

MATE 6540 assignment 7

20. Exercise 3, p. 118 of Gamelin-Greene.
21. Exercise 4, p. 118 of Gamelin-Greene.
22. Exercise 3, p. 121 of Gamelin-Greene.
23. Exercise 6, p. 121 of Gamelin-Greene.
24. Exercise 7, p. 121 of Gamelin-Greene.
25. In the exam, you learnt the meaning of homotopy of mappings between topological spaces. Let X be a topological space, and f, g continuous mapping from X to S^n . Show that if for all $x \in X, f(x) \neq -g(x)$, then f and g are homotopic.

Marks: 6 + 9 + 6 + 10 + 6 + 6