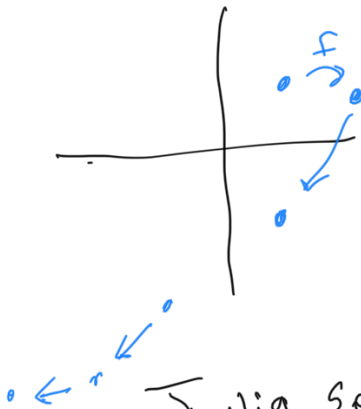


Lecture 1: Julia sets

$$f(z) = z^2 + c, \quad \text{complex numbers}$$

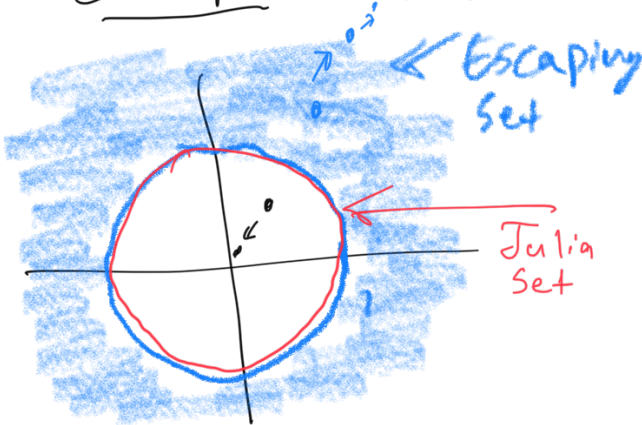
Escaping set: $\{z: |f^n(z)| \rightarrow \infty \text{ as } n \rightarrow \infty\}$

Draw today



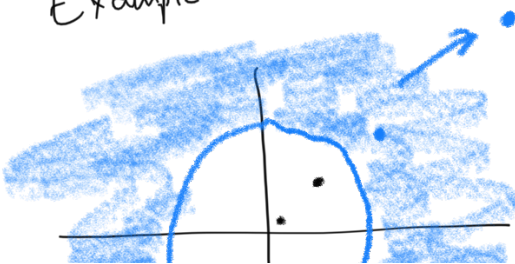
Julia set: Boundary of escaping set

Example: $f(z) = z^2$



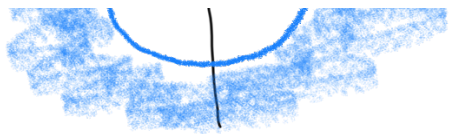
Warning: Not graph of f
(Graph of f would be 4 dim
since, $z, f(z)$
both complex
numbers)

Example $f(z) = z^3$



Escaping set:
 $\{z: |z| > 1\}$

Julia set:
 $\{z: |z| = 1\}$



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