

# Fractal.pdf

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Here we choose the polynomial,

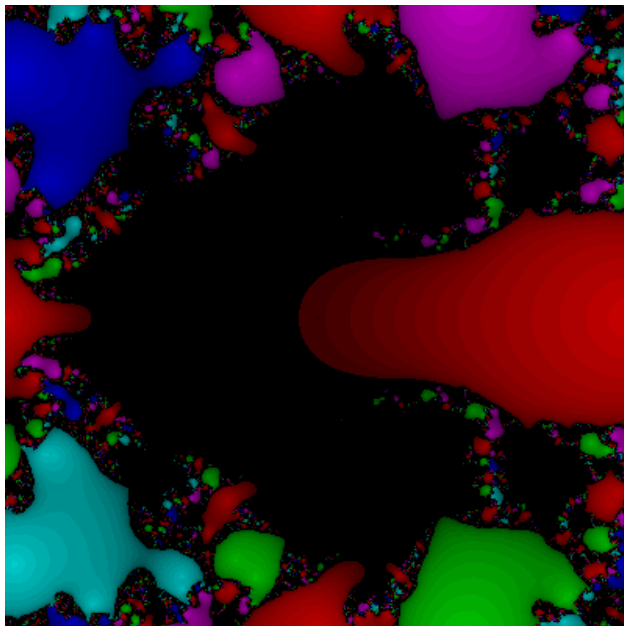
$$P(z) = z^5 + z - 2$$

We pick our square to have the top left coordinates, (i.e. origin),  $(-1, 1)$  in the complex plane and have width 2.

So our square has corners:  $(-1,1)$ ,  $(1,1)$ ,  $(1, -1)$ ,  $(-1, -1)$ .

Now we generate our fractals using our polynomial, origin and width above.

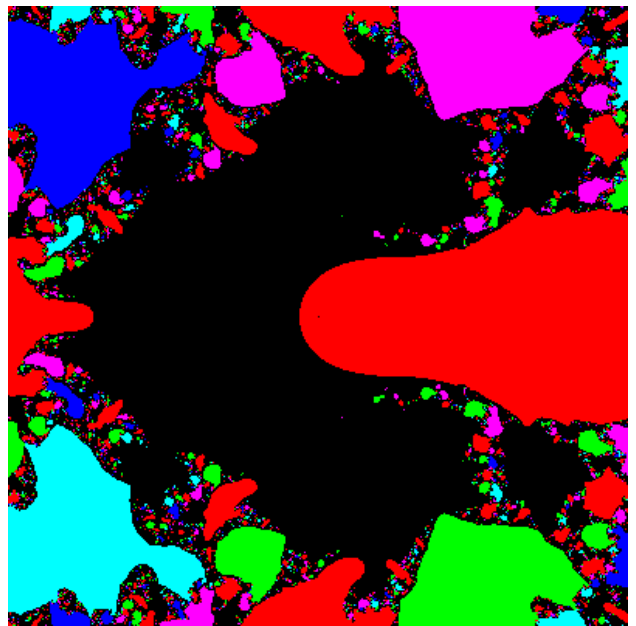
Dark Fractal:



Shows the speed of convergence depending on the starting points.

The darker the shade of colour the slower it converges from that position

Light Fractal:



Does not show speed of convergence. Only represents the root that a pair of starting points converge to.