Mathematics 623 – Complex Analysis

Assignment 6.
Due Wednesday, October 22

Part A. Problems 4, 5, 6, 7 on p. 103/104.

B. Compute the Laurent series $\sum_{n=\infty}^{\infty} a_n(z-i)^n$ of $f(z) = (1+z^2)^{-1}$ in the regions (i) $\{z : 0 < |z-i| < 2\}$ and (ii) $\{z : |z-i| > 2\}$.