**fractals.py**

```
class Maps2D(MovingCameraScene):
    def construct(self):
        t1 = Polygon([0,0,0], [1,0,0], [1/2,1,0])
        #r1 = Polygon([0,0,0],[1,0,0], [0,1,0], [1,1,0]).set_color(GREEN)
        self.camera.frame.scale(1.5).shift(RIGHT*3 + UP*4)
        v = t1.get_vertices()
        #rv = r1.get_vertices()
        gNow = VGroup()
        gPrev = VGroup(t1)
        self.add(t1)
        self.wait()
        fac = 1/15
        maxIter = 5
        scales = [1/4, 2/3, 3/4]
        xshifts = [1, -1, 4]
        yshifts = [2, 3, 3]



        for i in range(maxIter):
            gNow = VGroup()
            for t in gPrev:
                v = t.get_vertices()

                sideLen = np.linalg.norm(v[0]- v[1])
                t2 = t.copy().scale(scales[0]).shift(sideLen*xshifts[0]*RIGHT +
sideLen*yshifts[0]*UP).set_color(PURPLE)
                t3 = t.copy().scale(scales[1]).shift(sideLen*xshifts[1]*RIGHT+
sideLen*yshifts[1]*UP).set_color(GREEN)
                t4 = t.copy().scale(scales[2]).shift(sideLen*xshifts[2]*RIGHT +
sideLen*xshifts[2]*UP).set_color(PINK)

                gNow.add(t2, t3, t4)

            self.add(gNow)
            self.wait()
            gPrev = gNow
```