

# 1 Bisection algorithm for simplicial meshes

- Serial algorithm
- Longest edge splitting
- Local refinement propagation so that the levels of refinement of the one-ring neighbors it differs at most one.
- For 2D meshes with triangles isosceles the number of congruence classes is 1.
- The algorithm works directly for 3D and 4D.

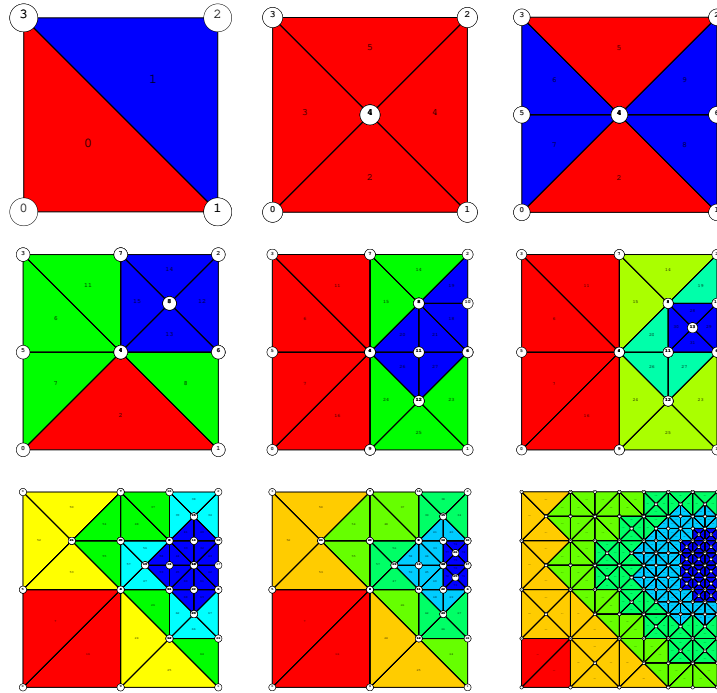


Figure 1: Steps of the bisection algorithm.