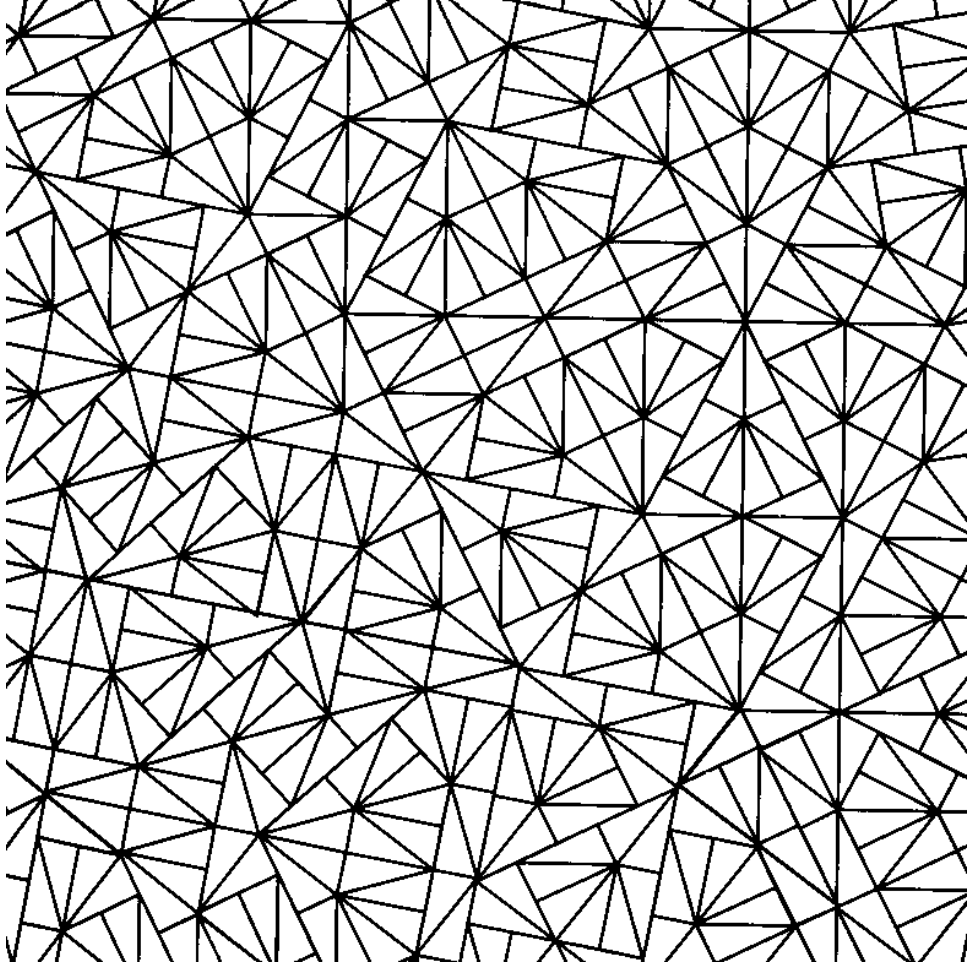
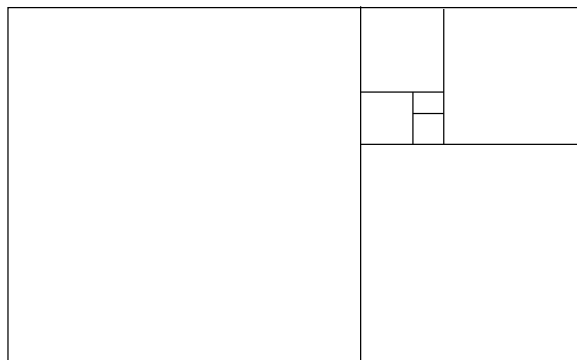


3. In the following piece of the Pinwheel Pattern:

- (a) Outline a 5-unit supertile.
- (b) Outline a 25-unit super-supertile.

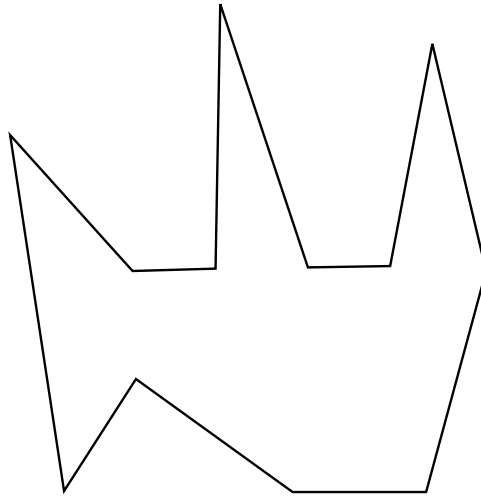


4. (a) Draw the Golden Spiral in the Golden Rectangle.
(b) Find (and clearly mark) the center point from which the spiral spins.



5. For the following gallery:

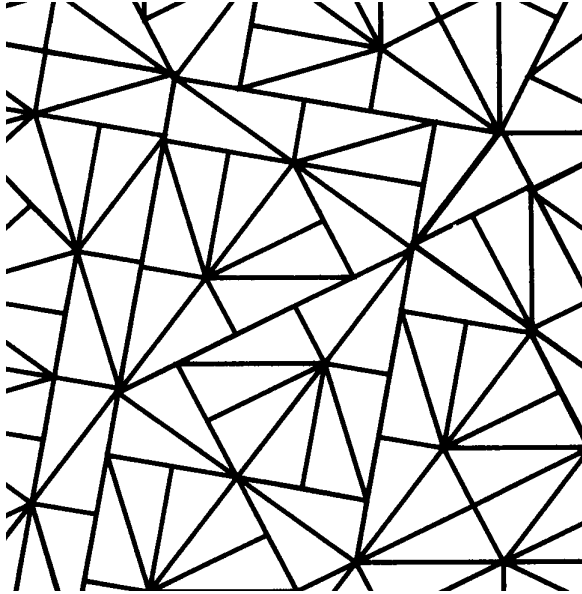
- (a) Triangulate the museum by adding straight lines that do not cross each other yet span the insides and extend from one vertex to another (like we did in class and in the homework).
- (b) Color each vertex of the gallery so that each triangle has one red, one yellow, and one blue vertex. You can use symbols to stand for the colors.
- (c) At which vertices would you place the cameras?



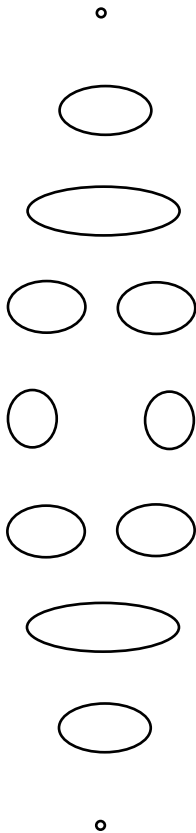
6. (a) How many vertices (corners) are there on a 4-dimensional cube?

(b) How many edges are there on a 4-dimensional cube?

7. Consider the following rectangle which occurs in the Pinwheel Pattern. Is it a Golden Rectangle (justify your answer)?



8. A two-dimensional being sees the following series of nine images. What three-dimensional shape passed through the two-dimensional world?



9. The short side of a Golden Rectangle has length two. Find the area of the rectangle.

10. Prove the Pythagorean Theorem.