

CS10 With-Snap! Midterm (Fall 2017, Sec 1)

Below are screenshots of the first four iterations of a beautiful fractal. Write code that generates the fractal (you don't have to match our exact placement on the screen), and name it **FractalYourfirstnameYourlastname.xml** (e.g., **FractalAlanTuring.xml**). Also, save a PNG image of the *fifth* ($n = 5$) iteration and name it similarly, (e.g., **FractalAlanTuring.png**). To save a PNG image of the stage, right-click (or control-click) on the stage and choose "pic...", then in the new tab right-click (or control-click) the image and save the file to the Desktop. Submit both on bCourses under the "with-Snap!" midterm assignment for the lab section you are in.

Though this may look daunting at first, it really isn't that bad. Remember, every fractal has a base case ($n = 1$) and recursive case. We've drawn the fractal with **bold** lines to indicate the parts of the drawing that will recurse; the other parts of the drawing at $n = 1$ are just lines. (You don't have to copy our bold/normal style, it's ok if it's all the same.) Look at how the straight line at $n = 1$ transforms into the $n = 2$ case – this happens for every bold line when it goes to the next level.

The $n = 2$ lines are $1/3$ as long as the $n = 1$ lines. The sprite ends facing the same way it started.

