

Julia Set Exploration

Chaos and Fractals

College of the Atlantic

Please bring a Julia set to class, Monday Feb 21

General Instructions

- Do this with others if you like. It might be more fun that way.
- Here are three pages you can use for making Julia sets:
 1. <https://sciencedemos.org.uk/julia.php>. Less psychedelic.
 2. <https://www.kylepaulsen.com/stuff/juliaSet.html> more psychedelic.
 3. <http://shodor.org/interactivate/activities/JuliaSets/> Julia Set Generator. Barebones but effective.

The above programs let you visualize the Julia set (aka the prisoner set) for functions of the form $f(z) = z^2 + c$. In class we used post-its to build the Julia set for the case where $c = -1$. Different c values yields a stunning diversity of Julia sets.

1. Experiment with one of the above programs until you find a Julia set that you like.
2. Write down the c value for your Julia set.
3. Give your Julia set a name.

We will start class on Monday by looking at your Julia sets. We'll then use this gallery of images to launch our explorations of the Mandelbrot set.