

MATH 185-1: Complex Analysis

Homework #2

Due February 4, 2016

All problems are from Gamelin, *Complex Analysis*, unless stated otherwise. If you use an exercise that has not been shown on a previous assignment or in class, prove it first before applying it.

1. Show that if $\{z_n\}_{n=1}^{\infty}$ is a convergent sequence of complex numbers, then the sequence is bounded (see p. 34 for a reminder of the definition of a bounded sequence).
2. Exercise II.1.11
3. Exercise II.1.16
4. Exercise II.2.3
5. Exercise II.2.4
6. Exercise II.2.5
7. Exercise II.3.2
8. Exercise II.3.3
9. Exercise II.3.8