris, week 1 of 3)	Combinatorial Topology *** (Jim/Chris, week 1 of 3)	Combinatorial Topology *** (Jim/Chris, week 1 of 3)	Combinatorial Topology *** (Jim/Chris, week 1 of 3)	Turing Machines **-*** (Moses, week 1 of 2)
	M103	Set Theory (Moore Method) **** (Kenny, week 1 of 4)	Set Theory (Moore Method) **** (Kenny, week 1 of 4)	Set Theory (Moore Method) **** (Kenny, week 1 of 4)	Set Theory (Moore Method) **** (Kenny, week 1 of 4)	Olympiad Problem Solving **** (Dorin, week 1 of 5)
3:30-5		**Cookies and Math!** Central Lounge (Leonard)	**Cookies and Math!** Central Lounge (Leonard)	**Cookies and Math!** Central Lounge (Leonard)	**Cookies and Math!** Central Lounge (Leonard)	**Relays!** Meet in Arey 5 if raining, main quad if fine

Room key: A5, Arey 5; L302, Lovejoy 302; L413, Lovejoy 413; M103, Mudd 103; M405, Mudd 405; R233, Roberts 233.

DRAFT **DRAFT** **DRAFT** **Name:**

Mathcamp 2004, week 2: Tuesday 20th July to Saturday 24th July

Period	Tuesday	Wednesday	Thursday	Friday	Saturday
9~~10~~	**Assembly**	Carl Pomerance	Carl Pomerance	Carl Pomerance	Carl Pomerance
		Inversive Geometry ** (Brenda)	Inversive Geometry ** (Brenda)	Inversive Geometry ** (Brenda)	Inversive Geometry ** (Brenda)
		Abstract Algebra **-*** (Mark K, week 2 of 2)	Abstract Algebra **-*** (Mark K, week 2 of 2)	Abstract Algebra **-*** (Mark K, week 2 of 2)	Abstract Algebra **-*** (Mark K, week 2 of 2)
		Geometric Group Theory **** (Mark Sapir, week 2 of 2)	Geometric Group Theory **** (Mark Sapir, week 2 of 2)	Geometric Group Theory **** (Mark Sapir, week 2 of 2)	Geometric Group Theory **** (Mark Sapir, week 2 of 2)
10:10—11:10	Carl Pomerance colloquium	Philosophy of Probability * (Kenny)	Philosophy of Probability * (Kenny)	Philosophy of Probability * (Kenny)	Philosophy of Probability * (Kenny)
		Tilings and tesselations ** (Yvonne)	Tilings and tesselations ** (Yvonne)	Tilings and tesselations ** (Yvonne)	Tilings and tesselations ** (Yvonne)
		Wand of Compactness **-*** (Alice)	Wand of Compactness **-*** (Alice)	Wand of Compactness **-*** (Alice)	Wand of Compactness **-*** (Alice)
		What is distance? *** (Dan)	What is distance? *** (Dan)	What is distance? *** (Dan)	What is distance? *** (Dan)
		Cryptography **** (Moses, wk 2 of 4)	Cryptography **** (Moses, wk 2 of 4)	Cryptography **** (Moses, wk 2 of 4)	Cryptography **** (Moses, wk 2 of 4)
11:20—12:20	Strategies for TV games * (Alfonso)	Strategies for TV games * (Alfonso)	Brenda *	Brenda *	Brenda *
	Calculus ** (Anti, week 2 of 2)	Calculus ** (Anti, week 2 of 2)	Calculus ** (Anti, week 2 of 2)	Calculus ** (Anti, week 2 of 2)	Calculus ** (Anti, week 2 of 2)
	Strange Old Stuff (Fernando Gouvêa)	Strange Old Stuff (Fernando Gouvêa)	Strange Old Stuff (Fernando Gouvêa)	Strange Old Stuff (Fernando Gouvêa)	Strange Old Stuff (Fernando Gouvêa)
	Arithmetic on planes **** (Jim)	Arithmetic on planes **** (Jim)	Arithmetic on planes **** (Jim)	Arithmetic on planes **** (Jim)	Arithmetic on planes **** (Jim)
Lunch	**Lunch**	**Lunch**	**Lunch**	**Lunch**	**Lunch and advisor meetings**
1:20—2:20	Basic number theory *-** (Mark K, week 2 of 2)	Basic number theory *-** (Mark K, week 2 of 2)	Basic number theory *-** (Mark K, week 2 of 2)	Basic number theory *-** (Mark K, week 2 of 2)	**Advisor meetings, continued** Most 1:20pm Tues-Fri classes continue in the same classrooms at 2:30pm Sat, in place of 2:30pm Tues-Fri classes
	Linear Algebra ** (Anti/Yvonne, week 2 of 2)	Linear Algebra ** (Anti/Yvonne, week 2 of 2)	Linear Algebra ** (Anti/Yvonne, week 2 of 2)	Linear Algebra ** (Anti/Yvonne, week 2 of 2)	
	Gauss **-*** (Dave, week 2 of 4)	Gauss **-*** (Dave, week 2 of 4)	Gauss **-*** (Dave, week 2 of 4)	Gauss **-*** (Dave, week 2 of 4)	
	Turing Machines **-*** (Moses, week 2 of 2)	Turing Machines **-*** (Moses, week 2 of 2)	Turing Machines **-*** (Moses, week 2 of 2)	Turing Machines **-*** (Moses, week 2 of 2)	
	Olympiad Problem Solving **** (Dorin, week 2 of 5)	Olympiad Problem Solving **** (Dorin, week 2 of 5)	Olympiad Problem Solving **** (Dorin, week 2 of 5)	Olympiad Problem Solving **** (Dorin, week 2 of 5)	
2:30—3:30	Finite geometries * (Alice)	Finite geometries * (Alice)	Finite geometries * (Alice)	Finite geometries * (Alice)	Basic number theory *-** (Mark K, week 2 of 2)
	Introductory Problem Solving *-** (Dorin, week 2 of 5)	Introductory Problem Solving *-** (Dorin, week 2 of 5)	Introductory Problem Solving *-** (Dorin, week 2 of 5)	Introductory Problem Solving *-** (Dorin, week 2 of 5)	Linear Algebra ** (Anti/Yvonne, week 2 of 2)
	Combinatorial Game Theory ** (Alfonso, week 2 of 4)	Combinatorial Game Theory ** (Alfonso, week 2 of 4)	Combinatorial Game Theory ** (Alfonso, week 2 of 4)	Combinatorial Game Theory ** (Alfonso, week 2 of 4)	Hopf fibration *** (Chris)
	Combinatorial Topology *** (Jim/Chris, week 2 of 3)	Combinatorial Topology *** (Jim/Chris, week 2 of 3)	Combinatorial Topology *** (Jim/Chris, week 2 of 3)	Combinatorial Topology *** (Jim/Chris, week 2 of 3)	Turing Machines **-*** (Moses, week 2 of 2)
	Set Theory (Moore Method) **** (Kenny, week 2 of 4)	Set Theory (Moore Method) **** (Kenny, week 2 of 4)	Set Theory (Moore Method) **** (Kenny, week 2 of 4)	Set Theory (Moore Method) **** (Kenny, week 2 of 4)	Olympiad Problem Solving **** (Dorin, week 2 of 5)
3:30-5	**Cookies and Math!** Central Lounge (Leonard)	**Cookies and Math!** Central Lounge (Leonard) How to Write Math Good * (Moses, session 1 of 4)	**Cookies and Math!** Central Lounge (Leonard)	**Cookies and Math!** Central Lounge (Leonard)	**Relays!** Meet in Arey 5 if raining, main quad if fine

DRAFT **DRAFT** **DRAFT** **Name:**

Mathcamp 2004, week 3: Tuesday 27th July to Saturday 31st July

Period	Tuesday	Wednesday	Thursday	Friday	Saturday
~~9~~10	**Assembly**	Lambda Calculus *-** (Jim)	Lambda Calculus *-** (Jim)	Lambda Calculus *-** (Jim)	Lambda Calculus *-** (Jim)
		Hidden Markov Models ** (Mira)	Hidden Markov Models ** (Mira)	Hidden Markov Models ** (Mira)	Hidden Markov Models ** (Mira)
		Billiards *** (Yvonne, week 1 of 2)	Billiards *** (Yvonne, week 1 of 2)	Billiards *** (Yvonne, week 1 of 2)	Billiards *** (Yvonne, week 1 of 2)
		Olympiad Problem Solving **** (Dorin, week 3 of 5)	Olympiad Problem Solving **** (Dorin, week 3 of 5)	Olympiad Problem Solving **** (Dorin, week 3 of 5)	Olympiad Problem Solving **** (Dorin, week 3 of 5)
10:10—11:10	Arts and crafts in geometry * (Yvonne/Brenda)	Arts and crafts in geometry * (Yvonne/Brenda)	Adding things up * (Julian)	Adding things up * (Julian)	Meep's choice *
	Games in logic, parts I, II **-*** (Alice)	Games in logic, parts I, II **-*** (Alice)	Games in logic, parts I, II **-*** (Alice)	Games in logic, parts I, II **-*** (Alice)	Games in logic, parts I, II **-*** (Alice)
	Point-set topology *** (Alfonso/Anti)	Point-set topology *** (Alfonso/Anti)	Point-set topology *** (Alfonso/Anti)	Point-set topology *** (Alfonso/Anti)	Point-set topology *** (Alfonso/Anti)
	Cryptography **** (Moses, wk 3 of 4)	Cryptography **** (Moses, wk 3 of 4)	Cryptography **** (Moses, wk 3 of 4)	Cryptography **** (Moses, wk 3 of 4)	Cryptography **** (Moses, wk 3 of 4)
11:20—12:20	The Rainbow Game (Mira)	Josh Tenenbaum colloquium	Digital Image Compression (Hany Farid)	Big Numbers * (Julian)	Is 10^10^100 finite? * (Anti)
				Calculus without calculus ** (Brenda)	Calculus without calculus ** (Brenda)
				Digital Image Enhancement (Hany Farid)	Huffman Coding (Hany Farid)
				Fractional Graph Theory *** (Ari)	Fractional Graph Theory *** (Ari)
Lunch	**Lunch**	**Lunch**	**Lunch**	**Lunch**	**Lunch and advisor meetings**
1:20—2:20	Fractals * (Moses)	Fractals * (Moses)	Fractals * (Moses)	Josh Q and A	**Advisor meetings, continued**
	Gauss **-*** (Dave, week 3 of 4)	Gauss **-*** (Dave, week 3 of 4)		Gauss **-*** (Dave, week 3 of 4)	
	Projective geometry *** (Brenda)	Projective geometry *** (Brenda)	Digital Steganography (Hany Farid)	Projective geometry *** (Brenda)	
	Constructivism *** (Anti)	Constructivism *** (Anti)	Constructivism *** (Anti)	Constructivism *** (Anti)	Most 1:20pm Tues-Fri classes continue in the same classrooms at 2:30pm Sat, in place of 2:30pm Tues-Fri classes
	Representation theory **** (Mark)	Representation theory **** (Mark)	Representation theory **** (Mark)	Representation theory **** (Mark)	
2:30—3:30	Physics without physics * (Ari)	Physics without physics * (Ari)	Physics without physics * (Ari)	Feeling of power * (Anti)	Josh Q and A
	Introductory Problem Solving *-** (Dorin, week 3 of 5)	Introductory Problem Solving *-** (Dorin, week 3 of 5)	Introductory Problem Solving *-** (Dorin, week 3 of 5)	Introductory Problem Solving *-** (Dorin, week 3 of 5)	Gauss **-*** (Dave, week 3 of 4)
	Combinatorial Game Theory ** (Alfonso, week 3 of 4)	Combinatorial Game Theory ** (Alfonso, week 3 of 4)	Combinatorial Game Theory ** (Alfonso, week 3 of 4)	Combinatorial Game Theory ** (Alfonso, week 3 of 4)	Projective geometry *** (Brenda)
	Combinatorial Topology *** (Jim/Chris, week 3 of 3)	Combinatorial Topology *** (Jim/Chris, week 3 of 3)	Combinatorial Topology *** (Jim/Chris, week 3 of 3)	Combinatorial Topology *** (Jim/Chris, week 3 of 3)	Constructivism *** (Anti)
	Set Theory (Moore Method) **** (Kenny, week 3 of 4)	Set Theory (Moore Method) **** (Kenny, week 3 of 4)	Set Theory (Moore Method) **** (Kenny, week 3 of 4)	Set Theory (Moore Method) **** (Kenny, week 3 of 4)	Representation theory **** (Mark)
3:30-5	**Cookies and Math!** Central Lounge (Leonard)	**Cookies and Math!** Central Lounge (Leonard) How to Write Math Good * (Moses, session 2 of 4)	**Cookies and Math!** Central Lounge (Leonard)	**Cookies and Math!** Central Lounge (Leonard)	**Relays!** Meet in Arey 5 if raining, main quad if fine

DRAFT **DRAFT** **DRAFT** **Name:**

Mathcamp 2004, week 4: Tuesday 3rd August to Saturday 7th August

Period	Tuesday	Wednesday	Thursday	Friday	Saturday
~~9~~10	**Assembly**	Voting Theory * (Jeremy Martin)	Voting Theory * (Jeremy Martin)	Voting Theory * (Jeremy Martin)	Voting Theory * (Jeremy Martin)
		Algebraic data types ** (Jim)	Algebraic data types ** (Jim)	Algebraic data types ** (Jim)	Algebraic data types ** (Jim)
		Billiards *** (Yvonne, week 2 of 2)	Billiards *** (Yvonne, week 2 of 2)	Billiards *** (Yvonne, week 2 of 2)	Billiards *** (Yvonne, week 2 of 2)
		Uniform Convergence *** (Ari)	Uniform Convergence *** (Ari)	Uniform Convergence *** (Ari)	Uniform Convergence *** (Ari)
		Olympiad Problem Solving **** (Dorin, week 4 of 5)	Olympiad Problem Solving **** (Dorin, week 4 of 5)	Olympiad Problem Solving **** (Dorin, week 4 of 5)	Olympiad Problem Solving **** (Dorin, week 4 of 5)
10:10—11:10	Julian *	Julian *	Algebra of statements * (Brenda)	Algebra of statements * (Brenda)	Continued fractions * (Yvonne)
	Mark's choice **-***	Mark's choice **-***	Mark's choice **-***	Mark's choice **-***	Mark's choice **-***
	Games in Logic parts II, III *** (Alice)	Games in Logic parts II, III *** (Alice)	Games in Logic parts II, III *** (Alice)	Games in Logic parts II, III *** (Alice)	Games in Logic parts II, III *** (Alice)
	The Continuum **** (Anti)	The Continuum **** (Anti)	The Continuum **** (Anti)	The Continuum **** (Anti)	The Continuum **** (Anti)
	Cryptography **** (Moses, wk 4 of 4)	Cryptography **** (Moses, wk 4 of 4)	Cryptography **** (Moses, wk 4 of 4)	Cryptography **** (Moses, wk 4 of 4)	Cryptography **** (Moses, wk 4 of 4)
11:20—12:20	The John Conway Hour	The John Conway Hour	The John Conway Hour	The John Conway Hour	The John Conway Hour
Lunch	**Lunch**	**Lunch**	**Lunch**	**Lunch**	**Lunch and advisor meetings**
1:20—2:20	Monica Vazirani colloquium	Ray tracing * (Dan)	Ray tracing * (Dan)	Ray tracing * (Dan)	**Advisor meetings, continued**
		Gauss **-*** (Dave, week 4 of 4)	Gauss **-*** (Dave, week 4 of 4)	Gauss **-*** (Dave, week 4 of 4)	
		Symmetric polynomials (Monica Vazirani)	Symmetric polynomials (Monica Vazirani)	Symmetric polynomials (Monica Vazirani)	
		Projective geometry *** (Brenda, week 2 of 2)	Projective geometry *** (Brenda, week 2 of 2)	Projective geometry *** (Brenda, week 2 of 2)	Most 1:20pm Tues-Fri classes continue in the same classrooms at 2:30pm Sat, in place of 2:30pm Tues-Fri classes
		Which sines are quadratic? **** (Julian)	Which sines are quadratic? **** (Julian)	Which sines are quadratic? **** (Julian)	
2:30—3:30	Conway's choice	Conway's choice	Conway's choice	Conway's choice	Ray tracing * (Dan)
	Introductory Problem Solving *-** (Dorin, week 4 of 5)	Introductory Problem Solving *-** (Dorin, week 4 of 5)	Introductory Problem Solving *-** (Dorin, week 4 of 5)	Introductory Problem Solving *-** (Dorin, week 4 of 5)	Gauss **-*** (Dave, week 4 of 4)
	Combinatorial Game Theory ** (Alfonso, week 4 of 4)	Combinatorial Game Theory ** (Alfonso, week 4 of 4)	Combinatorial Game Theory ** (Alfonso, week 4 of 4)	Combinatorial Game Theory ** (Alfonso, week 4 of 4)	Symmetric polynomials (Monica Vazirani)
	Knots and Links **-*** (Chris)	Knots and Links **-*** (Chris)	Knots and Links **-*** (Chris)	Knots and Links **-*** (Chris)	Projective geometry *** (Brenda, week 2 of 2)
	Set Theory (Moore Method) **** (Kenny, week 4 of 4)	Set Theory (Moore Method) **** (Kenny, week 4 of 4)	Set Theory (Moore Method) **** (Kenny, week 4 of 4)	Set Theory (Moore Method) **** (Kenny, week 4 of 4)	Mystery mentor ***-****
3:30-5	**Cookies and Math!** Central Lounge (Leonard)	**Cookies and Math!** Central Lounge (Leonard) How to Write Math Good * (Moses, session 3 of 4)	**Cookies and Math!** Central Lounge (Leonard)	**Cookies and Math!** Central Lounge (Leonard)	**Relays!** Meet in Arey 5 if raining, main quad if fine