

Math 535
Homework 6
Due Friday, March 13

Continue reading Chapter 4. You are encouraged to work on *all* of the exercises in the text, but you only need to turn in the following problems.

1. Ahlfors §3.2 #1, p.129, proving that the algebraic order at $z = a$ defines a *discrete valuation* on the field of meromorphic functions.
2. Ahlfors §3.2 #6, p.130, on isolated singularities of e^f when f has an isolated singularity.
3. Ahlfors §3.3 #1, p.133, finding a disk where $z^2 + z$ is invertible.
4. Ahlfors §3.3 #4, p.133, on a functional equation for conformal f . Something further to think about: to what extent does the function g depend on n ? For example, writing g_n for g , does the limit $\lim_{n \rightarrow \infty} g_n(z)$ exist in a neighborhood of 0?