Topology Midterm Review

2.19,2.20. 2.23, but refer to this as *sequential* compactness. Definitions 3.3 - 3.5. Exercise 3.2. Know 3.7-3.10 and be able to apply 3.10 to show two bases are equivalent. 3.11-3.15. 3.16-3.17. 3.18-3.19. 3.22-3.24. Exercise 3.25, 3.25-3.26. 3.28-3.30.3.33. Exercise 3.31. Be able to do exercises similar to 3.33,3.34.

Not in text: definition for the convergence of a sequence in a topological space, proof that in a Hausdorff space a sequence can have at most one limit. Be able to show that a compact *or* sequentially compact subset of $\mathbb{R}^n$ is closed and bounded.

There will be one new proof on the test and one proof of an above listed theorem, short answers, definitions and objective questions (for example, Ex 2.1, True/False).