Lesson Plan 0

Each presenter will have up to 3 minutes for her presentation. The goal is to present the material from each prompt clearly, concisely and completely. Some choices might have to be made in order for a given presentation to fit within the allotted 3 minute window, so each presenter should think carefully about what issues are essential to discuss, and which issues are nice but could be excised if necessary. What you choose to present will be as much a function of what you choose *not to* say as it is a function of what you choose *to* say.

It is a smart idea to give a practice lecture to time yourself and rehearse your boardwork. These presentations aren't going to be graded, but students are encouraged to chat with the professor afterwards to talk about how the presentation went: what strengths she should build on, and places where she could make adjustments to optimize the next presentation.

Presentation topics

(1) Groups (definition, familiar (pre-abstract algebra) examples)
(2) Subgroups (basic definition, canonical examples)
(3) Order (not including Lagrange's theorem or its corollaries)
(4) Fundamental theorem of Cyclic groups
(5) Symmetric groups
(6) Parity of permutations; alternating group
(7) Functions on groups (homomorphism, isomorphism, kernel, image)
(8) Cosets
(9) Lagrange's theorem and its consequences
(10) Normality
(11) Quotient groups
(12) First isomorphism theorem (of groups)
(13) Rings (definition)
(14) Characteristic
(15) Quotient rings