

Algebra I

Schedule

Date	Title & Note	Assignments
April 11	Lecture 1. Groups	Read 1, Ex. 1.2, 1.3, 1.22
April 13	Lecture 2. Examples + Recitation	Read 2, Ex. 2.3, 2.8 + 3 others
April 15	Recitation Ex. 2 (Volunteers)	Ex. 2.24, 2.25, 2.35, 2.36, 2.37
April 18	Lecture 3. Finite Groups; Subgroups	Read 3, Ex. 3.1, 3.22 + 3 others
April 20	Recitation Ex. 3 (Volunteers)	Ex. 3.8, 3.12, 3.16, 3.26, (3.30 or 3.34)
April 22	Lecture 4. Cyclic Groups	Read 4, Ex. 4.1, 4.9 + 3 others
April 25	Recitation Ex. 4 (Volunteers)	T/F and 1, 4, 12, 22, 34 (see p.91-4)
April 27	Lecture 5. Permutation Groups	Read 5, Ex. 5.2, 5.4 + 3 others
April 29	Recitation Ex. 5 (Volunteers)	5 in Ex.5.8, 5.19, 5.25, 5.27, 5.48, 5.52
May 2	Lecture 6. Isomorphisms	Read 6, Ex. 6.4, 6.5 + 3 others
May 6	Recitation Ex. 6 (Volunteers)	Ex. 6.17, 6.32, 6.34, 6.37, 6.40
May 9	Lecture 7. Cosets and Lagrange's Theorem	Read 7, Ex. 7.1, 7.3 + 3 others
May 11	Recitation Ex. 7 (Volunteers)	Ex. 7.21, 7.22, 7.35, 7.40, 7.48
May 16	Lecture 8. External Direct Products	Read 8, Ex. 8.2, 8.9 + 3 others
May 18	Recitation Ex. 8 (Volunteers)	T/F and Ex. 6, 7, 18, 19, 32 (see p.174-7)
May 20	Lecture 9. Normal Subgroups and Factor Groups	Read 9, Ex. 9.5, 9.15 + 3 odds
May 23	Recitation of Odd Numbered Problems of Ex. 9	Read 9, Ex. 9.4, 9.8 + 3 evens
May 25	Recitation of Even Numbered Problems of Ex. 9	Ex. 9.60, 63, 64, 65, 66
May 27	Lecture 10. Group Homomorphisms	Read 10, Ex. 10.5, 10.7 + 3 odds
May 30	Recitation of Odd Numbered Problems of Ex. 10	Read 10, Ex. 10.16, 10.20 + 3 evens
June 1	Recitation of Even Numbered Problems of Ex. 10	Ex. 10.36, 39, 55, 57, 59
June 3	Lecture 11. Fund. Thm of Finite Abelian Groups	Read 11, Ex. 11.3, 11.5 + 3 odds
June 6	Recitation of Odd Numbered Problems of Ex. 11	Read 11, Ex. 11.8, 11.10 + 3 evens
June 8	Recitation of Even Numbered Problems of Ex. 11	T/F and 9, 14, 15, 19, 41 (see p.230-3)
June 10	Lecture 12. Sylow Theorems	Read 24, Ex. 24.5, 24.7 and 3 others
June 13	Recitation Ex. 24 (Volunteers)	Review
June 15	Review and Recitation	Preparation of Final Exam
June 17	Review and Recitation	Preparation of Final Exam

All assignments are due next class.

Algebra I final will be given during the term exam week. The schedule above is subject to change.

Textbook for Algebra I and II Joseph A. Gallian, Contemporary Abstract Algebra – 7th Edition – International Version — Paper backs ISBN-13: 978-0-495-83153-2 574 pages + appendix 51 pages

Grading Policy Grade will be decided by the performance on the following: Home Work (35%), Class Participation by Solving Problems (15%), and Final Exam (50%).

Home Page <http://subsite.icu.ac.jp/people/hsuzuki/science/class/algebra1/index-j.html>

Schedule, references, old quizzes, old finals, old midterms and their solutions, and much more.

Author's Home Page: <http://www.d.umn.edu/~jgallian/>

Supporting documents, True/False Quizzes, software and much more.

Math Word Search, J to E and E to J: <http://cpu.icu.ac.jp/math/search-text.cgi?>

Sage, Computer Algebra: <http://www.sagemath.org/>

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