fractals.py

```
class SelfAffineFractal(Scene):
    def construct(self):
        w = 4
        h = 2
        rect1 = Rectangle(width = w, height = h, color = WHITE).to_edge(LEFT, buff = 0.5)
        rect2 = rect1.copy().shift(UP*h)
        rect3 = rect2.copy().shift(RIGHT*w)
        rect4 = rect1.copy().shift(DOWN*h)
        rect5 = rect4.copy().shift(RIGHT*w)
        g1 = VGroup(rect1, rect2, rect3, rect4, rect5)
        g1.center()

        self.add(g1)
        n = 4
        t = 1/n
        for i in range(n):

            self.play(g1.animate.stretch_to_fit_width(g1.width/2), run_time = t)
            self.play(g1.animate.stretch_to_fit_height(g1.height/3), run_time = t)
            self.play(g1.animate.shift(LEFT*g1.width/2))
            i = 1
            g11 = g1
            g22 = g11.copy()
            g33 = g11.copy().shift(UP*g1.height)
            g44 = g11.copy()
            g55 = g44.copy().shift(DOWN*g1.height)


            g2 = VGroup(g11, g22, g33, g44, g55)
            #self.play(Write(g11))
            self.play(g22.animate.shift(UP*g1.height), run_time = t)
            self.play(g33.animate.shift(RIGHT*g1.width), run_time = t)
            self.play(g44.animate.shift(DOWN*g1.height), run_time = t)
            self.play(g55.animate.shift(RIGHT*g1.width), run_time = t)

            g2.center()
            g1 = g2
        pass
```