Homework

1. A fixed point for a function $f(z)$ is a point where $f(z) = z$. Find the fixed point(s) for $f_c(z) = z^2 + c$ when $c = 1$.

2. A point $z_0$ is called periodic of period 2 if $f(f(z)) = z$. Find the period 2 points for $f_c(z) = z^2 + c$ when $c = -1$.

3. A point $z_0$ is called periodic of period $n$ if $f^n(z) = z$. Are the period 2 points in $K_c$ or not?

4. Is $J_0$ connected? How about $J_{-1}$? And $J_{-2}$?

Recall that $J_c$ is the Julia set for $f_c(z) = z^2 + c$.

5. Read chapter 4.2 including color plates!!!