MATH 3510 Introduction to Topology
Homework Assignments

Problems with asterisks * will be collected and graded. The date on the left is the due date.

10/4. page 27: 1, 2, 3, 4
page 34: *1, 2, 3, *4
*(A). Given a set in a metric space. What is the maximal possible number of different sets by successive applications of closure and complement?

10/18. page 34: 5, 6
page 40: 1, *2, 3, 4
page 51: *1, 2, 3, *5

11/8. page 58: 2, *3, *6, 7, 8, *9

11/29. Page 71: 1, 2, *6, 7, *8
Note: For problem 6, the topology $\mathcal{T}$ is generated by all $N_{a,b}$ (arithmetic progressions). It is known as the *evenly spaced integer topology.* You can skip (a) and treat (b)-(d) as hints for proving (e).
Page 78: 1, 2, 3, 7, 8, *10

12/20. Page 88: 3, 4, *6, 7, *8, *9, 10

N/A Page 99: 3, 4, 9
Page 106: 2, 4, 5
Page 115: 6, 7