

University of Colorado
Department of Mathematics

2008/2009 Semester 2

Math 6360 Complex Variables 2

Assignment 2

Due Monday February 16, 2009

1. Read Ahlfors Chapter 5, Section 1.1, 1.2, 1.3, 2.1.
2. Let $f(z) = \frac{1}{z(z-1)(z-2)}$. Give the Laurent series expansion for f in each of the following annuli:
 - (a) $\{z \in \mathbb{C} : 0 < |z| < 1\}$;
 - (b) $\{z \in \mathbb{C} : 1 < |z| < 2\}$;
 - (c) $\{z \in \mathbb{C} : 2 < |z|\}$.
3. Do problems 1, 2 and 4 of Section 1.1, problems 1 and 2 of Section 1.2, problems 1 and 3 in Section 1.3, and problem 1, in Section 2.1 of Chapter 5 of Ahlfors.