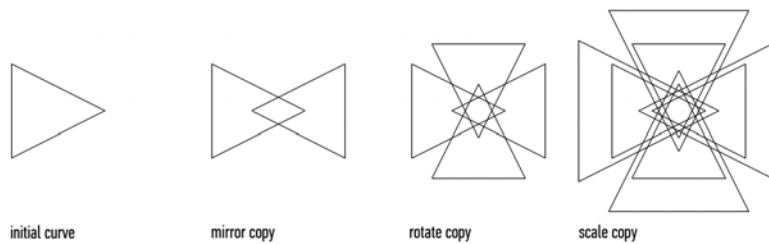2026.01.14-thursday

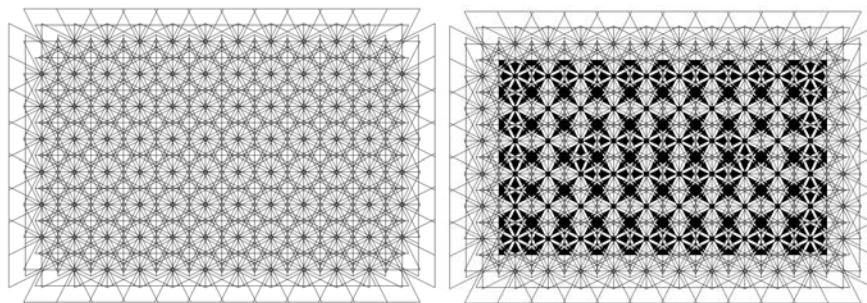**In-Class Exercise 01: EMERGENT PATTERNS***
deadline: 2026.01.21 – Thursday – *end of day*

In your first assignment, you are asked to generate an emergent pattern following these steps;

- Start by drawing a closed curve

- Apply three transformation rules to this curve in sequence, each time preserving the shape you have generated in previous step (see below)

initial curve   mirror copy   rotate copy   scale copy

- After you generated your final shape, copy it within a **50x50 inches canvas** by using 2 different transformation rules in horizontal and vertical directions to create a linear patterns (see below – left.)

- After you generate your linear pattern, experiment how these shapes come together and observe the variations of shapes that emerge via intersections, negatives, etc. Explore **emergent patterns** generated by above steps. Hatch the patterns you have discovered in different shades of gray (at lease two) and strengthen the characteristics of your geometric composition (see below – right). Make use of layers!

- Save two versions of the the hatched pattern as JPEG files: one with lines, one without lines. Adjust the canvas size accordingly to fit the 50" x 50" pattern, center it properly.

Evaluation Rubrick:
Drawing Precision – *use of OSNAPs, use of layers* (%25);
Initial Steps – *Are there reference lines? Are there at least 3 steps?* (20%);
Complexity of the Linear Pattern – *Are there new emergent shapes within the 50x50 pattern?* (15%);
Complexity of the Hatched Pattern – *Are there at least two colors? Are there new emergent shapes?* (20%);
Jpeg with Lines – *Check Lineweights, check the print layout – Is the pattern well-centered?* (10%);
Jpeg without Lines - *Check Lineweights, check the print layout – Is the pattern well-centered?* (10%).

Submission:
Save your Rhino file as arch122_nameSurname_emergentPatterns.3dm
Save two JPEG files of the hatched pattern: one with the lines, one without the lines using the same name convention.
Create a subfolder (Emergent Patterns) within your OneDrive Folder and upload all three files.

* This exercise has been adapted from an exercise developed by a group of faculty (including Benay Gursoy) at Istanbul Bilgi University, as part of the Architectural Geometry class.