

MA590 TOPOLOGY  
Spring 2017  
W. J. Martin  
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## Topology Homework 1

**Instructions:** Problems of the first type (10 problems) can be answered in a sentence or two. The three problems of the second type require full mathematical proofs. Please use one side of the page only. For the last three problems, feel free to discuss basic ideas and strategies with classmates. But write your solution up separately and share it with no one.

### QUICK SOLUTIONS

- Exercise 4(a) on p83
- Exercise 4(c) on p83
- Exercise 7 on p83
- Exercise 3 on p92
- Exercise 6 on p92
- Exercise 8 on p92
- Exercise 4 on p100
- Exercise 6(c) on p101
- Exercise 1 on p111
- Exercise 5 on p111

### FULL PROOFS

- Exercise 4 on p92
- Exercise 11 on p101
- Exercise 8 on p111