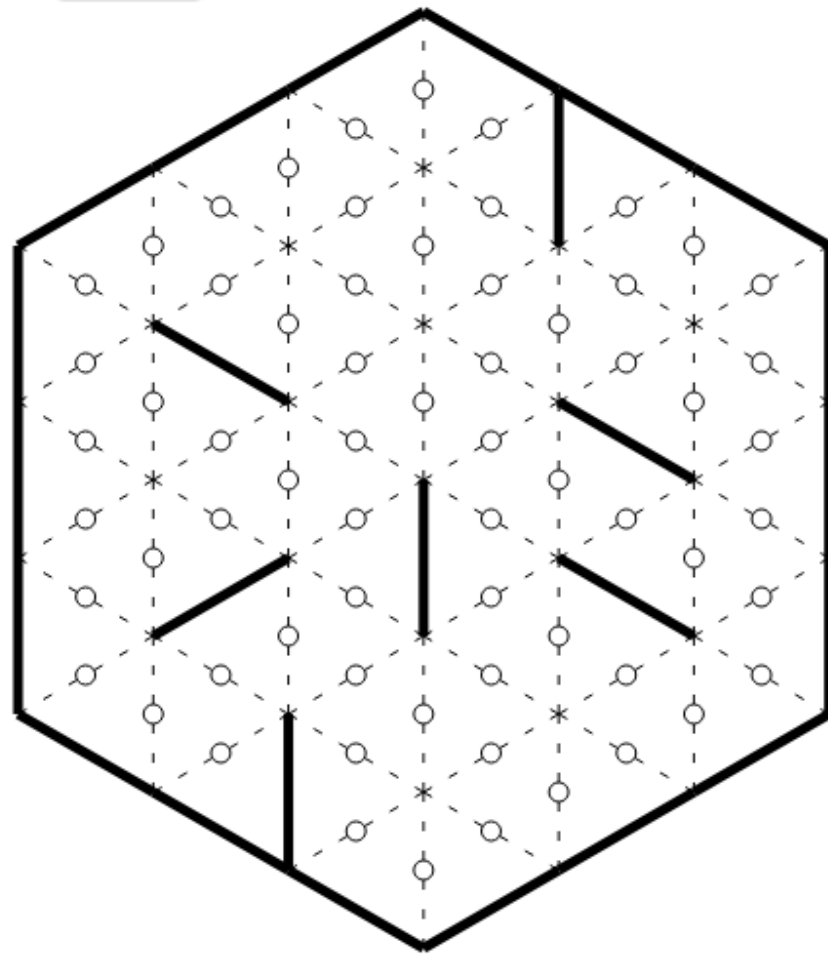


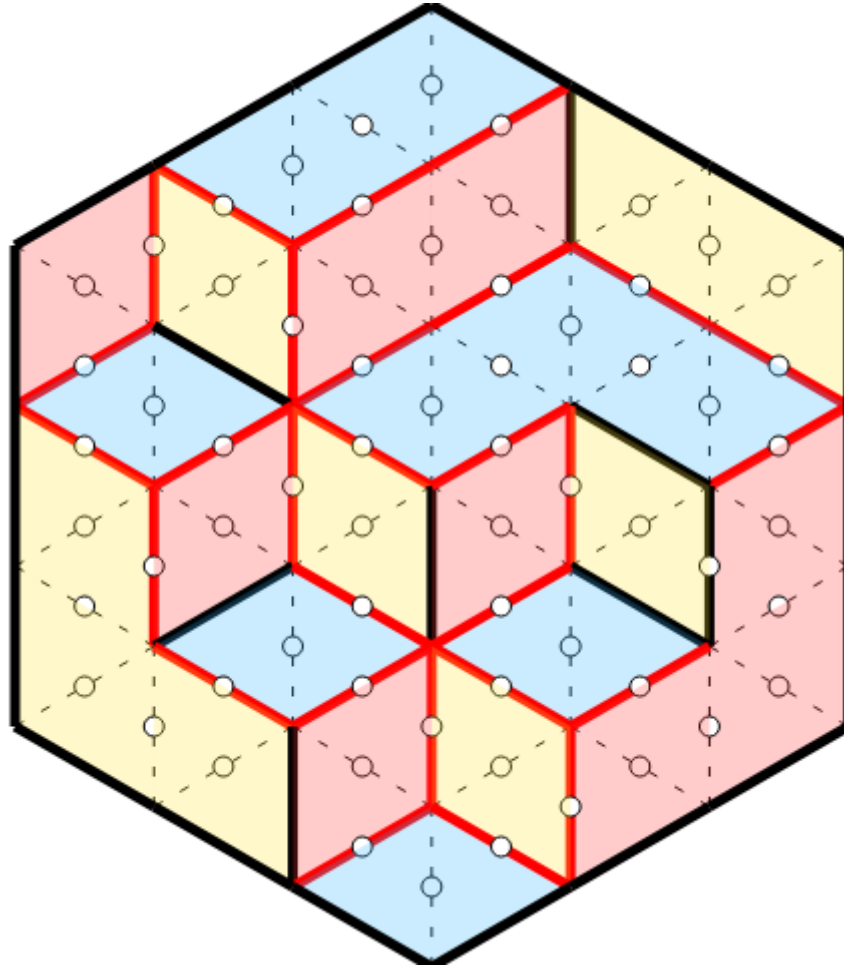
Couplages parfaits et pavages aléatoires de losanges par touillage de dominos

Antonin LOUBIERE, 9 Juillet 2025

Motivation : génération de grilles de calissons

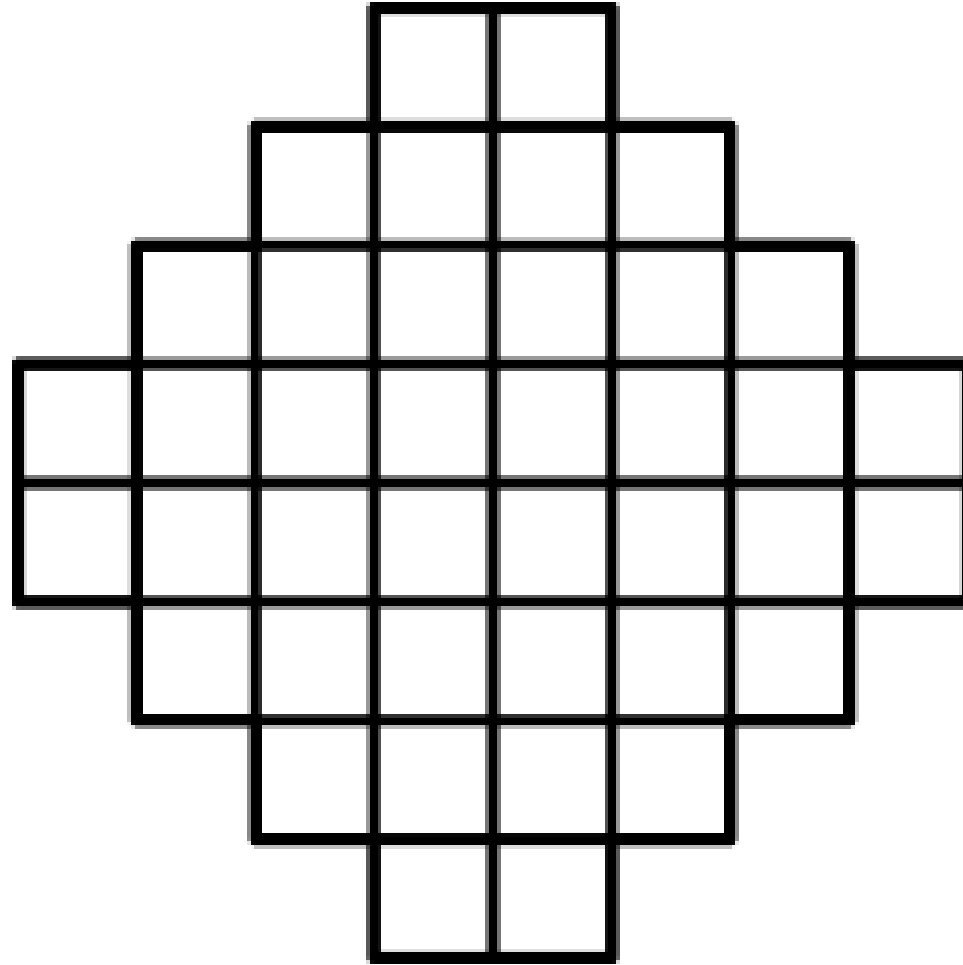


Grille vide 26/07/23 — O. Longuet

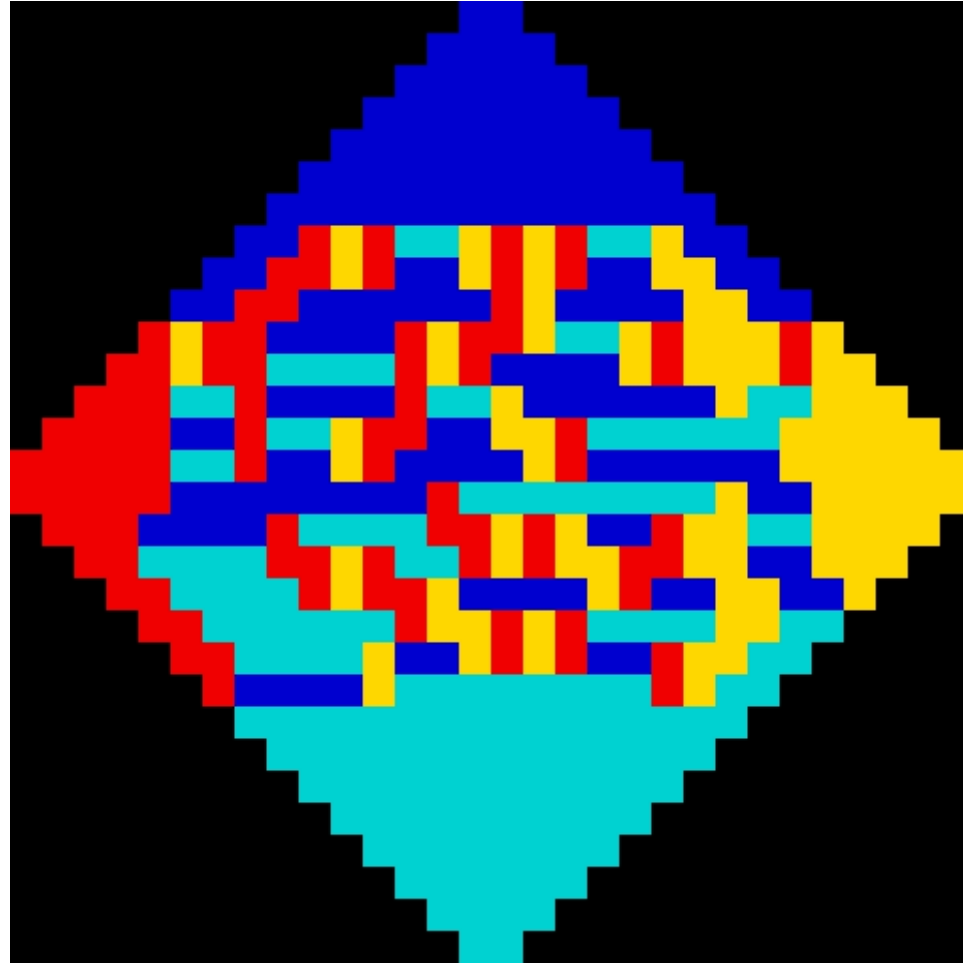


Grille complétée 26/07/23 — O. Longuet

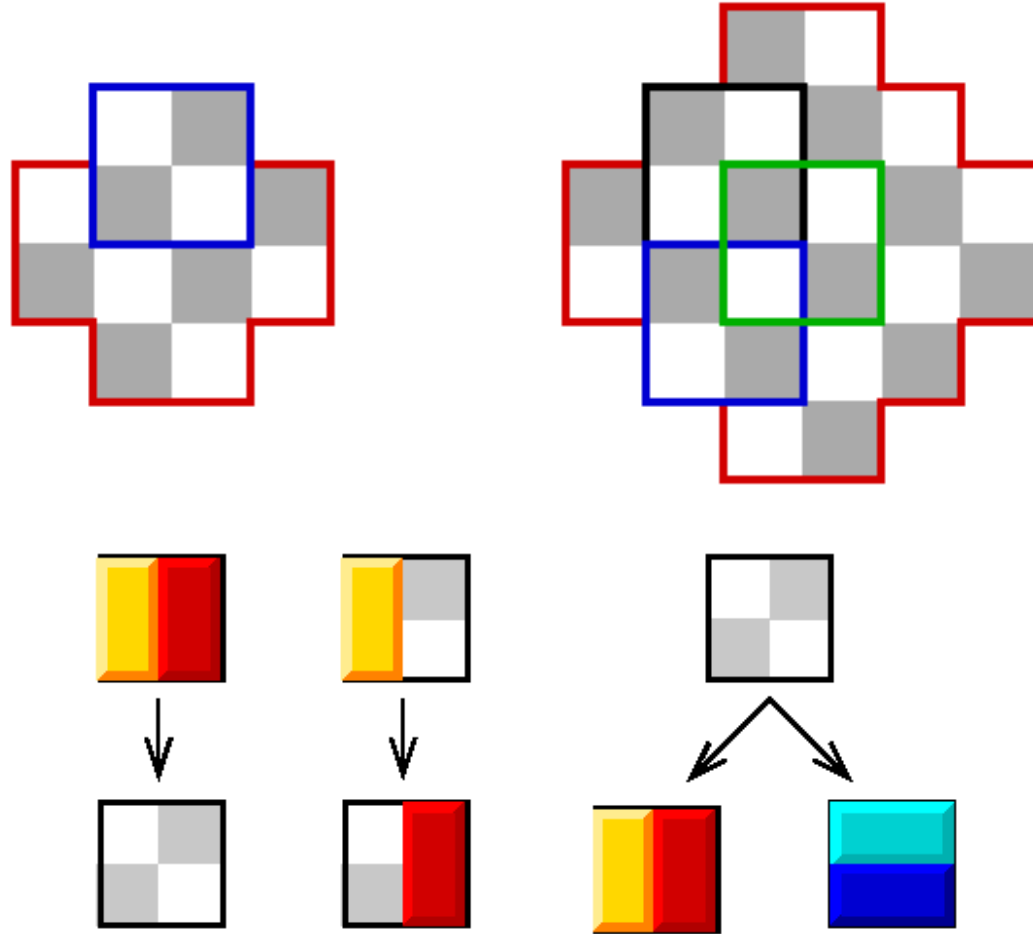
Diamants Aztèques uniformes



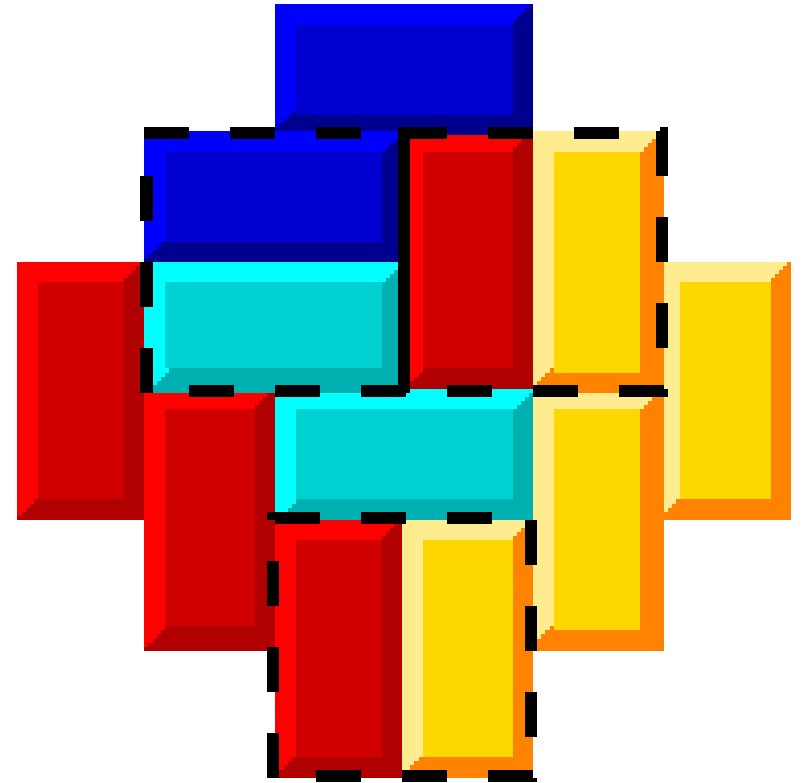
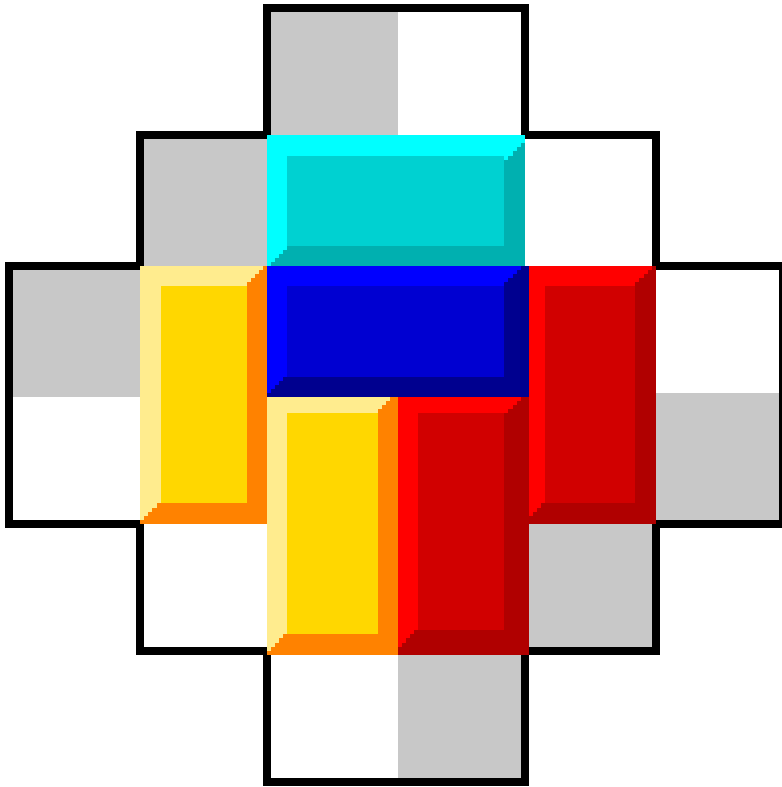
Diamant Aztèque d'ordre 4 — Wikipédia



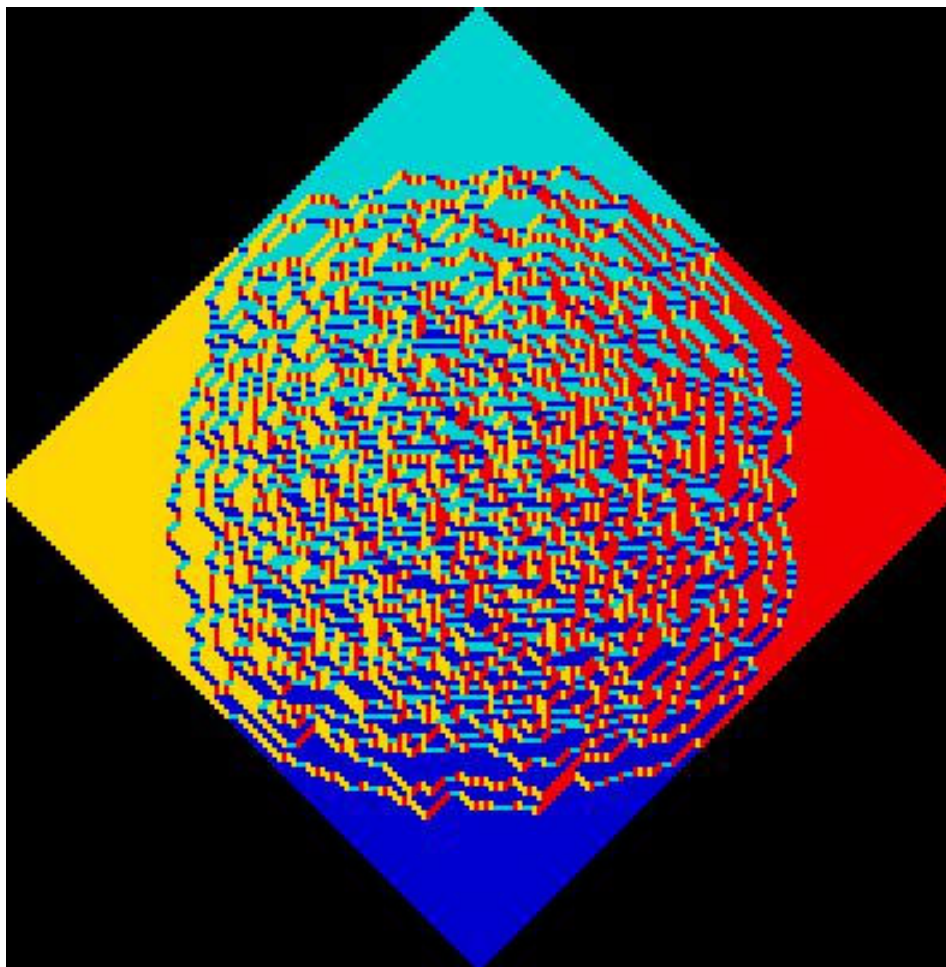
Pavage d'un diamant Aztèque d'ordre 15



Cellules actives et règle de mise à jour locale [1]



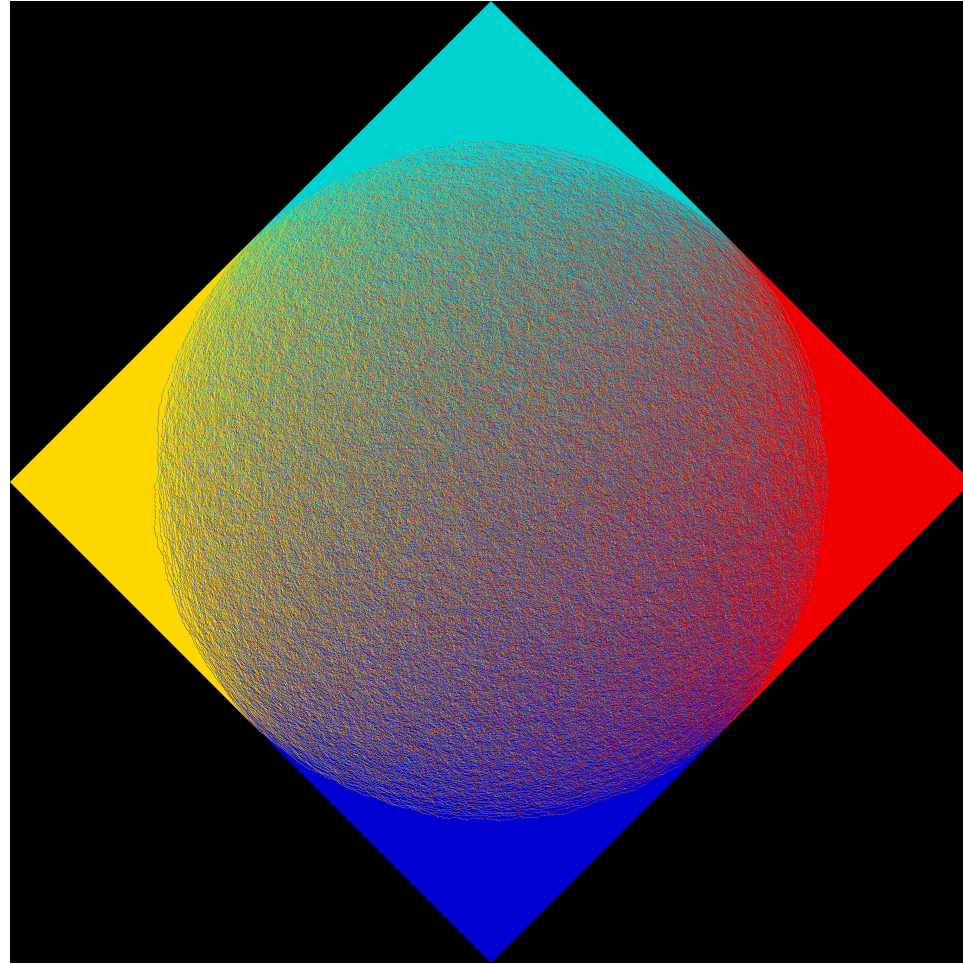
Exemple [1]



Diamant Aztèque d'ordre 200

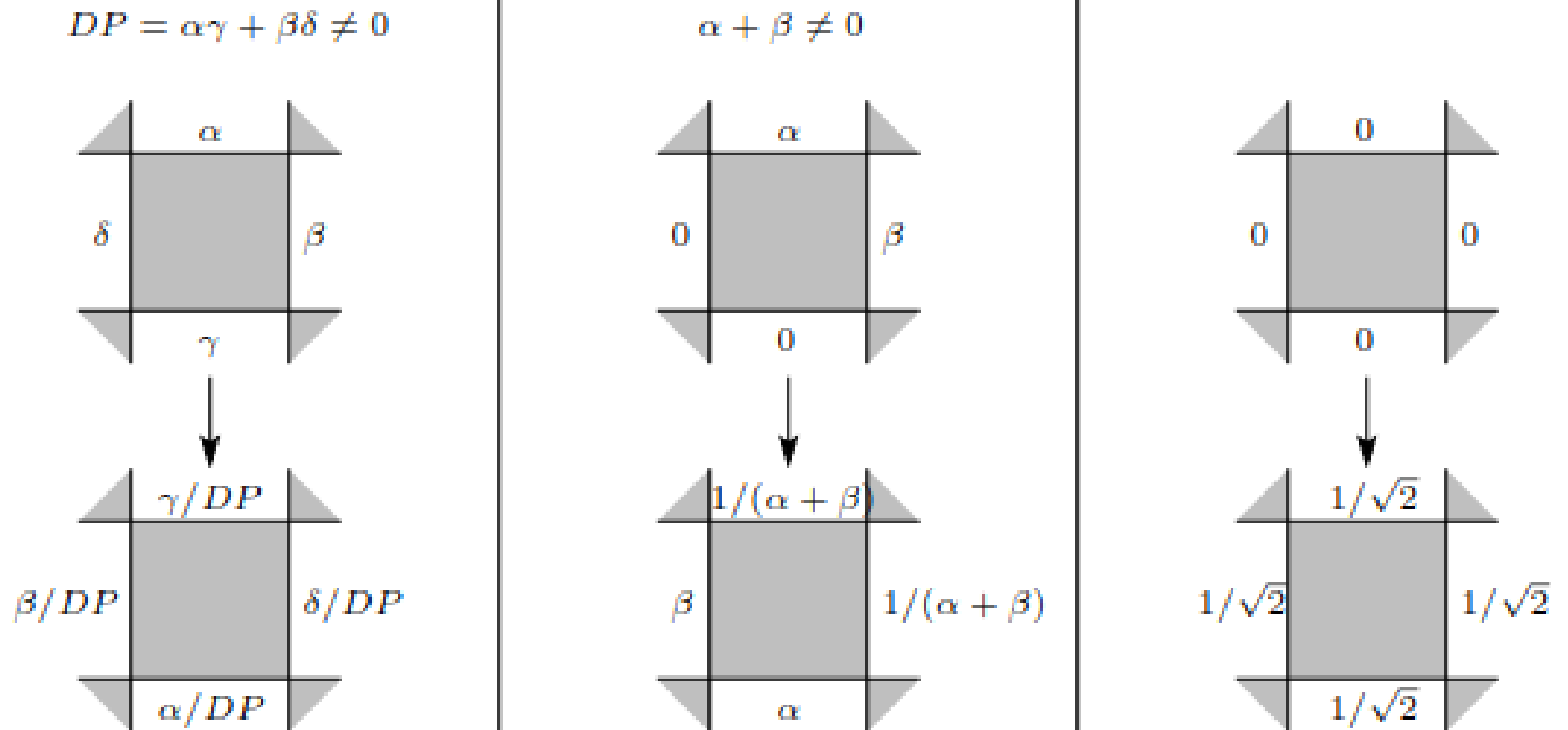


Création d'un pavage d'un diamant
Aztèque d'ordre 100

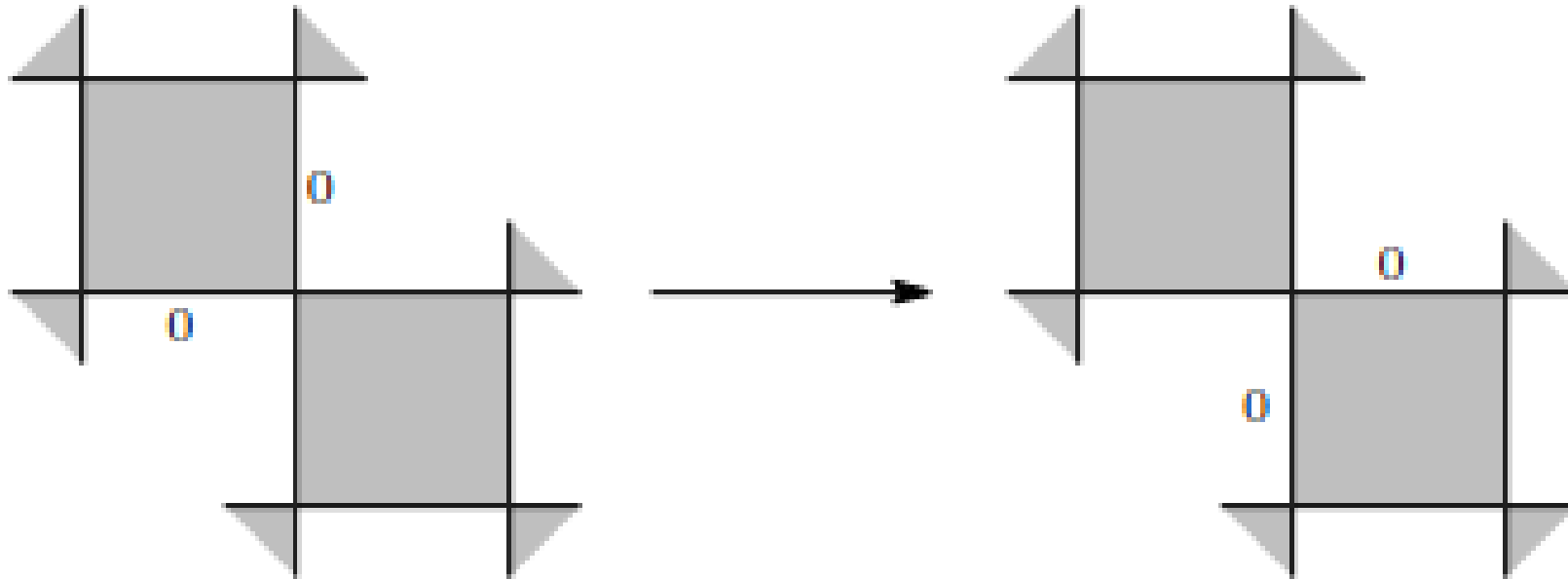


Diamant Aztèque d'ordre 2000

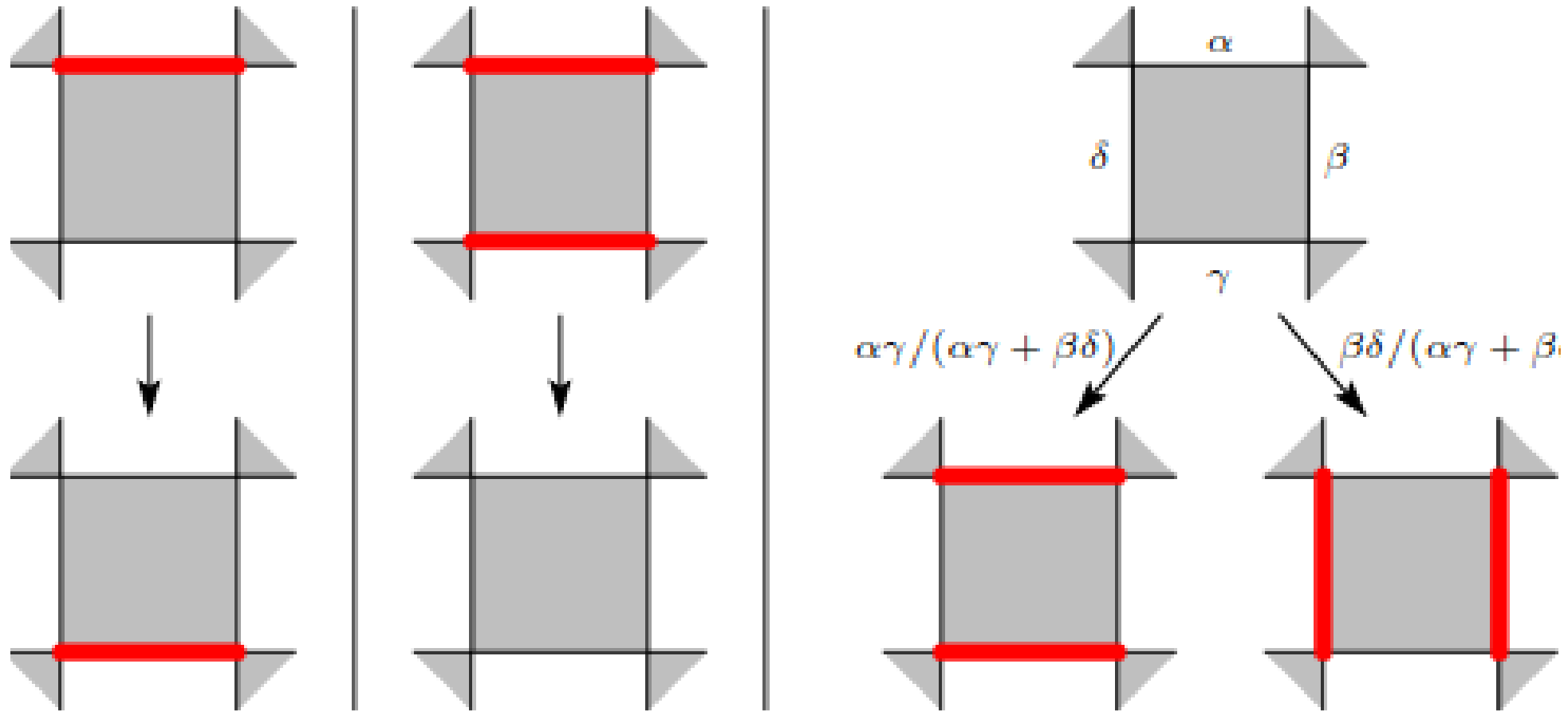
Diamants Aztèques pondérés



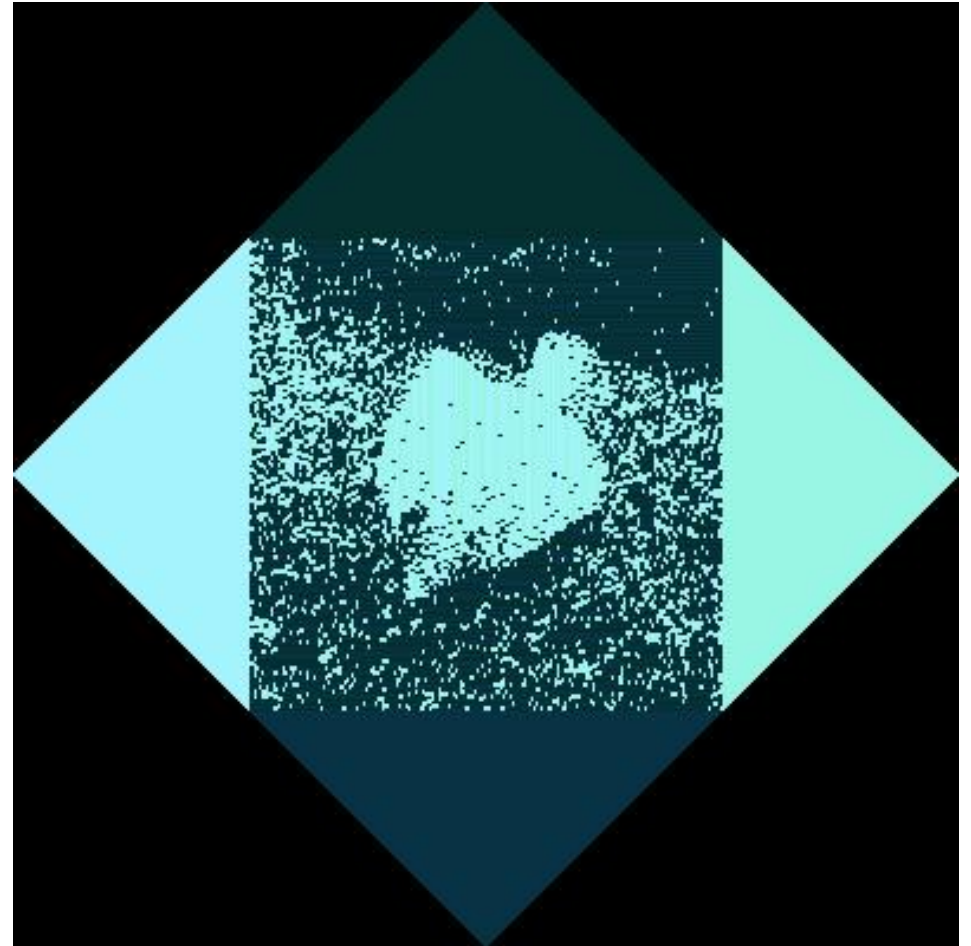
Pré-calcul des poids: règles de mises à jours [2]



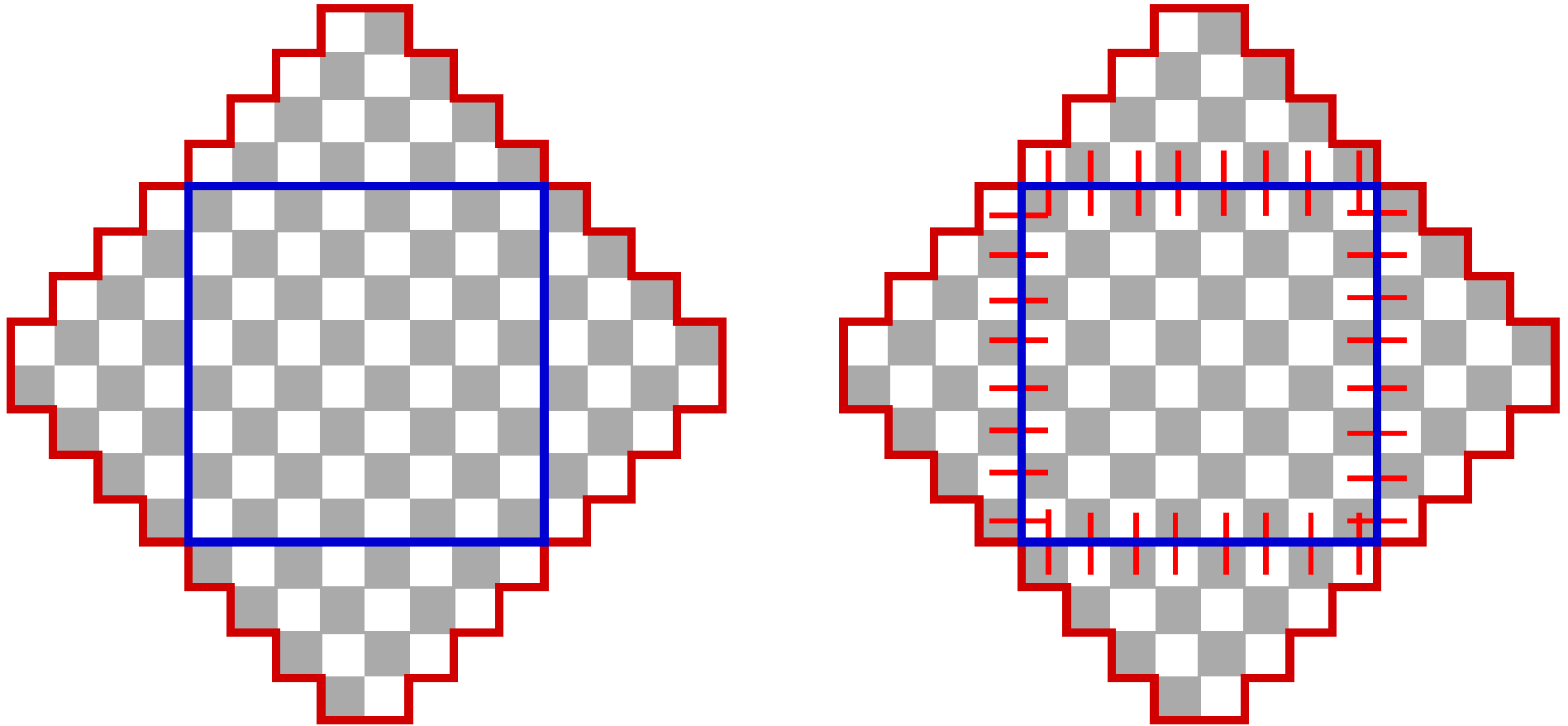
Effacement des arcs [2]



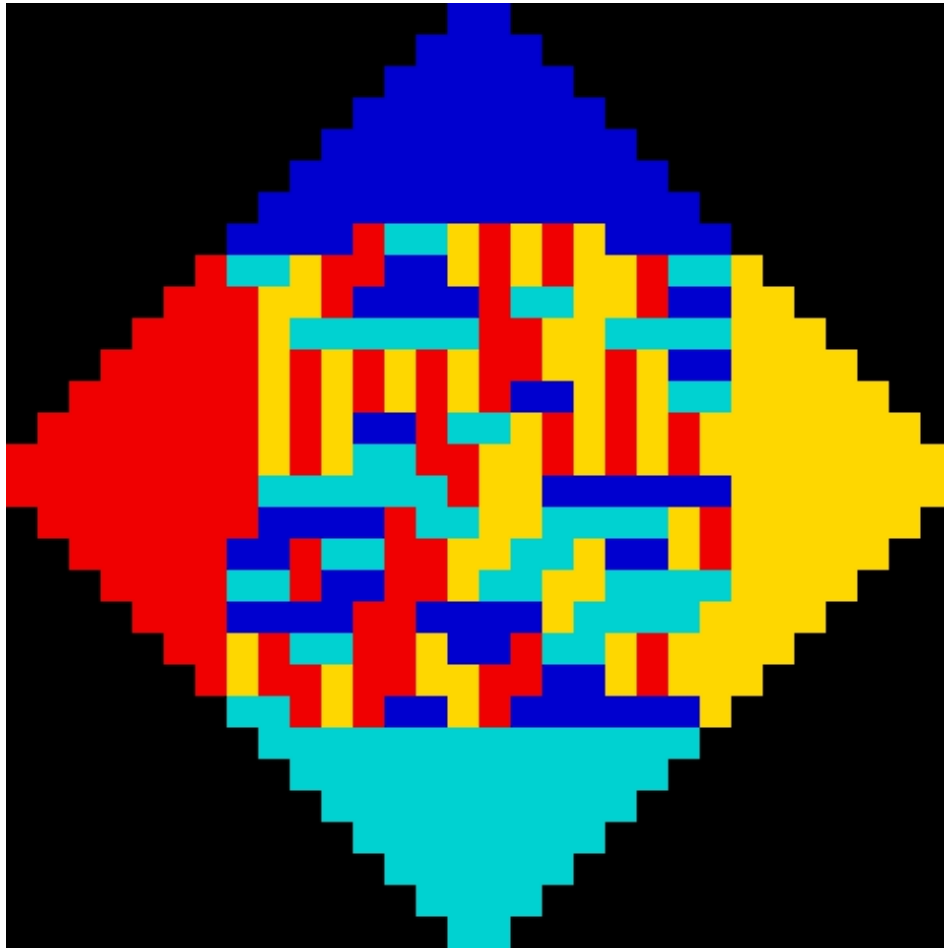
Synthèse des dominos [2]



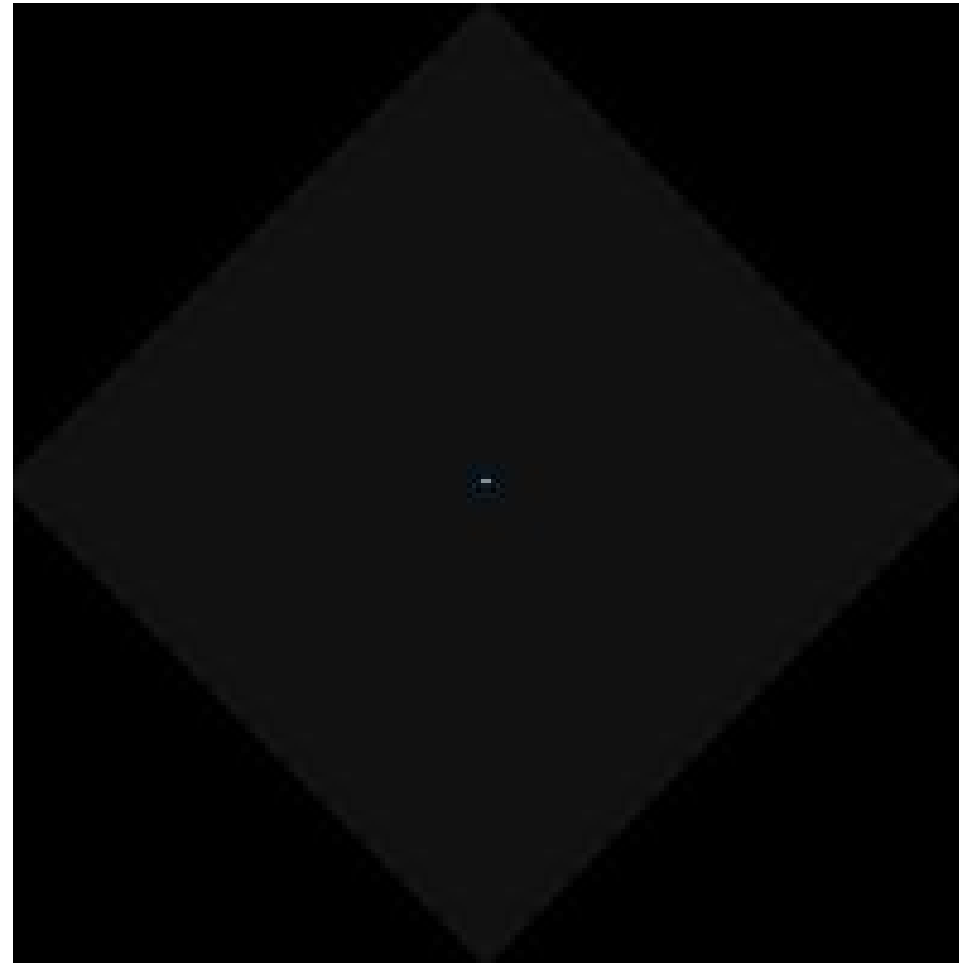
Encodage de graphes dans des diamant Aztèque pondérés



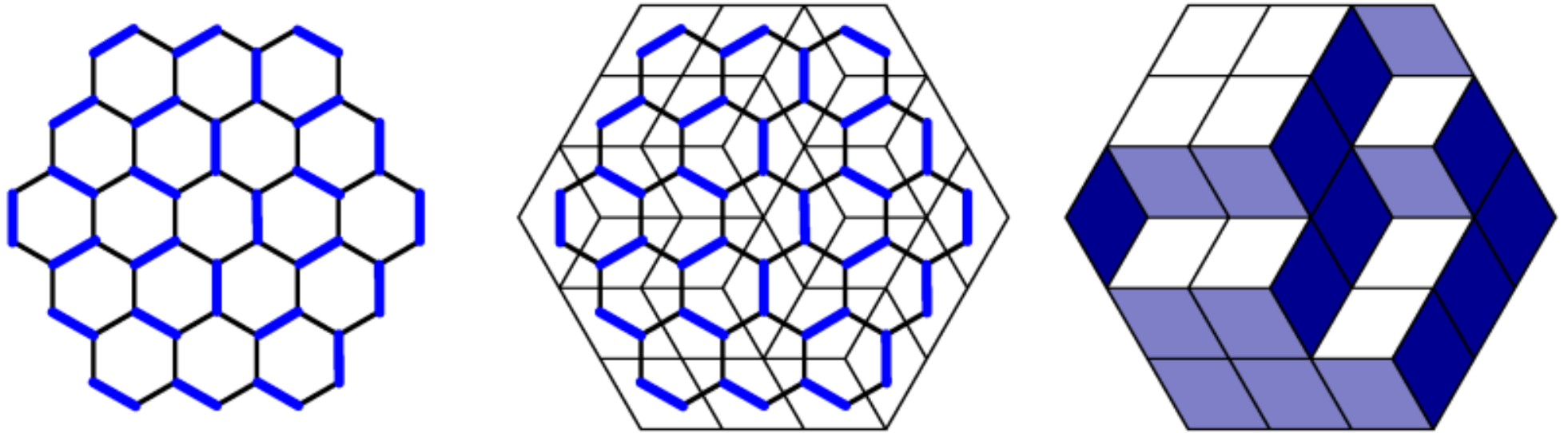
Un carré inséré dans un diamant aztèque [1]



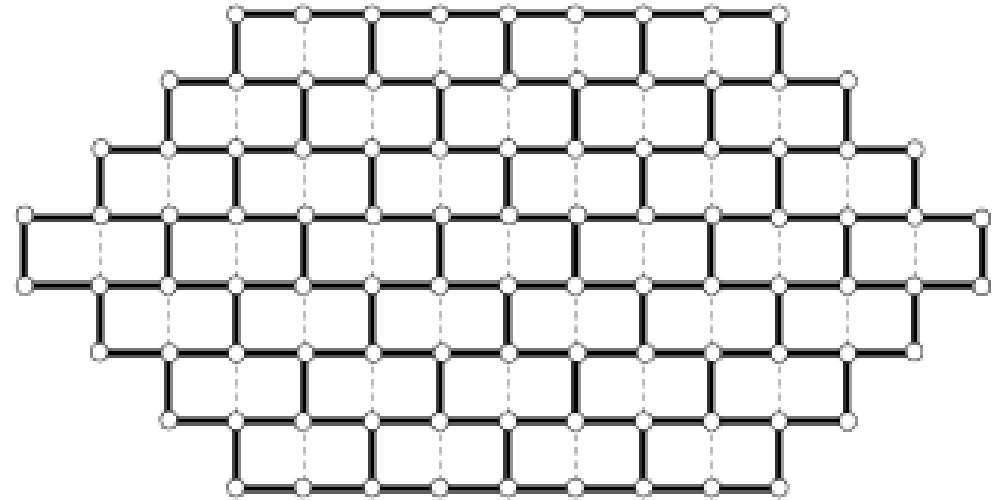
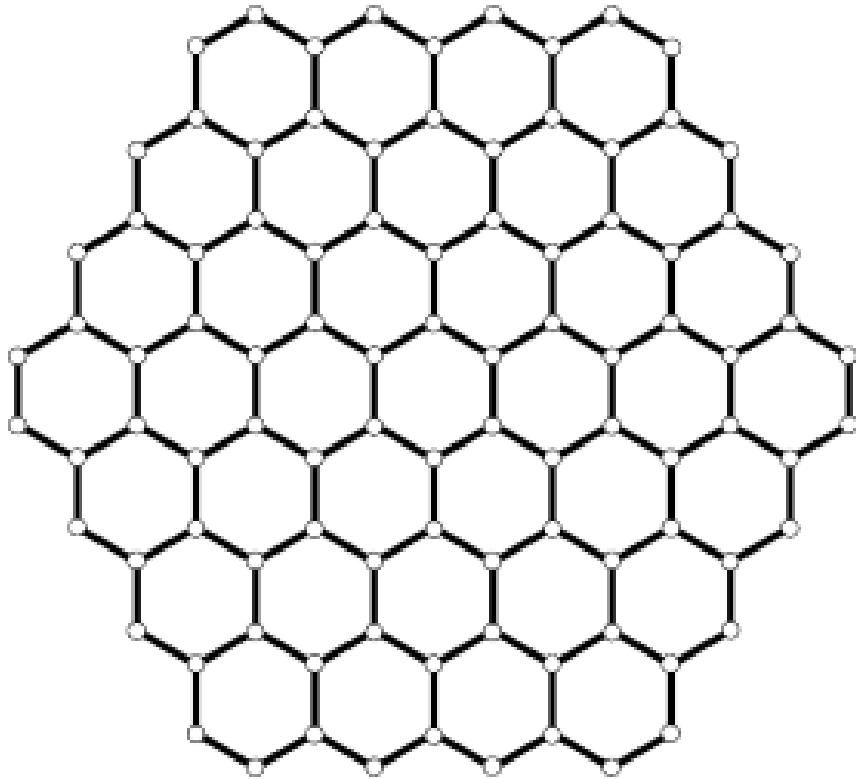
Pavage d'un carré d'ordre 16



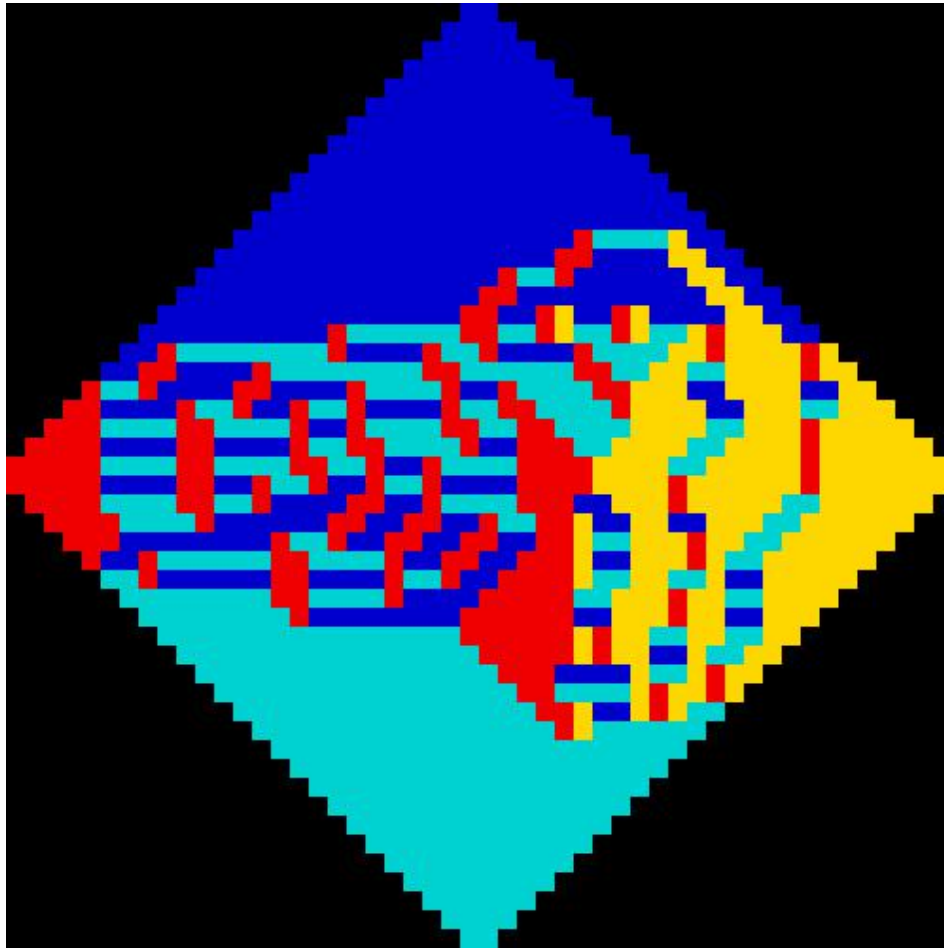
Pavage d'un carré d'ordre 80



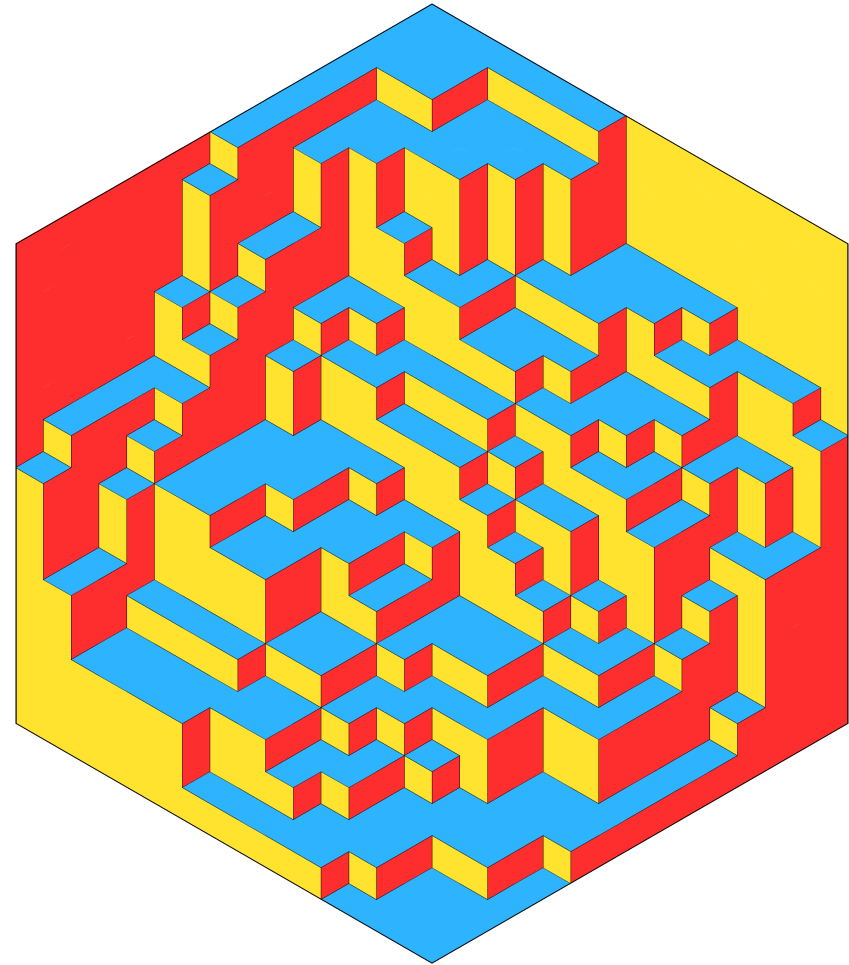
Dualité entre couplage parfait et pavage [2]



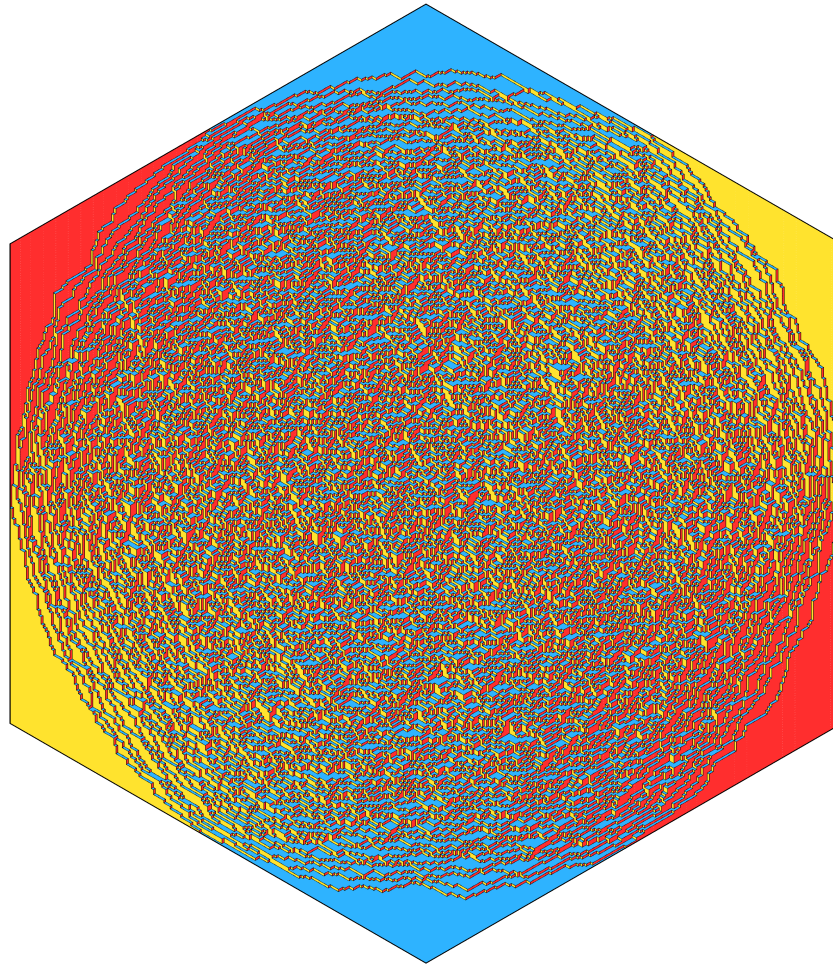
Encodage d'un réseau hexagonal [1]



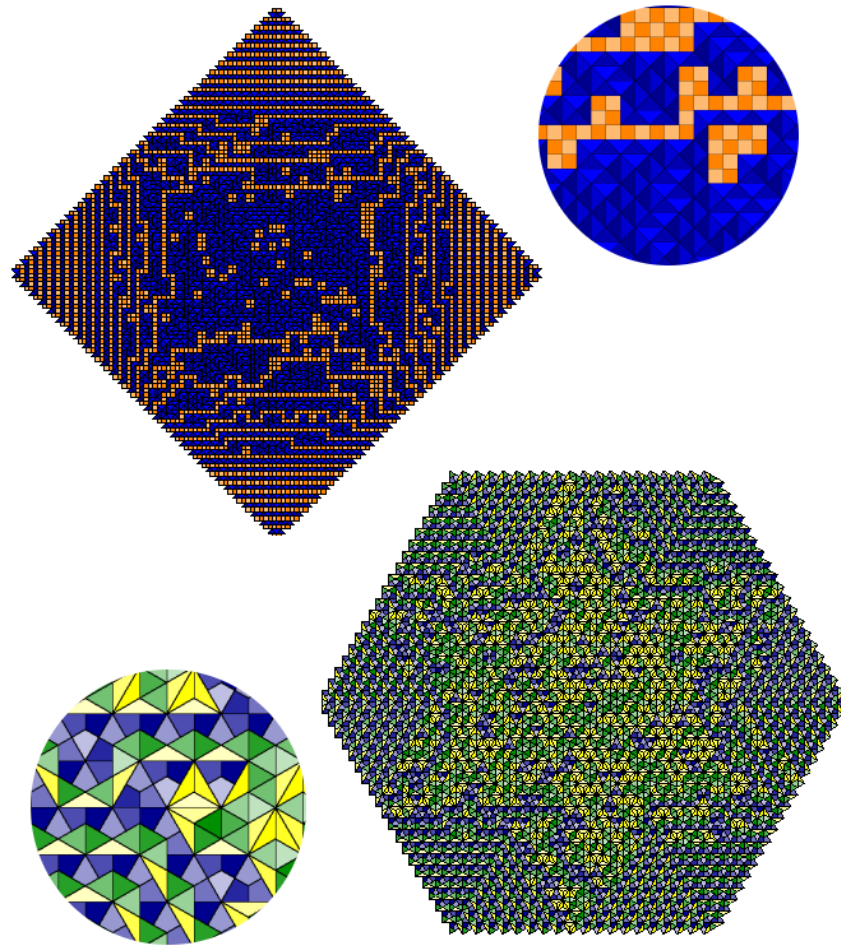
Calisson de rayon 6



Calisson d'ordre 15



Calisson d'ordre 200



Autres pavages [1]

Bibliography

- [1] É. Janvresse and T. de la Rue, “Pavages aléatoires par touillage de dominos.” Accessed: Dec. 29, 2024. [Online]. Available: <https://images-archive.math.cnrs.fr/Pavages-aleatoires-par-touillage-de-dominos.html>
- [2] É. Janvresse, T. de la Rue, and Y. Velenik, “A Note on Domino Shuffling,” *The Electronic Journal of Combinatorics*, p. R30–R30, Apr. 2006, doi: [10.37236/1056](https://doi.org/10.37236/1056).