

48-747 Shape Grammars

Shape, computation and languages of design

Assignment 1

Defining shape grammar

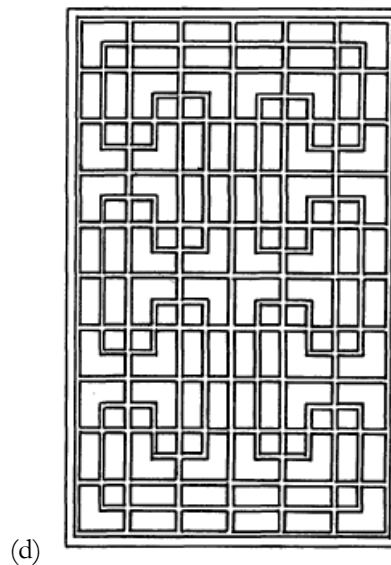
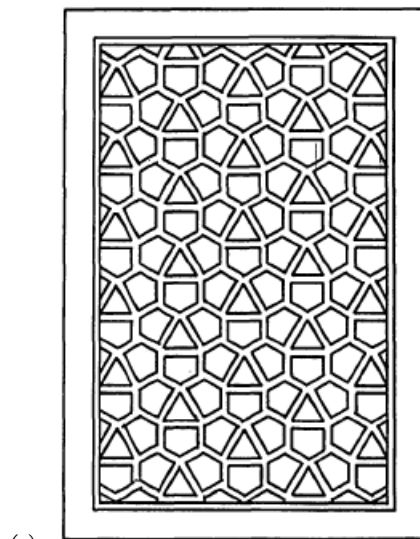
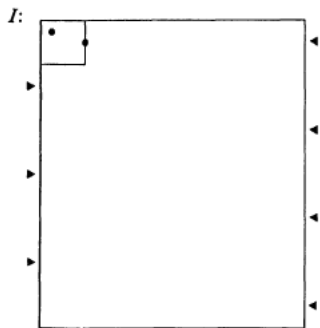
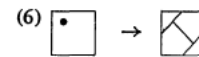
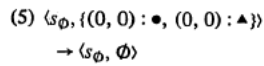
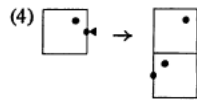
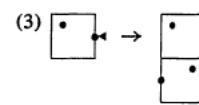
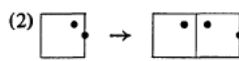
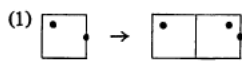
Due 02.02.16

- Read the first part of the paper *Ice-Ray: a note on the generation of Chinese Lattice designs* by George Stiny. Based on the shape grammar in figure 2, indicate how you would modify it to produce designs (c) and (d) in figure 1. For your benefit, the grammar and the specific designs are recalled below

S : —

L : $\{(0, 0) : \bullet\}, \{(0, 0) : \blacktriangle\}$

R :

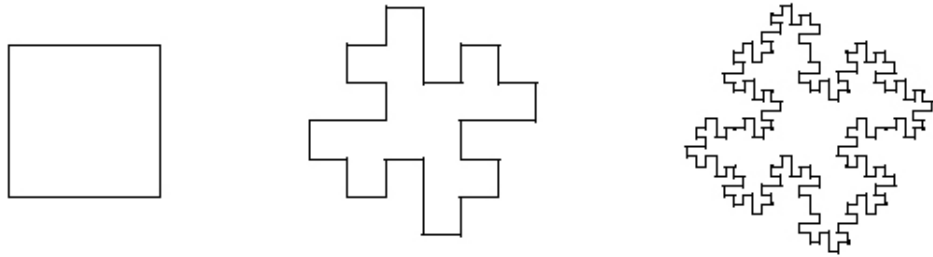


2.

“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

Each sequence below shows the first three shapes an infinite series that belong to a family of shapes. Develop non-parametric shape grammars that specify ONLY the shapes in series (a) and in series (b)



(a)

...



(b)

...