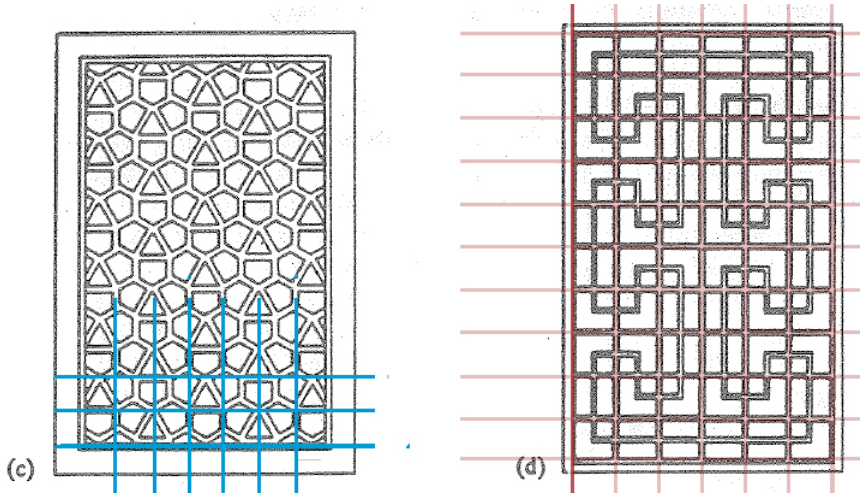
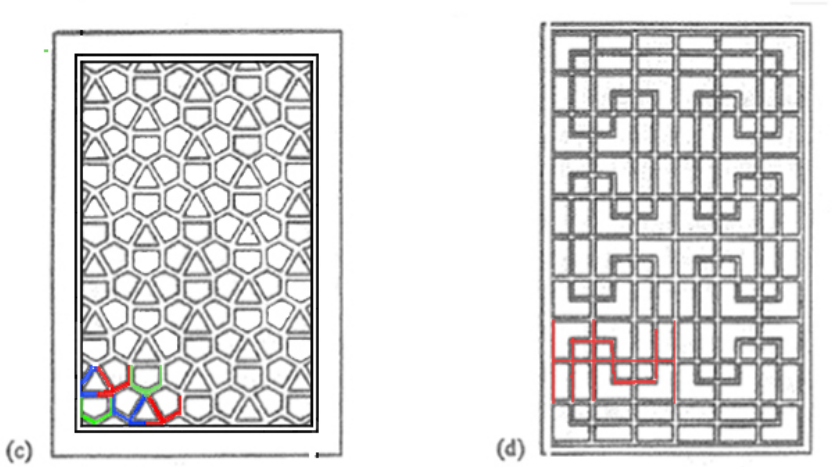
1

We can superimpose a grid as shown.

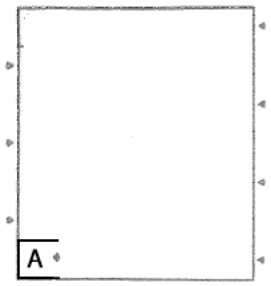


We can identify some basic patterns as shown below

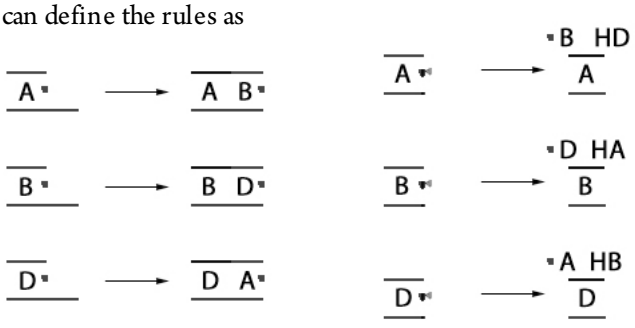


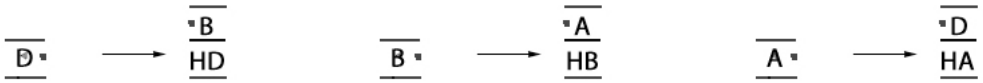
(c) Lets call the three colored patterns as A, B and C. Let the half patterns be HA, HB, HC

Let the initial shape be



We can define the rules as





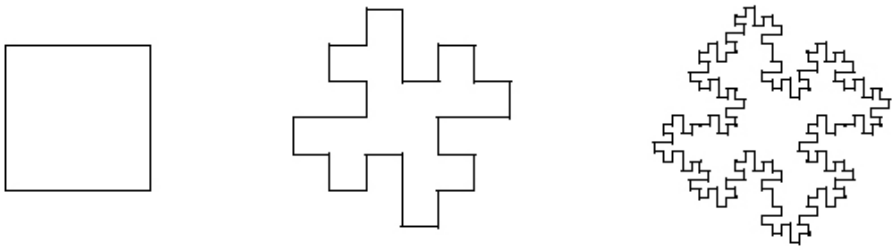
d) Most of you figured out the pattern, which is reflected about the central horizontal axisa
M
A
∀
A
∀
W

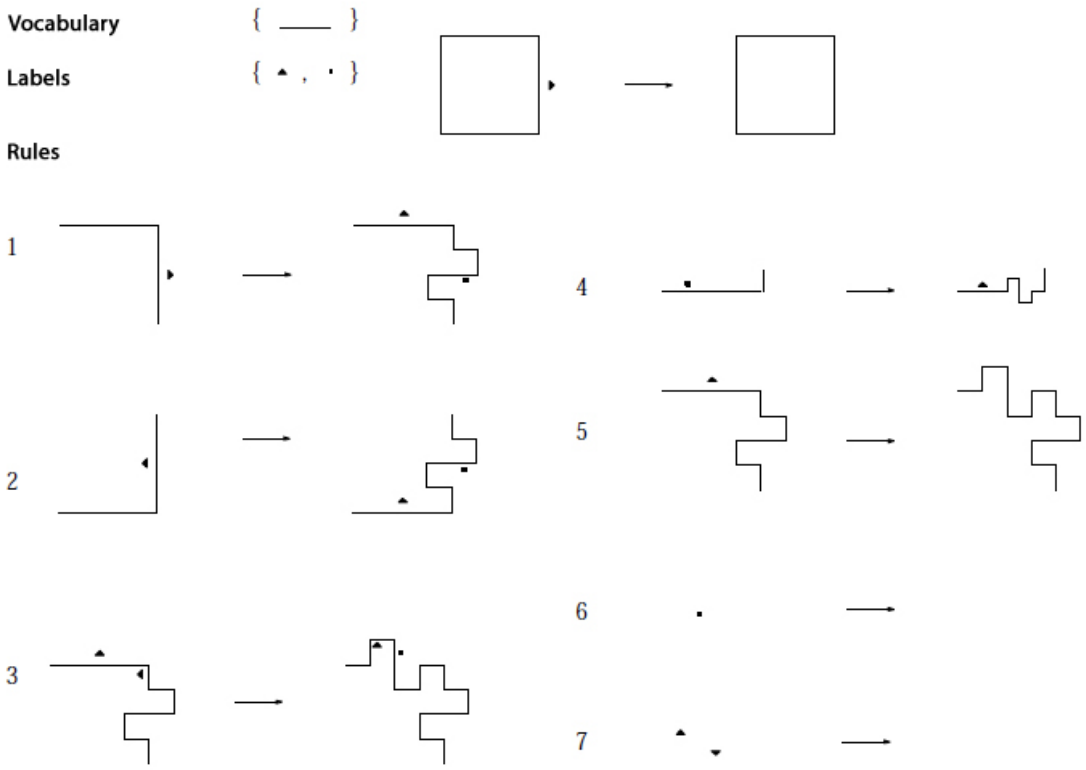
Each these patterns is straightforward to generate

2

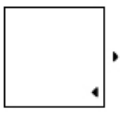
"I see an uncanny resemblance between the approximate fractals … and the successive stages of turbulent dispersion of black ink in milk."

Benoit Mandelbrot, *Fractals*, 1977





Initial Shape



Example using two types of labels, one for generation within a stage and one to start the next stage

48-747 Shape Grammars

Shape, computation and languages of design

Vocabulary

Terminal { }

Nonterminal { }

Rules

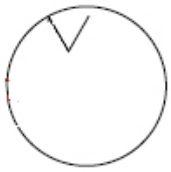
1

2

3

4

Initial Shape



Example using a shape as a label