Complex Analysis Homework #5
Due Friday, March 6

1. Do problems #2 through #10 in section 2.1 in the book.

2. Show that $f(z) = \bar{z}$ is not analytic on any domain (Hint: check the Cauchy-Riemann equations).

3. Suppose that $f = u + iv$ is analytic. If u is the function given below, then find v.

   (a) $u(x, y) = x$

   (b) $u(x, y) = x^2 - y^2$

   (c) $u(x, y) = \dfrac{x}{x^2 + y^2}$