

PRESENTATION TOPICS:

1. Fundamental Theorem of Algebra (page 31)*Ska
2. Borsuk-Ulam Theorem (pages 32-33)*IW
3. Torus knots (pages 47-49)*JN
4. Example 1.35 (pages 65-66)
5. Representing Coverings by Permutations (pages 68-70)*DP
6. Example 1.43 (pages 74-75)
7. Cayley Complexes (pages 77-78)*SS
8. Graphs and free groups (pages 83-85)*THN
9. Graph of groups (pages 91-93)
10. Homology of Lens spaces (pages 144-146)
11. 1-Homology and the fundamental group (pages 166-168)*ZW
12. Proposition 2B.1. (pages 169-170)
13. Division Algebras (pages 173-174)*SKh
14. Higher dimensional Borsuk-Ulam Theorem (pages 174-176)*DWA

* means that the topic is taken

**presented

Homework 1 (Quiz on September 9th)

(pages 18-19) Exercises: 3, 5, 9, 14, 16, 17, 18, 19.

Homework 2 (Quiz on October 7th)

(pages 38-39) Exercises: 3, 5, 8, 17;

(pages 52-55) Exercises: 2, 3, 4, 7, 17;

(pages 79-82) Exercises: 2, 3, 9.

Homework 3 (Quiz on November 30th)

(pages 131-133) Exercises: 1, 2, 4, 6, 7, 11, 14, 17, 19, 20, 26, 31.

EXTRA CREDIT PROBLEMS:

Credit for *-problems will be given to first 3 people for each problem who bring a correct solution to my office and present it on the blackboard. Then the problem will be removed from the list.

Problem 1*[\# of claims left - 3](2pts)

Prove that the fundamental group of a topological group is abelian.

Problem 2*[\# of claims left - 3](2pts) Exercise 6(b) page 18.

Problem 3*[\# of claims left - 3](4pts) Exercise 10 page 53

Problem 4*[\# of claims left - 3](4pts) Exercise 16 page 54

Problem 5*[\# of claims left - 3](4pts) Exercise 6 page 79

Problem 6*[\# of claims left - 3](3pts) Exercise 23 page 157