

1. Show that a space is normal if and only if it satisfies the conclusion of the Urysohn lemma if and only if it satisfies the conclusion of the Tietze extension theorem.
2. Let \mathcal{B} be a basis for the topology on X . Suppose every cover of X by elements of \mathcal{B} has a finite subcover. Show that X is compact. Prove this without recourse to Alexander's Lemma.
3. Munkres 37.4
4. Munkres 51.2
5. Munkres 52.4 (Wait until after Monday)
6. Munkres 52.3 (Wait until after Monday)