

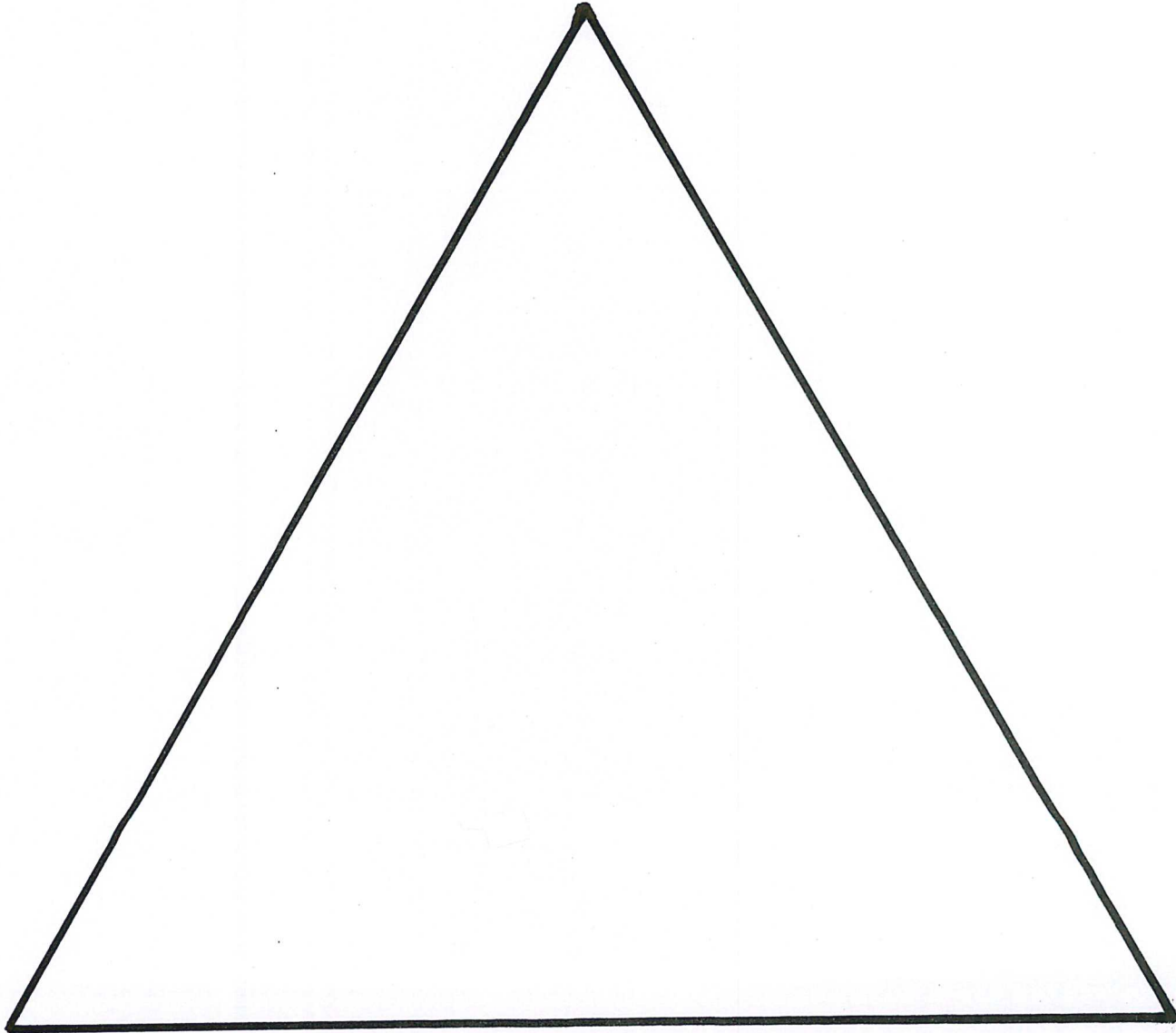
Definition (page 110 of text)

A **fractal** is an object O that possesses the property of *proper self-similarity*.

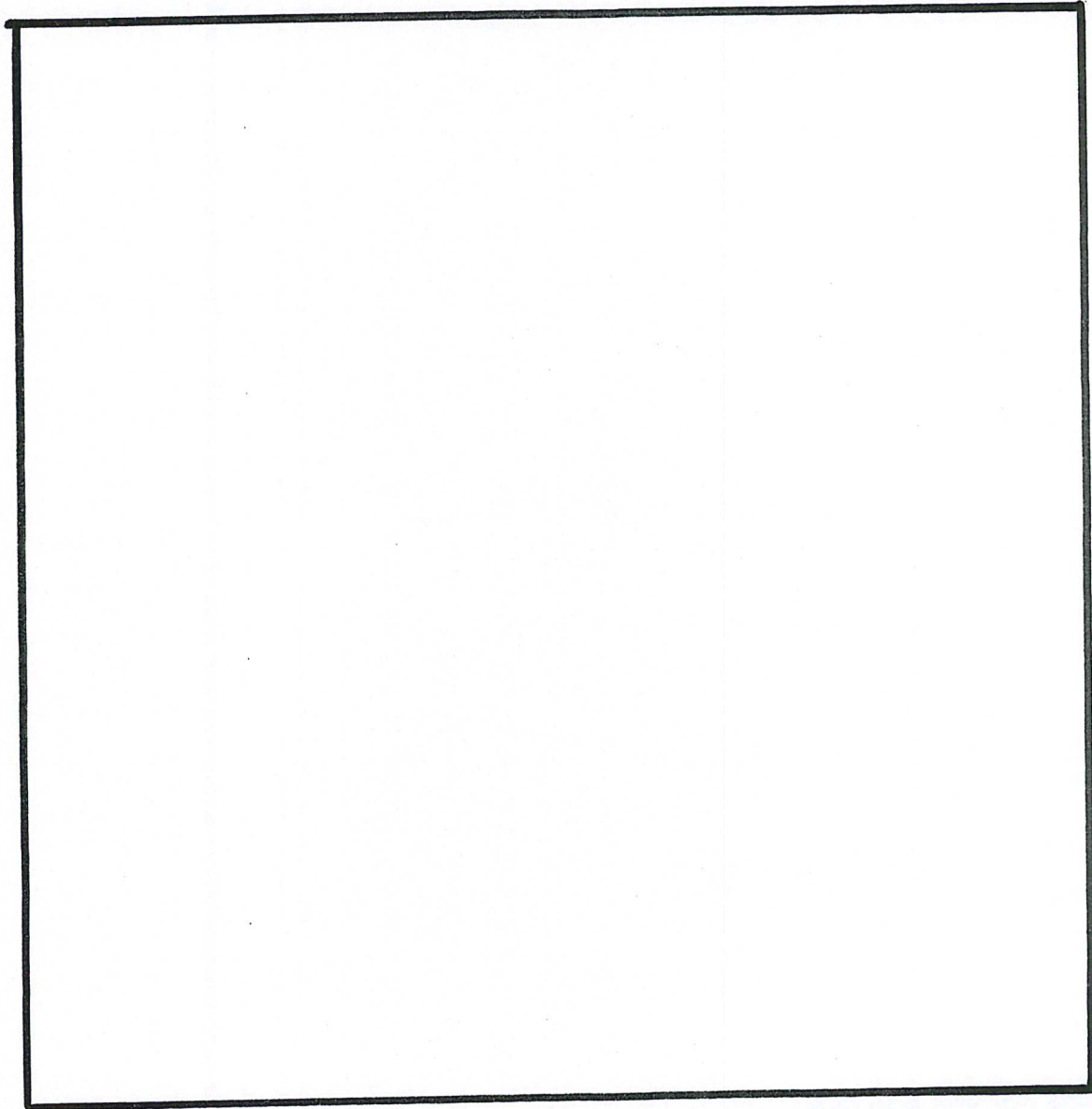
- This means that there is a part of O , say A_1 , which is
- That is, there is a similarity that sends a part A_1 of O onto a proper part A_2 of A_1 .

Note: The similarity cannot be a

Example: Sierpinski Triangle



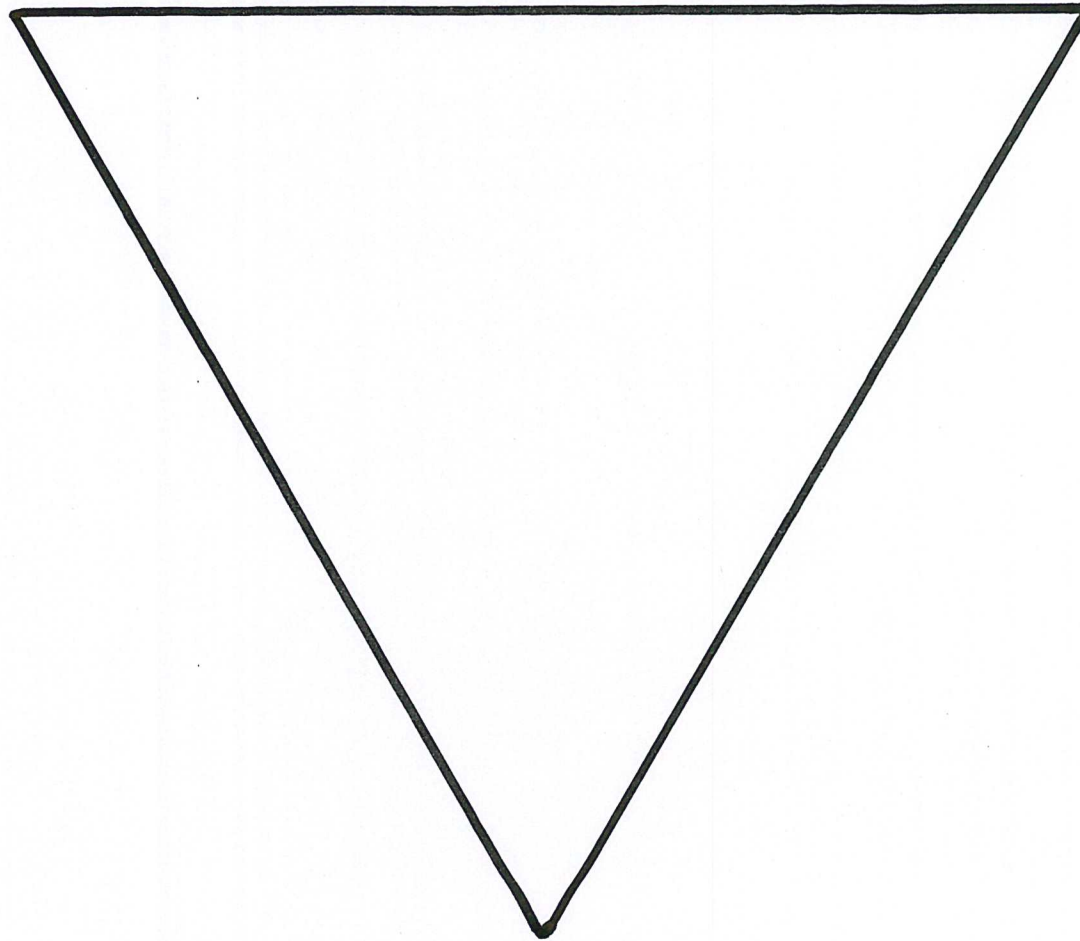
Example



Fractal Tree



Koch Snowflake



Definitions (page 124 of text)

- A set of points in the plane is **bounded** if
- A set of points in the plane is **unbounded** if the set is not bounded.

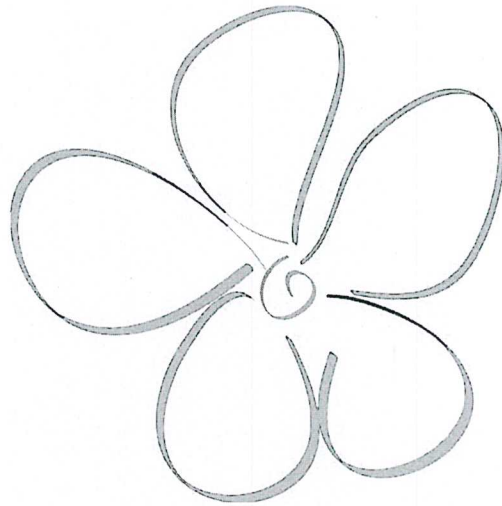
Juliet Sets – Definitions (page 125 of text)

Let f be a transformation of the points in the plane.

- The **prisoner set** (or **filled Julia set**) is the set of points A where $\{A, f(A), f(f(A)), \dots\}$ is
- The **escape set** is the set of points A where $\{A, f(A), f(f(A)), \dots\}$ is
- The **Juliet set** is the boundary between the prisoner set and the escape set.

Resource

http://server.math.umanitoba.ca/~sasho/CurentCourses/1020/Files/Lectures_2017/Lecture_07.html



QUESTIONS???