

## Additional HW problem for Chapter 6.

Consider a one-parameter family  $F_c(x) = x^2 + cx$ . Find all fixed points and classify them as attracting, repelling or neutral. Sketch a bifurcation diagram for the fixed points only. Describe the bifurcation that happens at  $c = 1$ . List at least two other values of the parameter  $c$  where the bifurcations occur (you don't have to describe or classify them).