

(7)

$$3z_{n+1} = (3z_n + i)^2 + 2 - i$$

$$3z_{n+1} + i = (3z_n + i)^2 + 2$$

$$\text{Put } w_n = 3z_n + i$$

$$\text{Then } w_{n+1} = w_n^2 + 2 = \phi$$

ϕ is the question

and since $3z + i = w$ is an isomorphism, the Keep Sets of g and $f(z)$ will be isomorphic (in fact congruent; $3z + i$ is a congruence).

In the w plane the Keep set of g is not connected since $2 \notin \mathbb{H}$.

In z plane the Keep set of f is not connected.

$\frac{23}{25}$