Math 427A: Complex Analysis, Fall Quarter 2018

Jarod Alper Homework 1

Due: Friday, October 5

Problem 1.1. Taylor 1.1.5

Problem 1.2. Taylor 1.1.13

Problem 1.3. Taylor 1.1.17

Problem 1.4. Taylor 1.2.4

Problem 1.5. Prove that the sequence $(6-ni)^{-1}$ converges to 0.

Problem 1.6. Taylor 1.2.12

Problem 1.7. Taylor 1.3.3

Problem 1.8. Taylor 1.3.8

Problem 1.9. Taylor 1.3.15

Problem 1.10. Let $\{z_n\}$ and $\{w_n\}$ be sequences such that $\lim_{n\to\infty} z_n = z$ and $\lim_{n\to\infty} w_n = w$. Show that $\lim_{n\to\infty} (z_n w_n) = zw$.