

## fractals.py

```
448 class Maps2DRect(MovingCameraScene):
449     def construct(self):
450         r1 = Polygon([0,0,0],[1,0,0], [1,1,0], [0,1,0]).set_color(GREEN)
451         self.camera.frame.shift(UP*5+ RIGHT*6).scale(1.5)
452         gNow = VGroup()
453         gPrev = VGroup(r1)
454         self.add(r1)
455         self.wait()
456         fac = 1/10
457         maxIter = 3
458
459
460
461         for i in range(maxIter):
462             gNow = VGroup()
463             for t in gPrev:
464                 rv = t.get_vertices()
465
466                 sideLen = np.linalg.norm(rv[0]- rv[1])
467                 print(sideLen)
468
469                 r2 = t.copy().scale(1/2).shift(sideLen*RIGHT + sideLen*2*UP).set_color(GREEN)
470                 r3 = t.copy().scale(1/2).shift(sideLen*RIGHT + sideLen*5*UP).set_color(RED)
471                 r4 = t.copy().scale(1/2).shift(sideLen*5*RIGHT + sideLen*5*UP).set_color(PINK)
472                 gNow.add(r2, r3, r4)
473                 #gNow.add(r2)
474
475             self.add(gNow)
476             self.wait()
477             gPrev = gNow
```