

## Some important prerequisites...

Prerequisite	Required for
Introduction to linear algebra (W1)	Representation theory of the symmetric groups (W2)
	The transcendence of many numbers (including $\pi$ and $e$ ) (W2 only)
	Polytopes (W2–W3)
	Solving equations with origami (W3)
	How to count rings (W3)
	Linear algebra through knots (W3)
	Finite fields (W4)
	What are your vectors worth? (W4)
	Gaussian magic (W4)
	Quantum computing (W4)
Multivariable calculus crash course (W1)	Functions of a complex variable (W3–W4)
	Calculus of variations (W3)
	Gaussian magic (W4)
Introduction to group theory (W1)	Representation theory of the symmetric groups (W2)
	Introduction to model theory (W2)
	Take it to the limit (W2)
	Coxeter groups (W3)
	The outer life of inner automorphisms (W4)
Braid groups (W4)	
Infinite arithmetic (W1)	Infinite Ramsey theory (W2)
Epsilons and deltas (W2)	Non-standard analysis (W3)
	Why do we need measure theory? (W3)
	aspacefillingcurve (W4)
Introduction to ring theory (W2)	How to count rings (W3)
	Finite fields (W4)
Gödel's incompleteness theorems (W2)	Consistency of arithmetic (W3)
Introduction to graph theory (W2)	Graph colorings (W3)
	Matroids and the chromatic polynomial (W4)

Note: When subject A is listed as a prerequisite for course B, this indicates that the Mathcamp course on subject A is *sufficient* as a prerequisite for B.

Often, the Mathcamp class on A covers a lot more than is necessary for B. If you already know some of subject A, consult the specific prerequisites in the class description for B or talk to the teacher of B to find out if what you know is enough. You can also talk to the teacher of A to find out when they plan to cover the parts that you already know.

**(Also see other side!)**

## Have a class you want to take? Here are the prerequisites!

Class	Requires
Representation theory of the symmetric groups (W2)	Introduction to linear algebra (W1)
	Introduction to group theory (W1)
Infinite Ramsey theory (W2)	Infinite arithmetic (W1)
Introduction to model theory (W2)	Introduction to group theory (W1)
Take it to the limit (W2)	Introduction to group theory (W1)
The transcendence of many numbers (including $\pi$ and $e$ ) (W2 only)	Introduction to linear algebra (W1)
Polytopes (W2–W3)	Introduction to linear algebra (W1)
Consistency of arithmetic (W3)	Gödel's incompleteness theorems (W2)
Solving equations with origami (W3)	Introduction to linear algebra (W1)
Functions of a complex variable (W3–W4)	Multivariable calculus crash course (W1)
How to count rings (W3)	Introduction to linear algebra (W1)
	Introduction to ring theory (W2)
Graph colorings (W3)	Introduction to graph theory (W2)
Calculus of variations (W3)	Multivariable calculus crash course (W1)
Coxeter groups (W3)	Introduction to group theory (W1)
Non-standard analysis (W3)	Epsilons and deltas (W2)
Linear algebra through knots (W3)	Introduction to linear algebra (W1)
Why do we need measure theory? (W3)	Epsilons and deltas (W2)
Finite fields (W4)	Introduction to linear algebra (W1)
	Introduction to ring theory (W2)
What are your vectors vorth? (W4)	Introduction to linear algebra (W1)
Gaussian magic (W4)	Introduction to linear algebra (W1)
	Multivariable calculus crash course (W1)
aspacefillingcurve (W4)	Epsilons and deltas (W2)
Matroids and the chromatic polynomial (W4)	Introduction to graph theory (W2)
The outer life of inner automorphisms (W4)	Introduction to group theory (W1)
Braid groups (W4)	Introduction to group theory (W1)
Quantum computing (W4)	Introduction to linear algebra (W1)

(Also see other side!)