Julia Sets

The **Julia set** $J_c = J(f_c)$ is the boundary of the set of points whose orbits under the map $f_c(z) = z^2 + c$ are bounded.

Properties of Julia sets. For every $c \in \mathbb{C}$

- J_c is non-empty,
- J_c is compact,
- J_c contains no isolated points,
- $f_c(J_c) = J_c$ and $f_c^{-1}(J_c) = J_c$.