

## MATH 185-1: Complex Analysis

Homework #8

*Due April 7, 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. Exercise V.5.1 (power series about  $\infty$  means the “inverted” series of the form  $\sum_{k=0}^{\infty} b_k z^{-k}$ )
2. Exercise V.5.2
3. Exercise V.5.4
4. Exercise V.6.3
5. Exercise V.6.6
6. Exercise V.7.1
7. Exercise V.7.5 (You may again assume that  $\int_{-\infty}^{\infty} e^{-x^2/2} dx = \sqrt{2\pi}$ . You will be asked to prove this in a future assignment.)
8. Exercise V.7.7