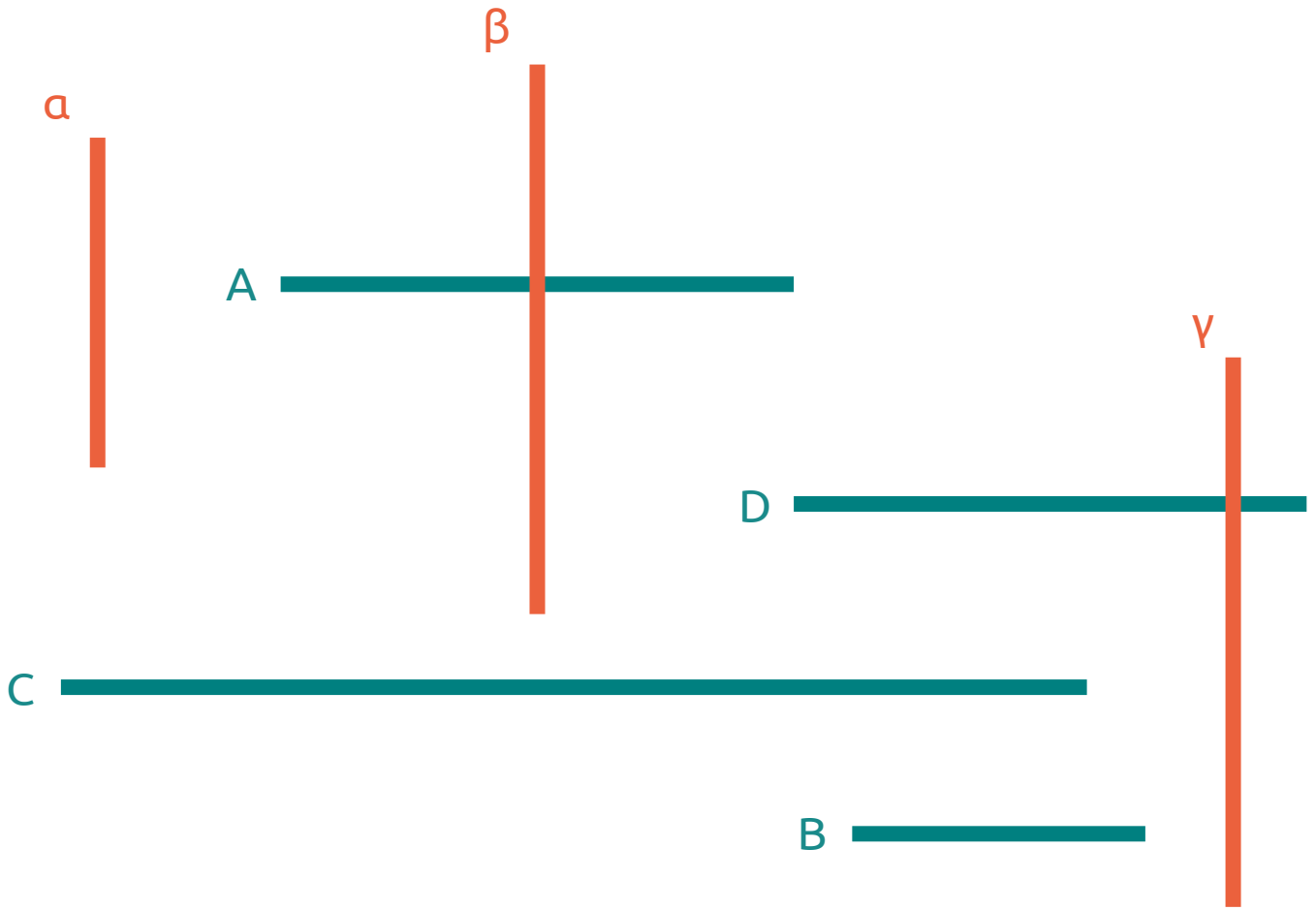
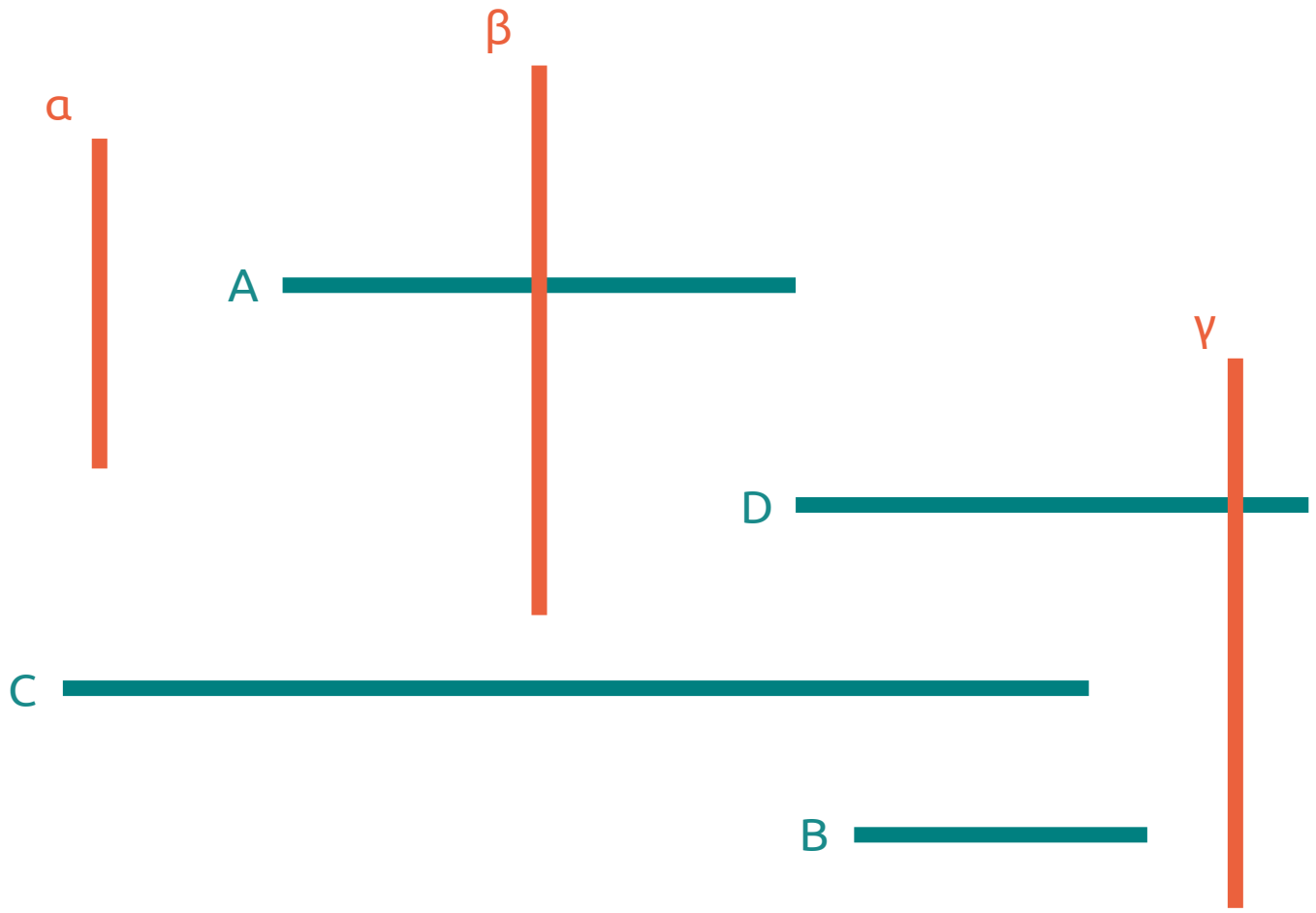
Arbres binaires de recherche

Motivation : intersection de segments horizontaux et verticaux

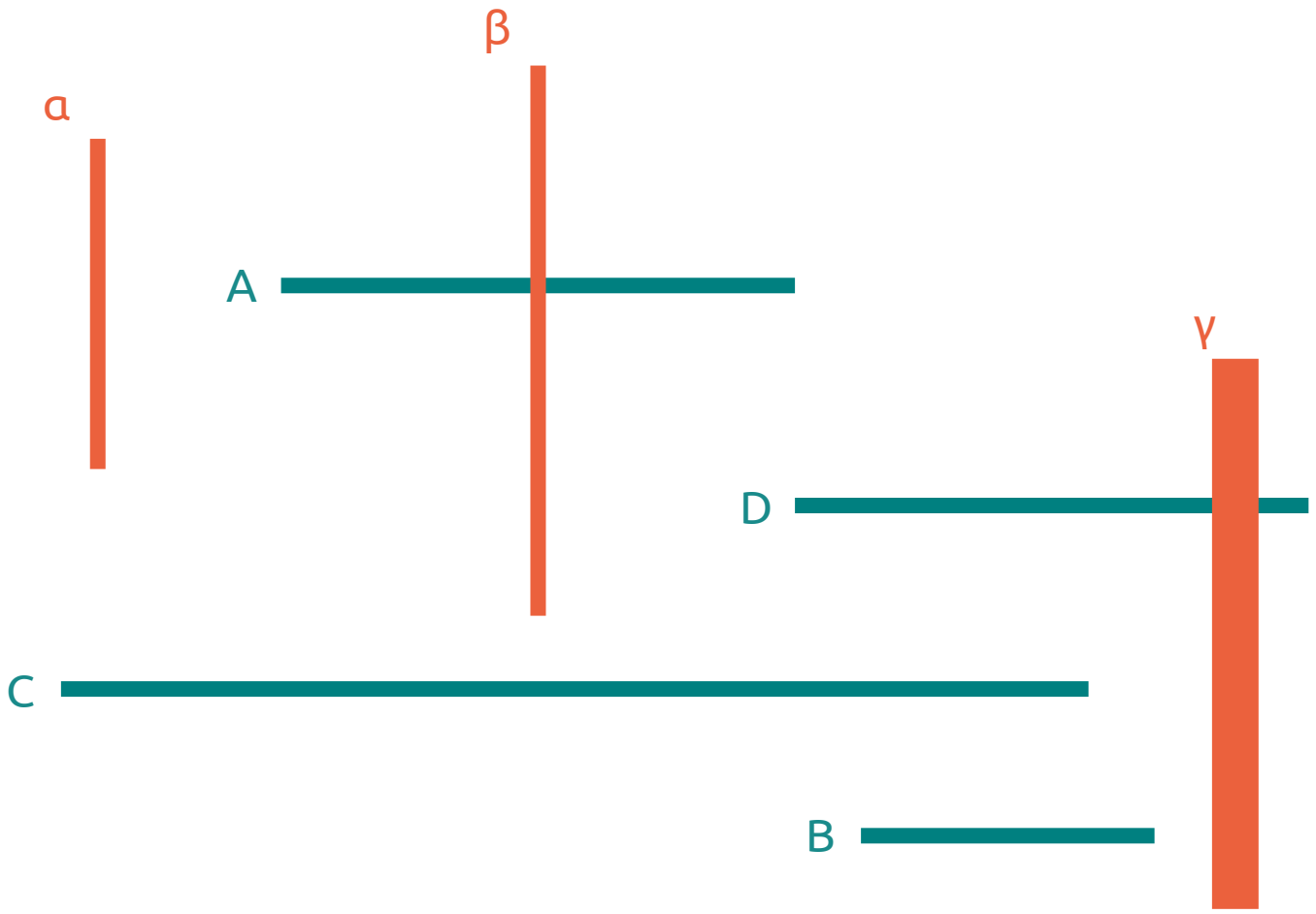


Motivation : intersection de segments horizontaux et verticaux



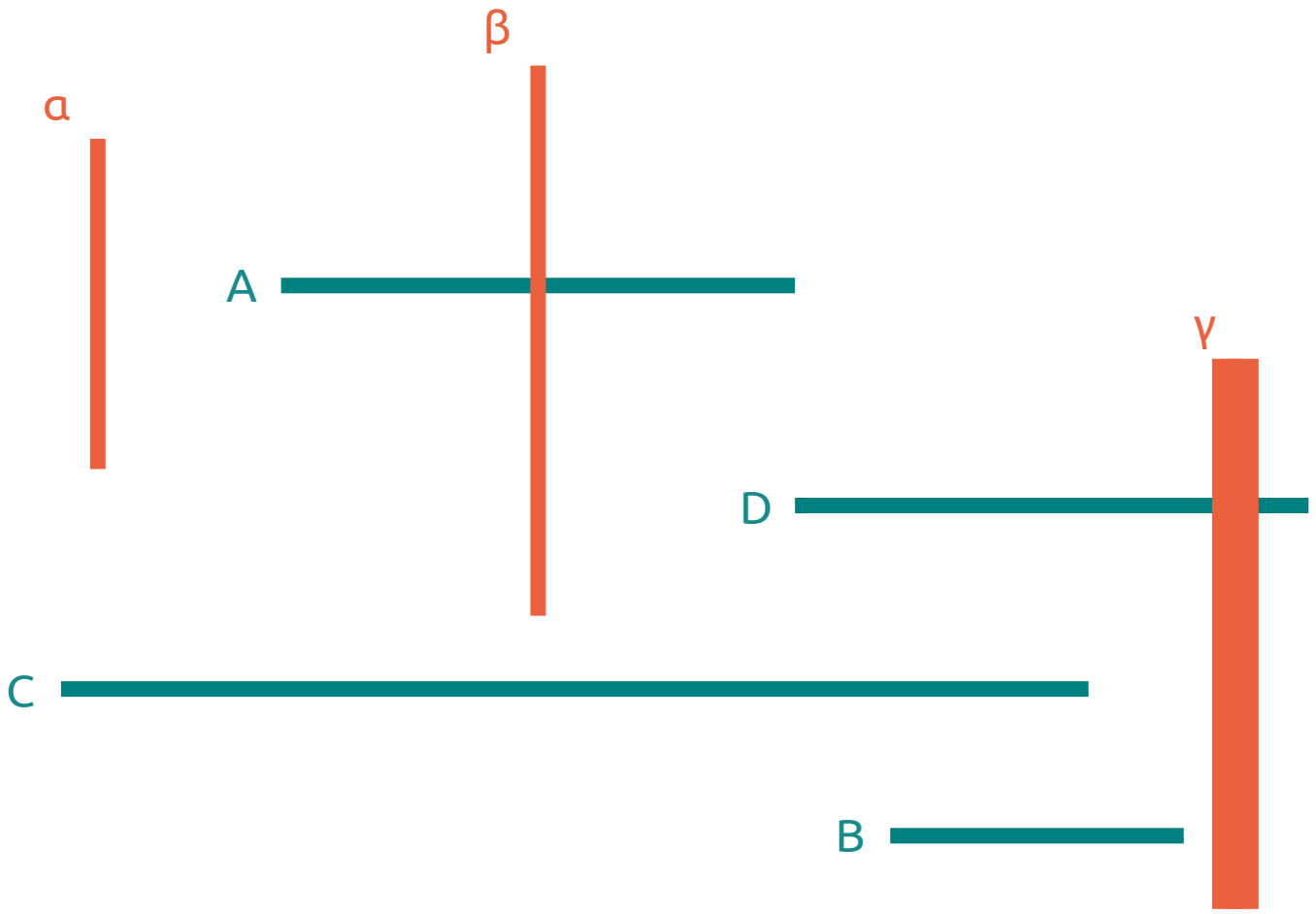
γ[B C β[D α[γ] A α] β]

Motivation : intersection de segments horizontaux et verticaux



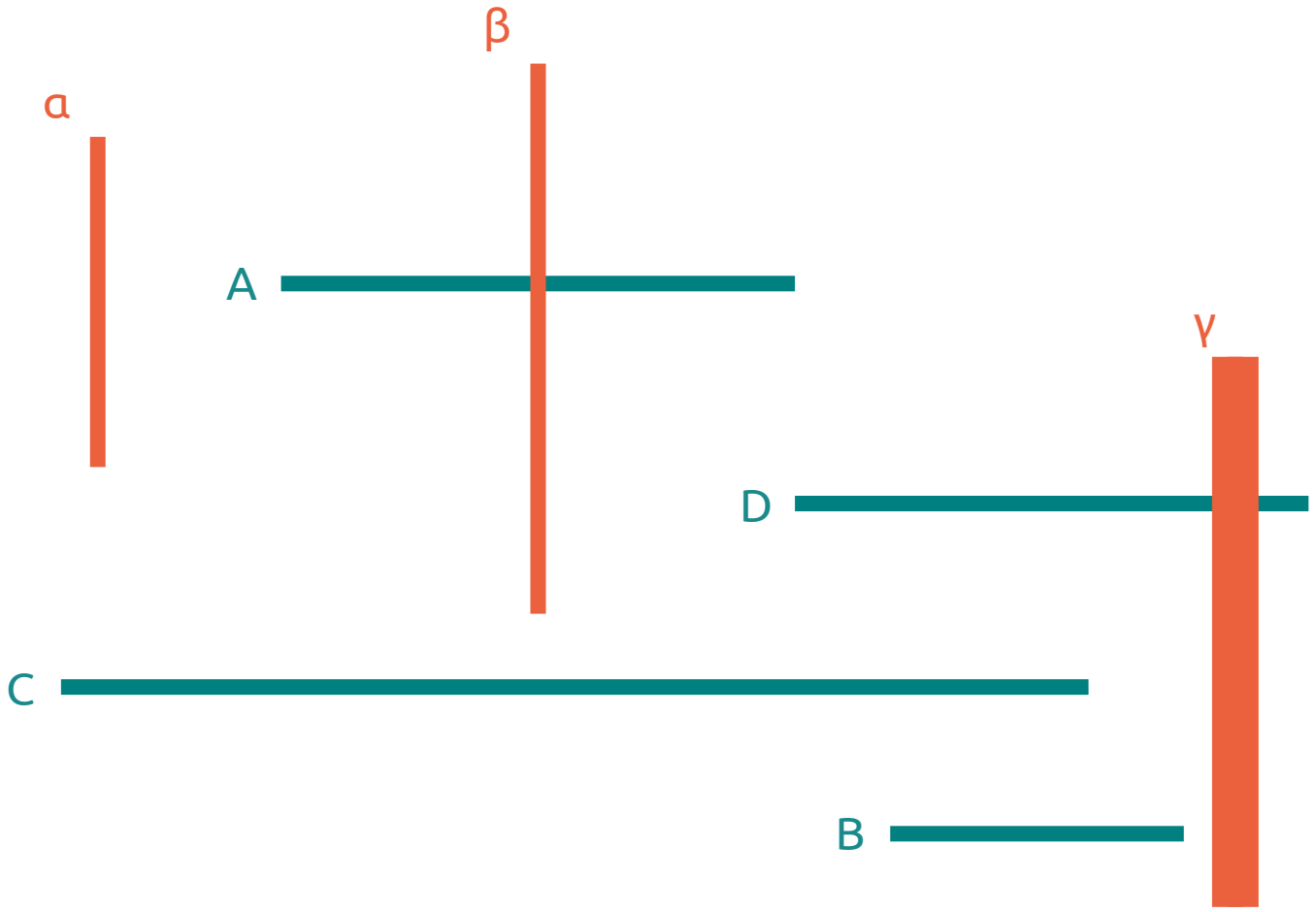
γ[B C β[D α[γ] A α] β]

Motivation : intersection de segments horizontaux et verticaux



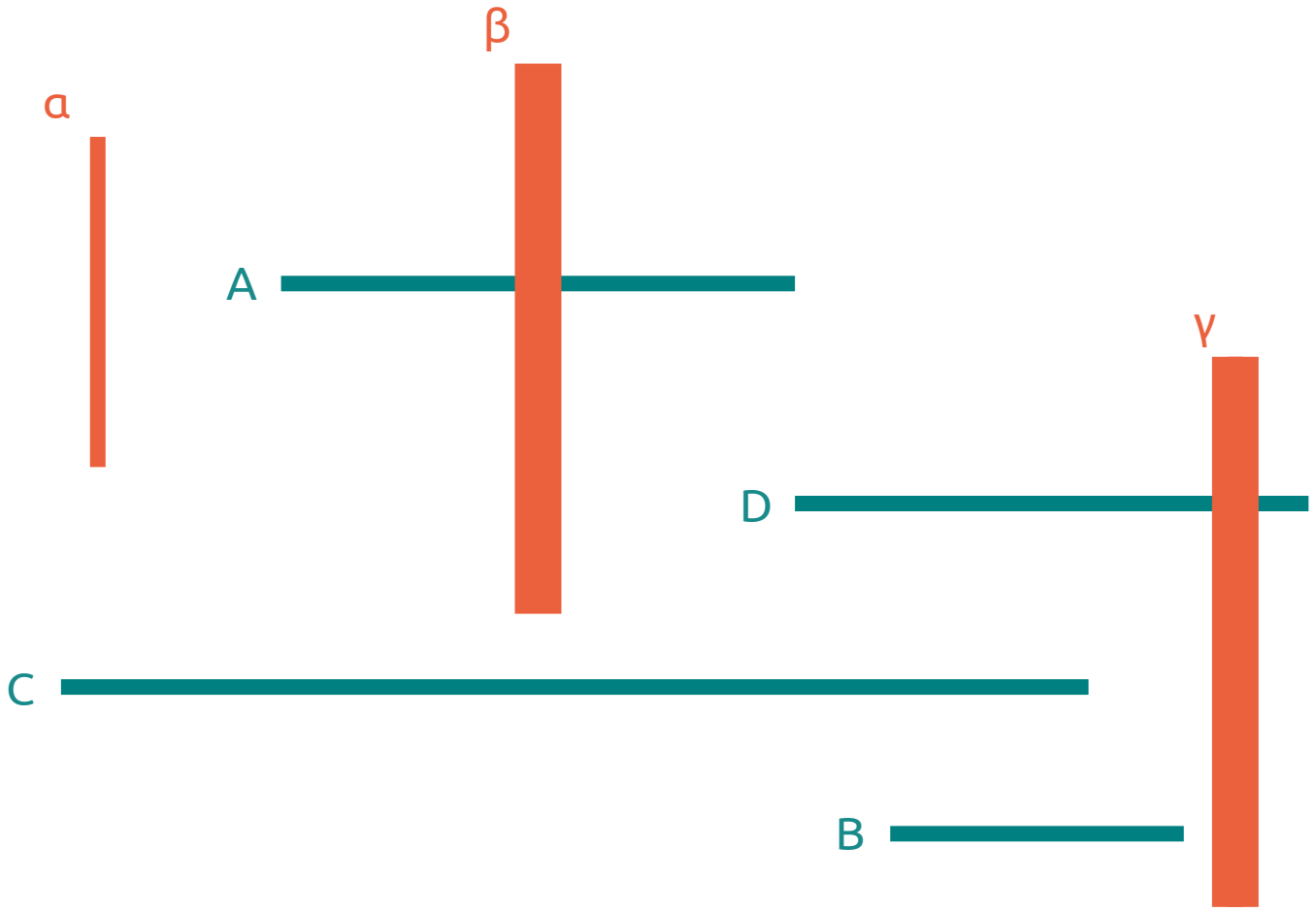
γ[B C β[D α[γ] A α] β]

Motivation : intersection de segments horizontaux et verticaux



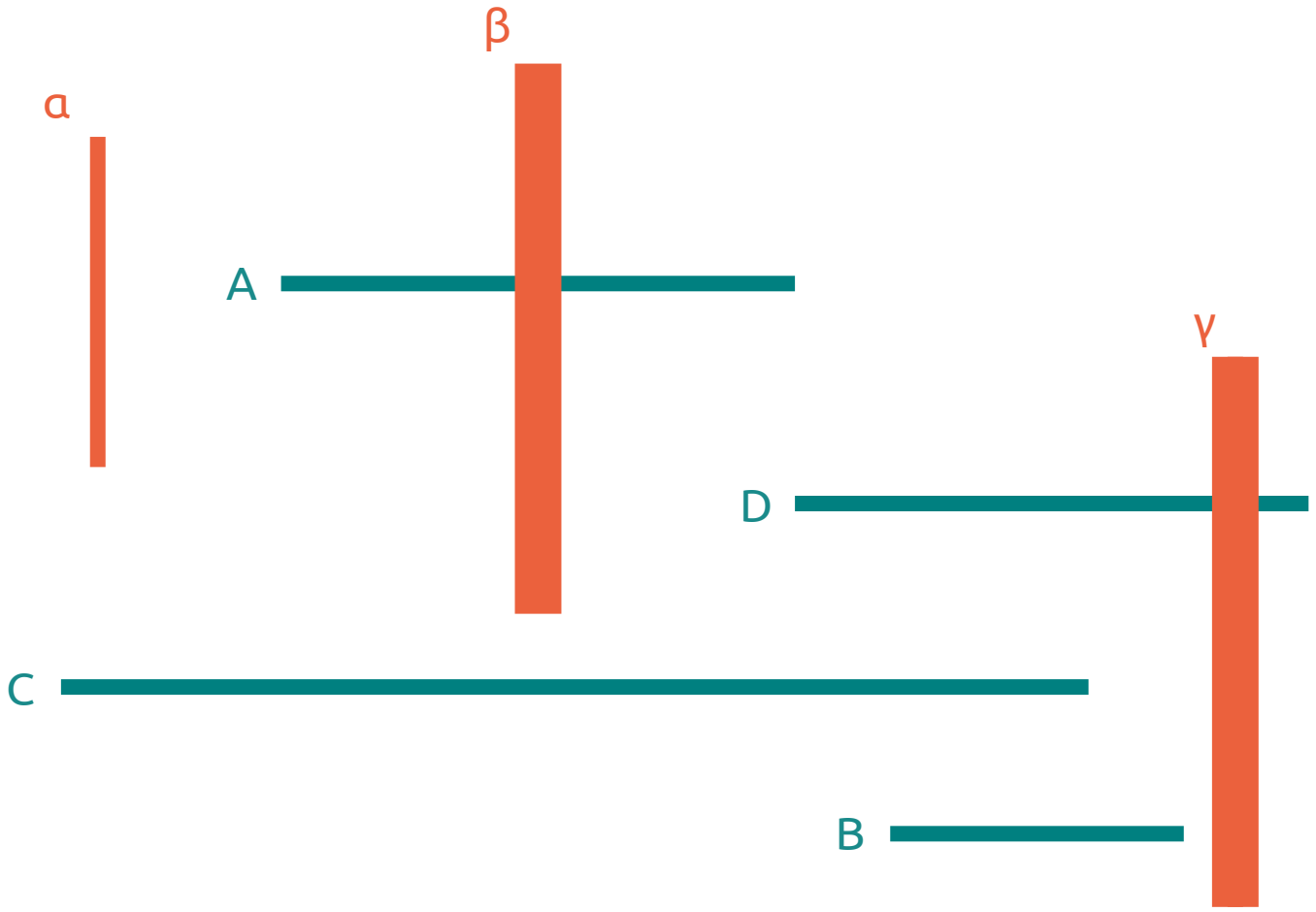
γ[B C β[D α[γ] A α] β]

Motivation : intersection de segments horizontaux et verticaux



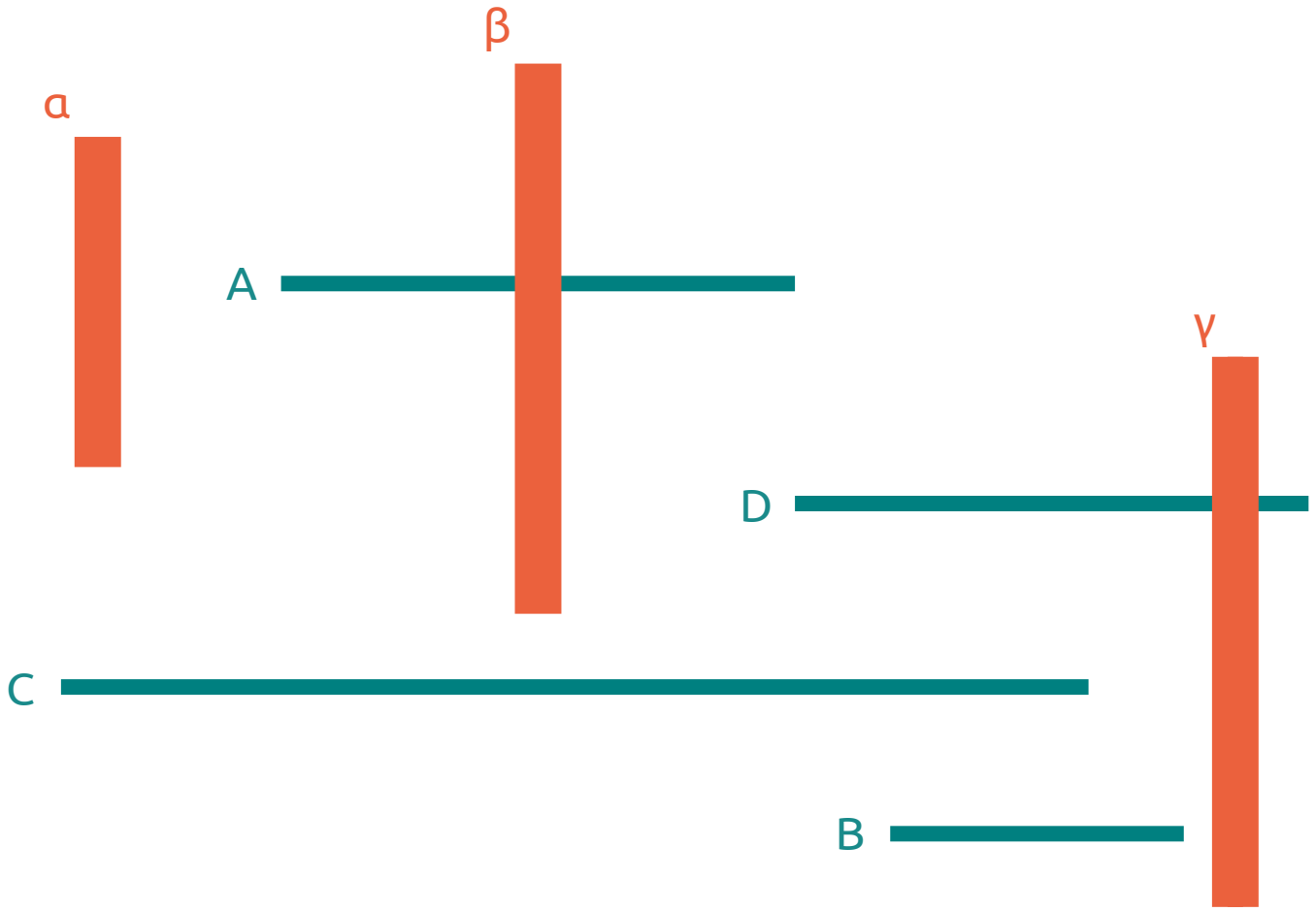
γ[B C β[D α[γ] A α] β]

Motivation : intersection de segments horizontaux et verticaux

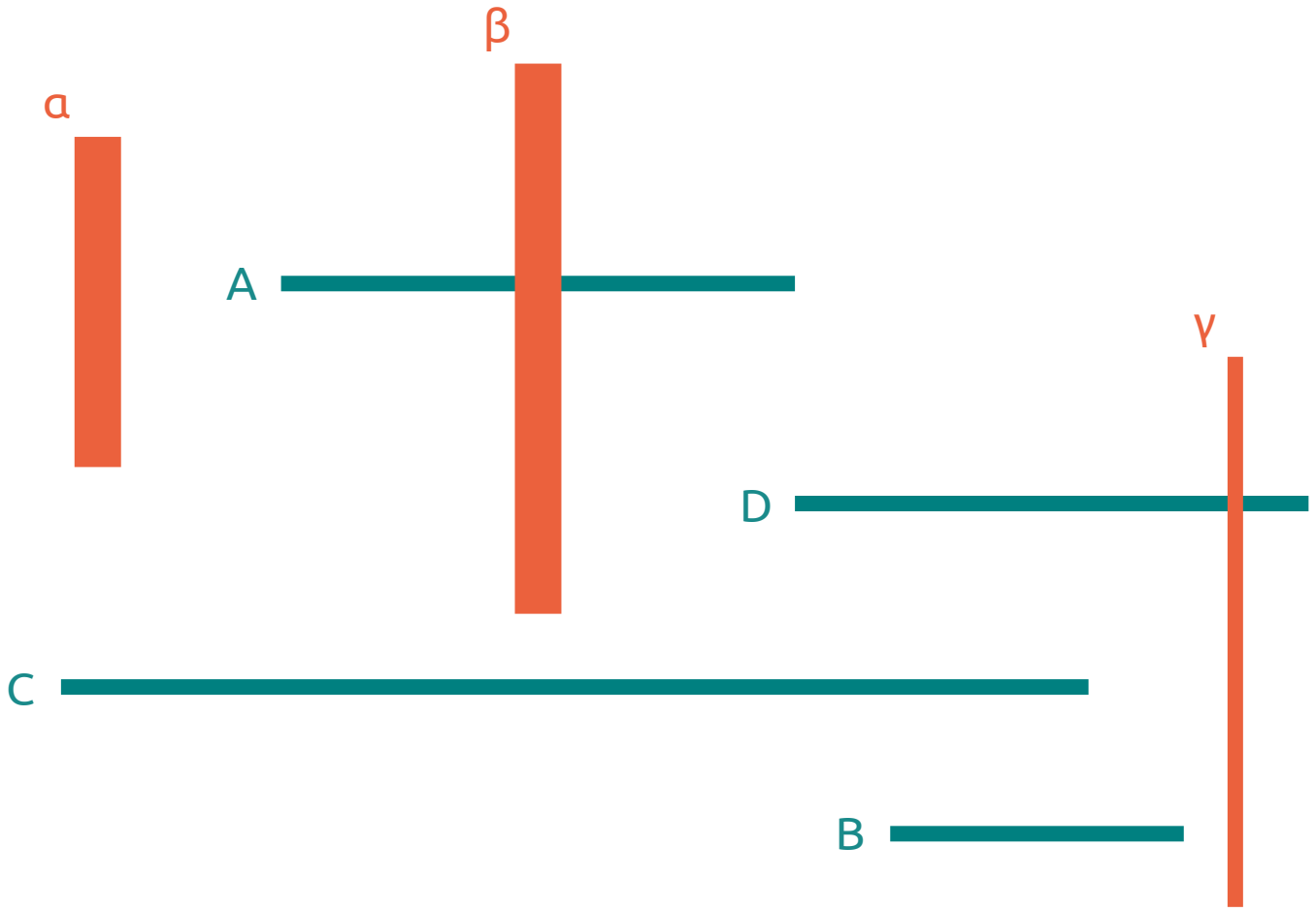


γ[B C β[D α[γ] A α] β]

Motivation : intersection de segments horizontaux et verticaux

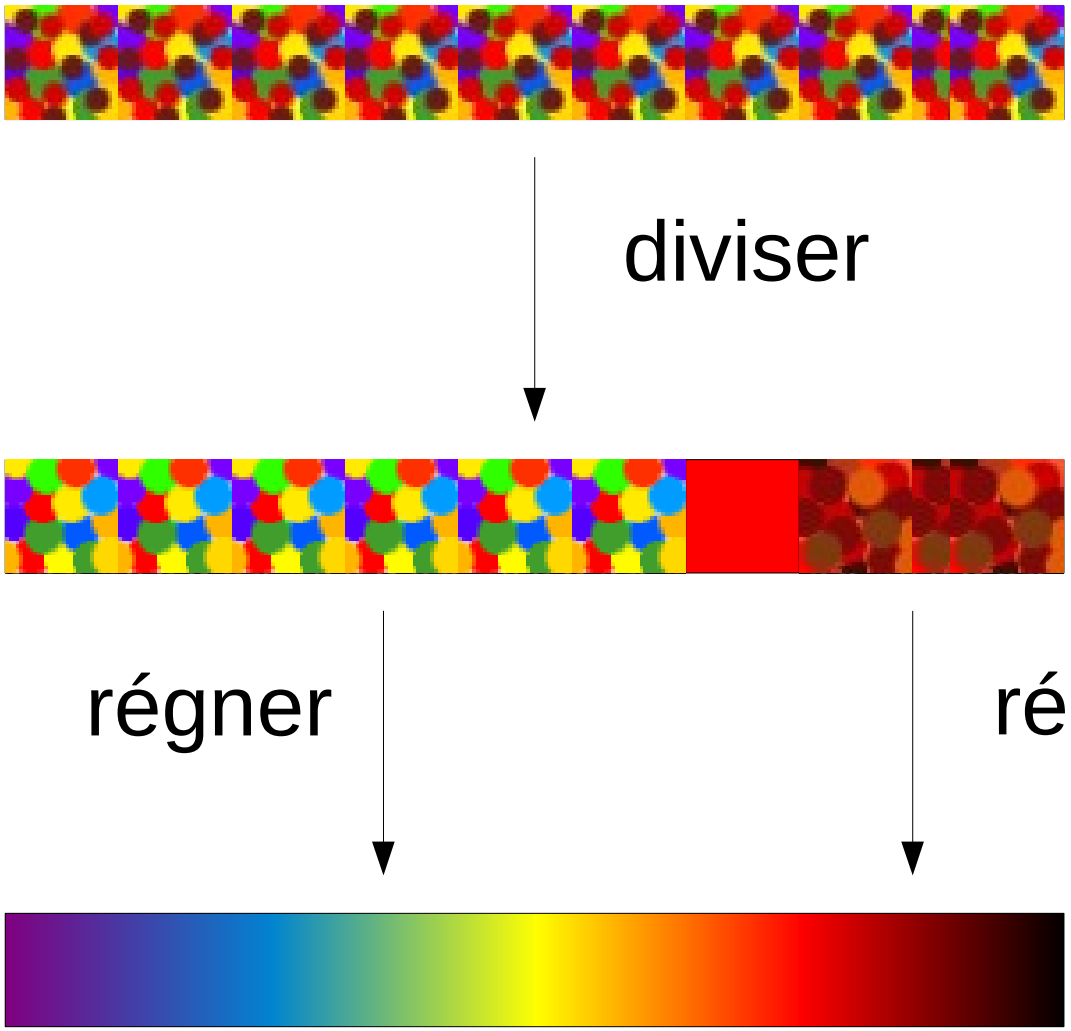


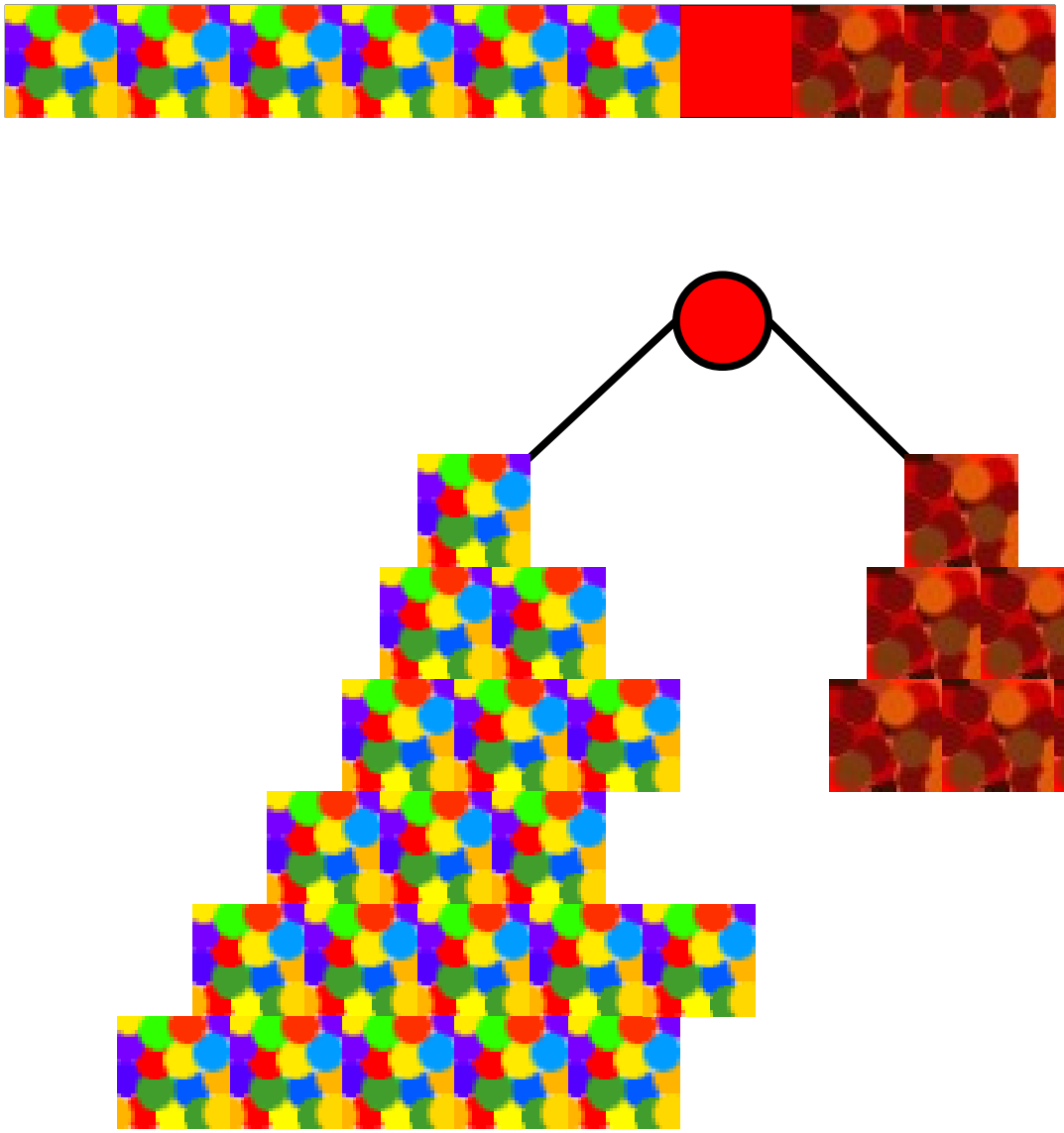
Motivation : intersection de segments horizontaux et verticaux

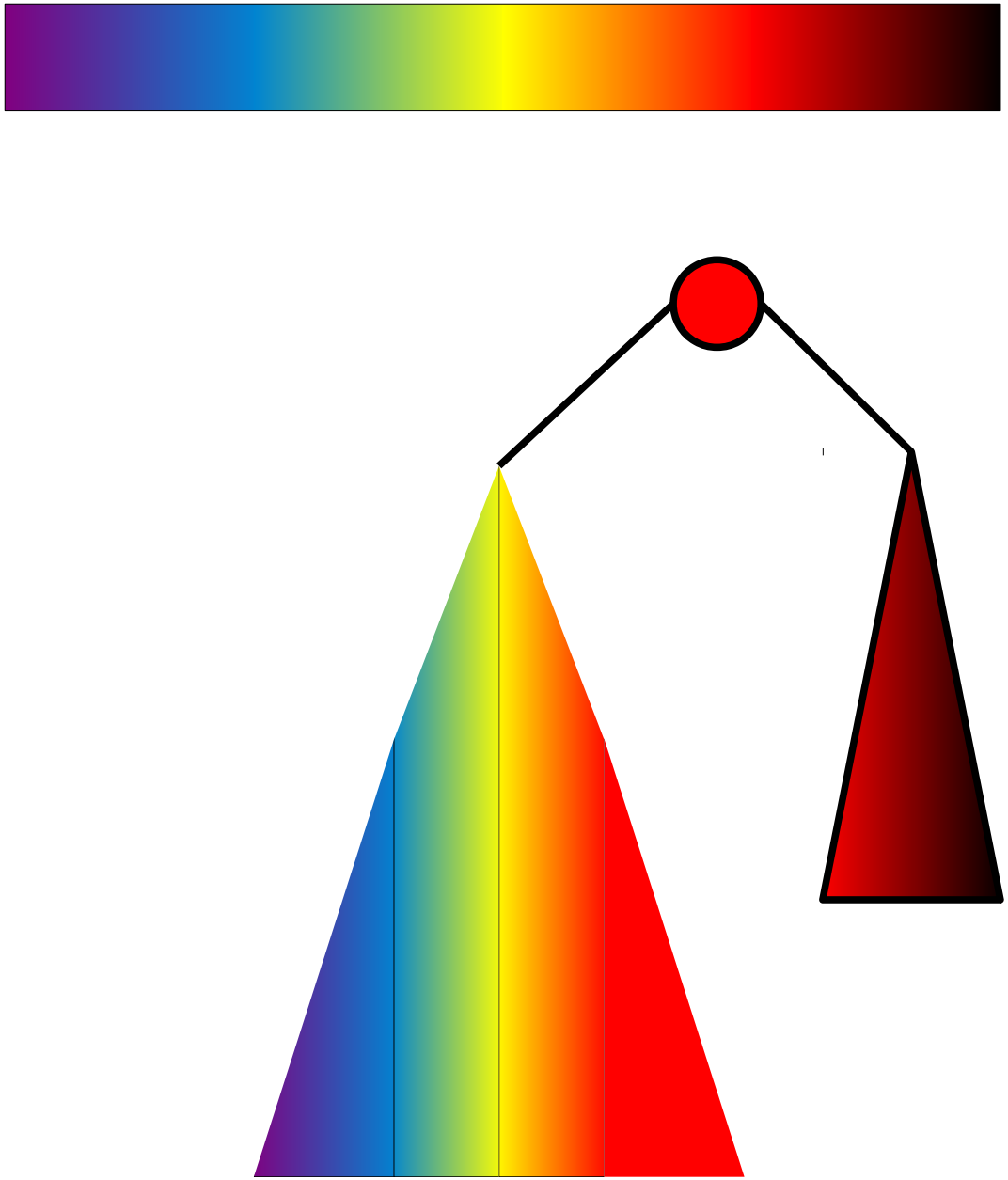


γ[B C β[D α[γ] A α] β]

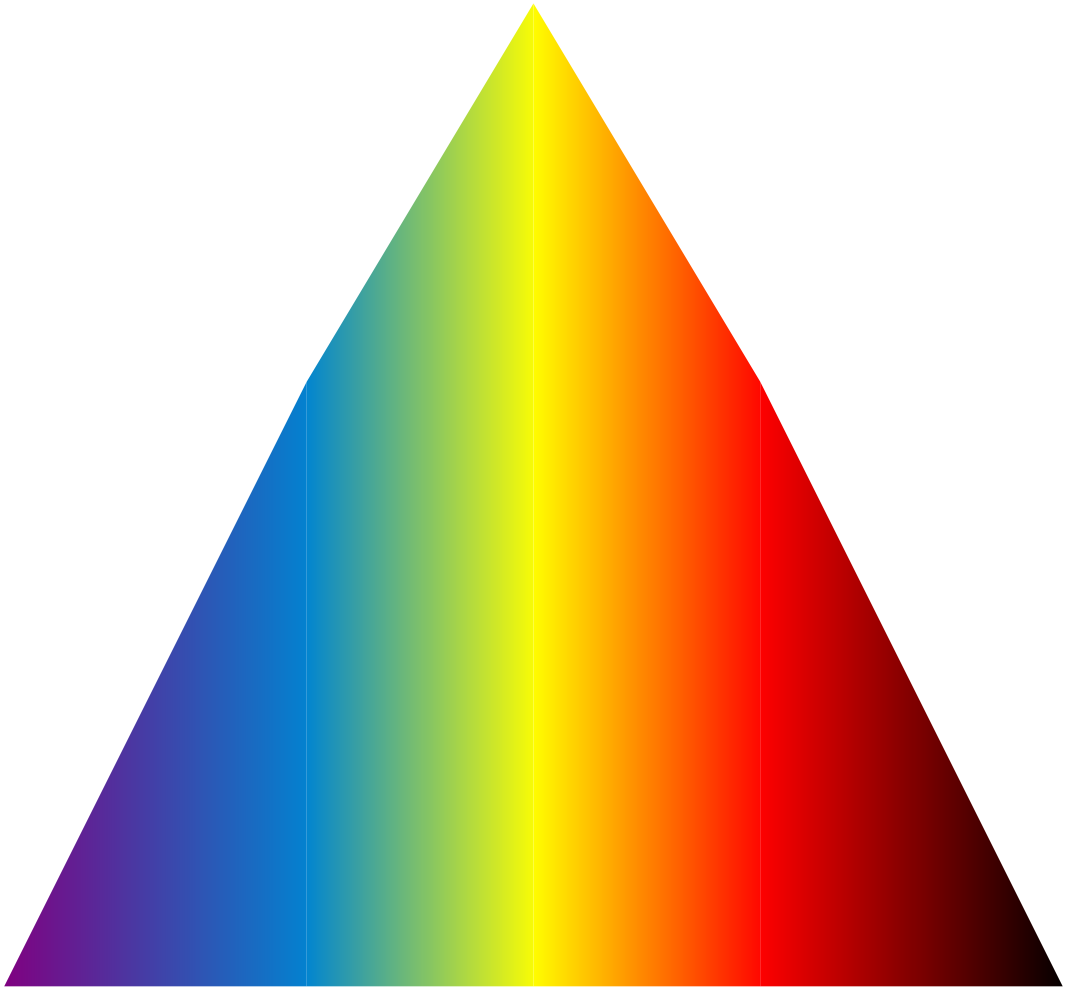
Idée qui vient du tri rapide



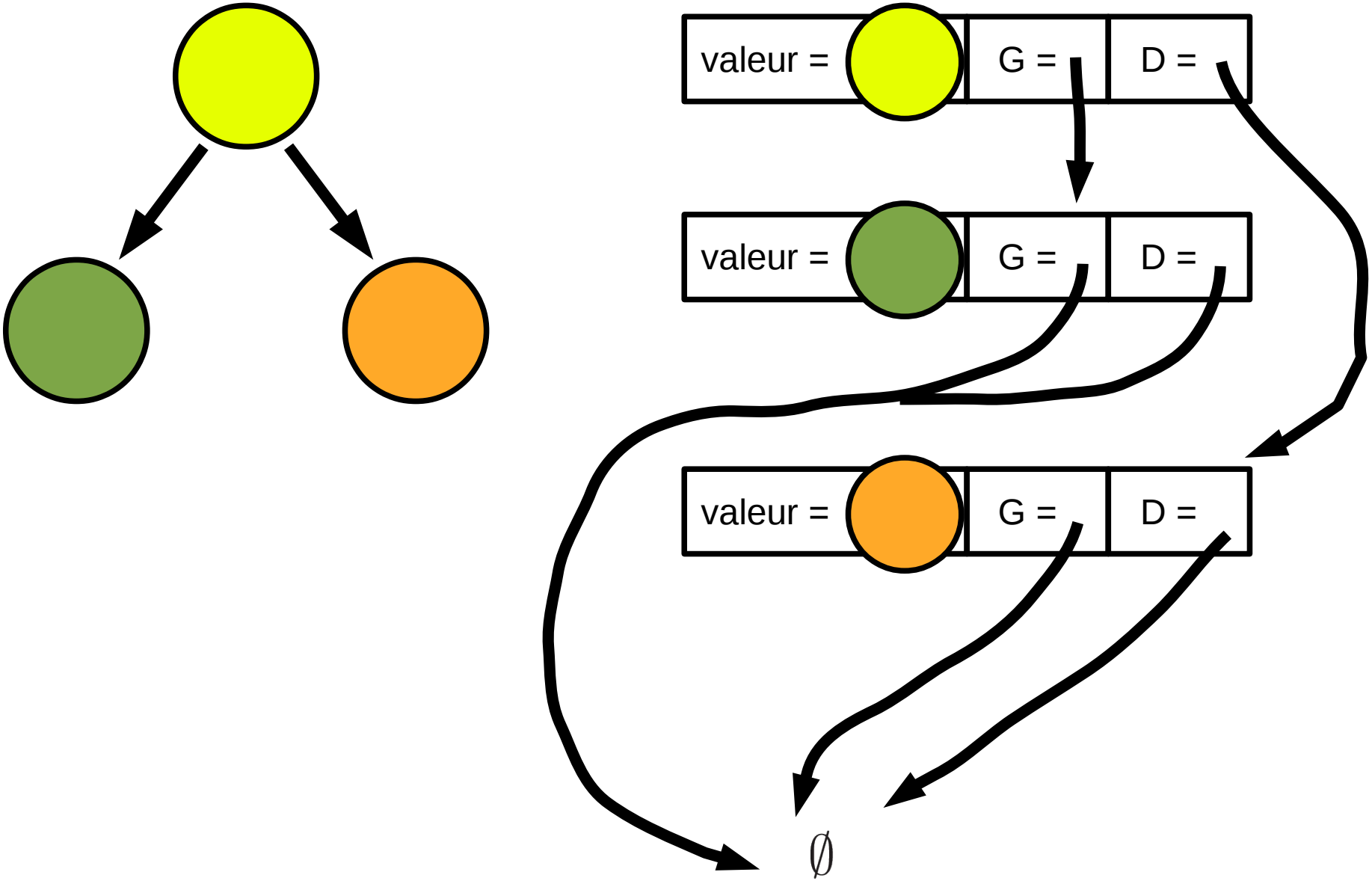




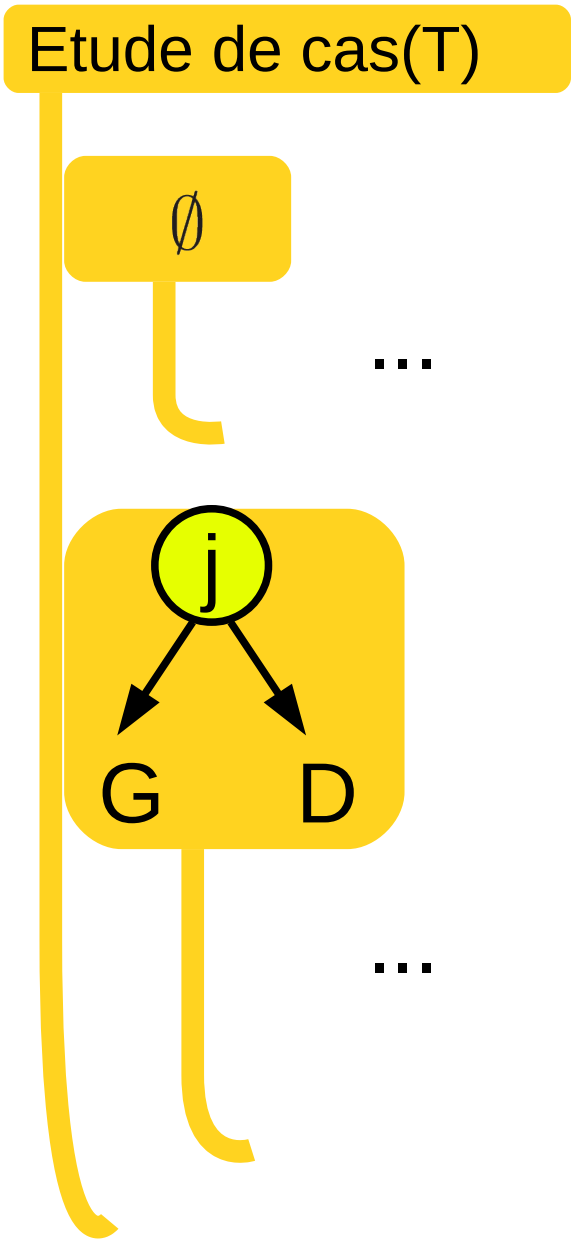
Un arbre de recherche



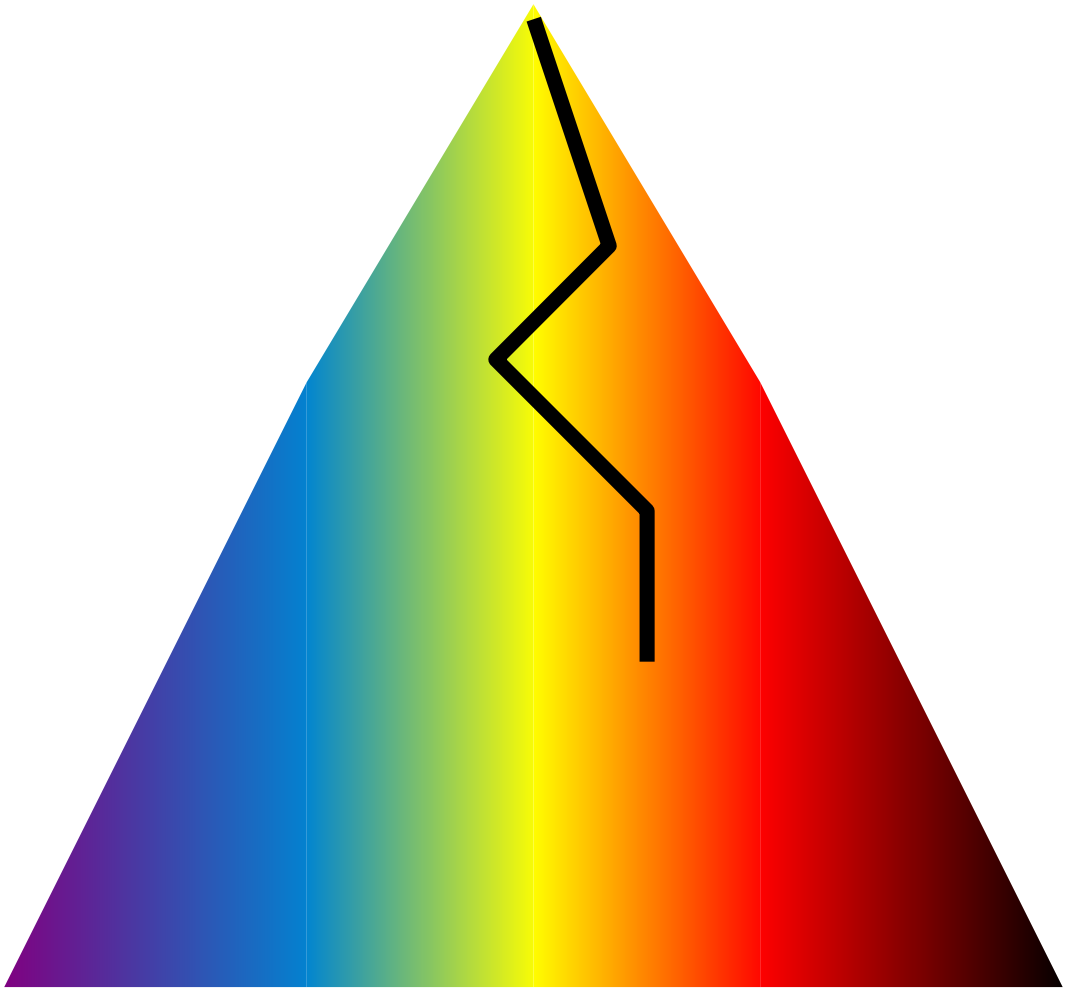
Représentation en machine



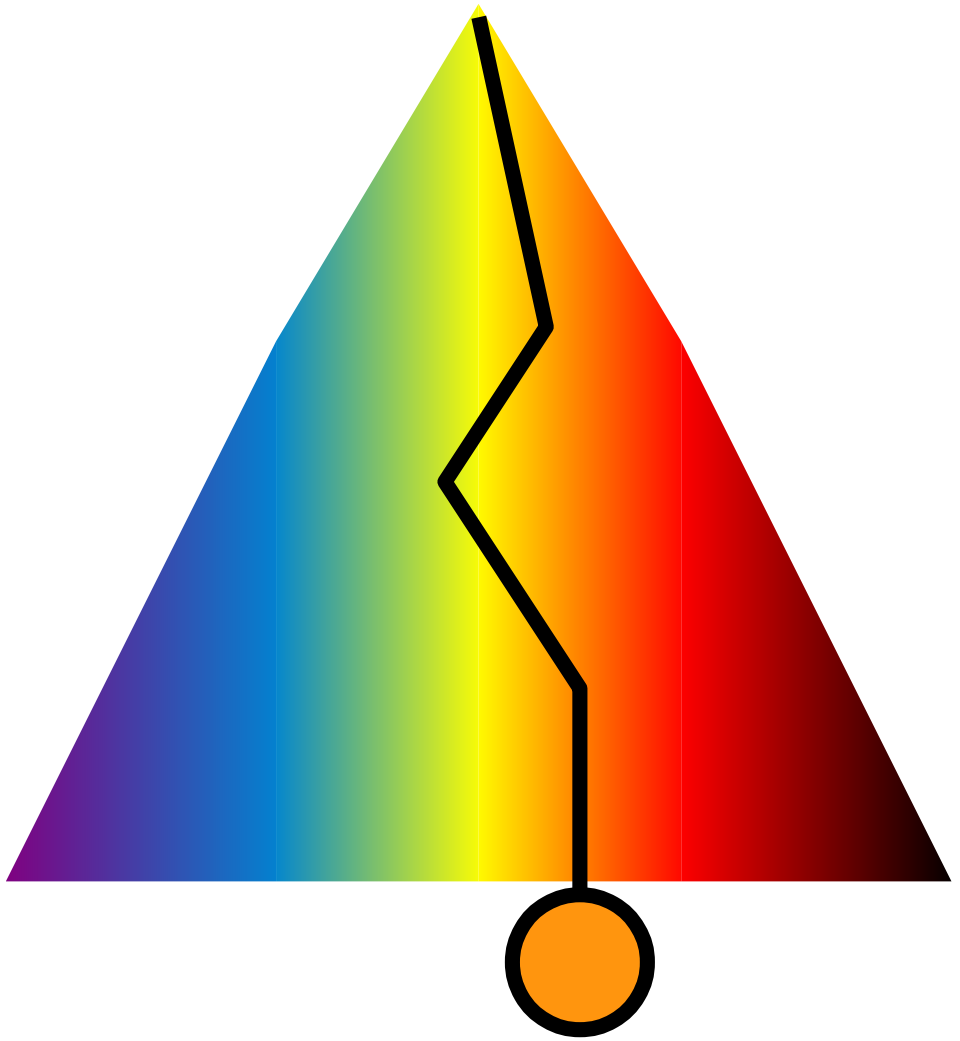
Etude de cas



Rechercher

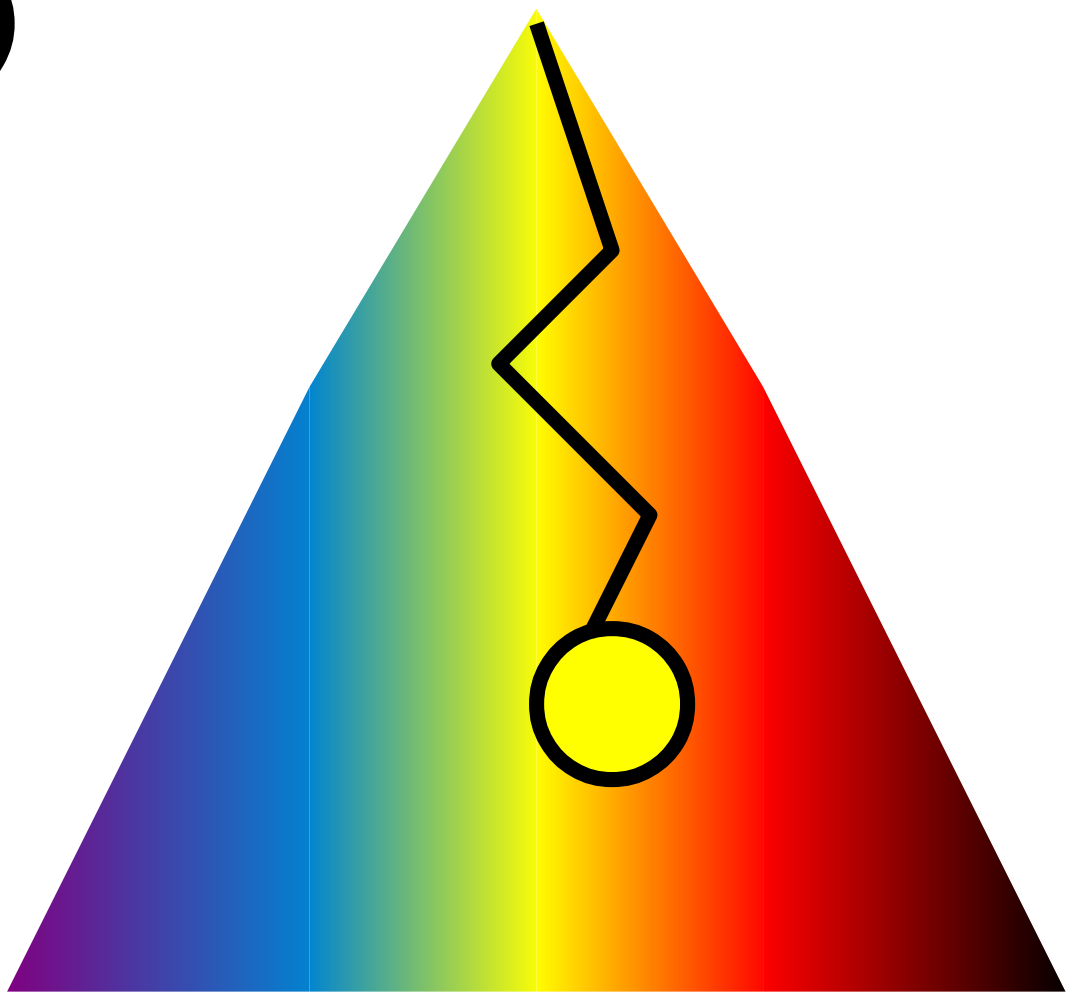


Ajouter



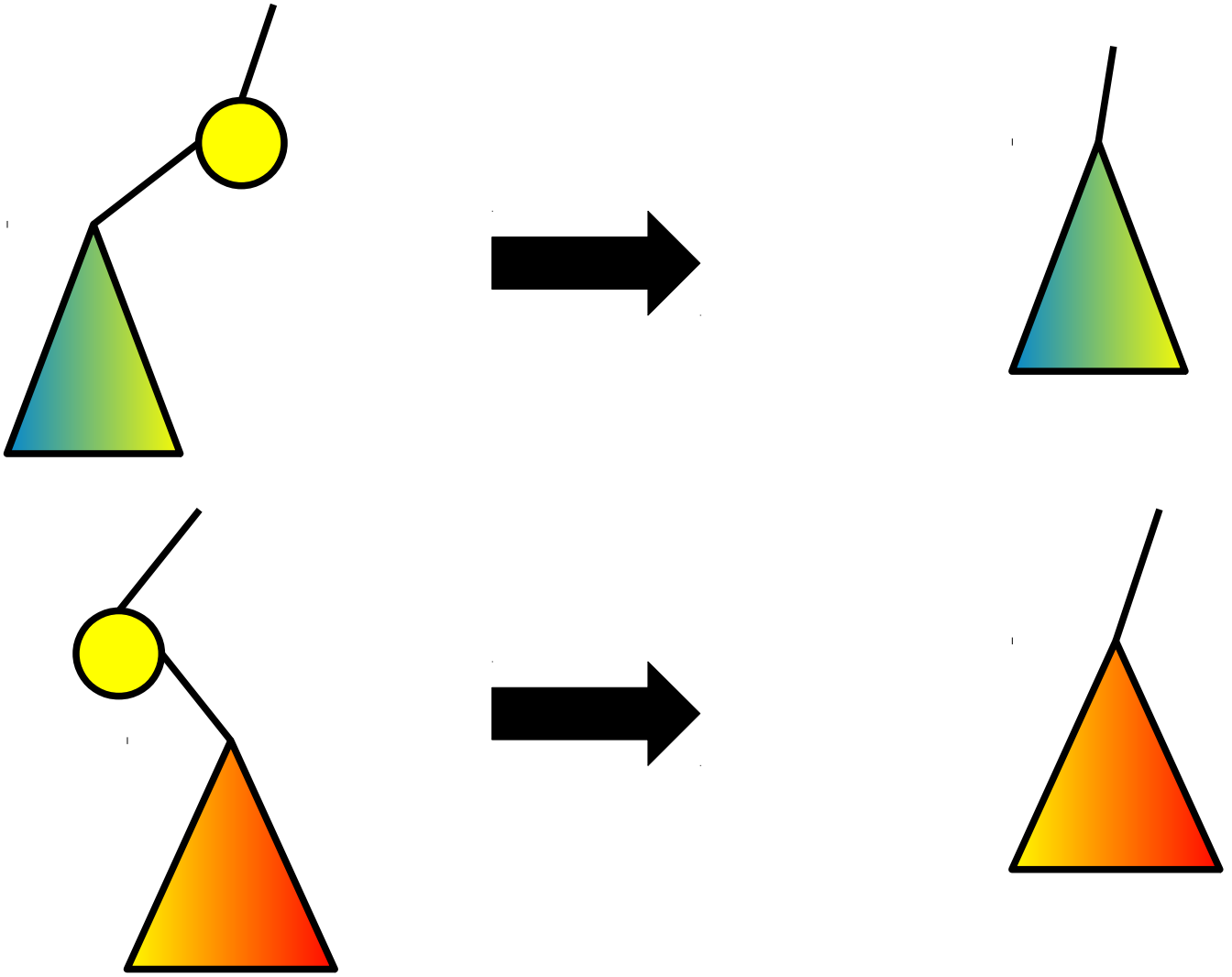
Supprimer

1)Recherchons



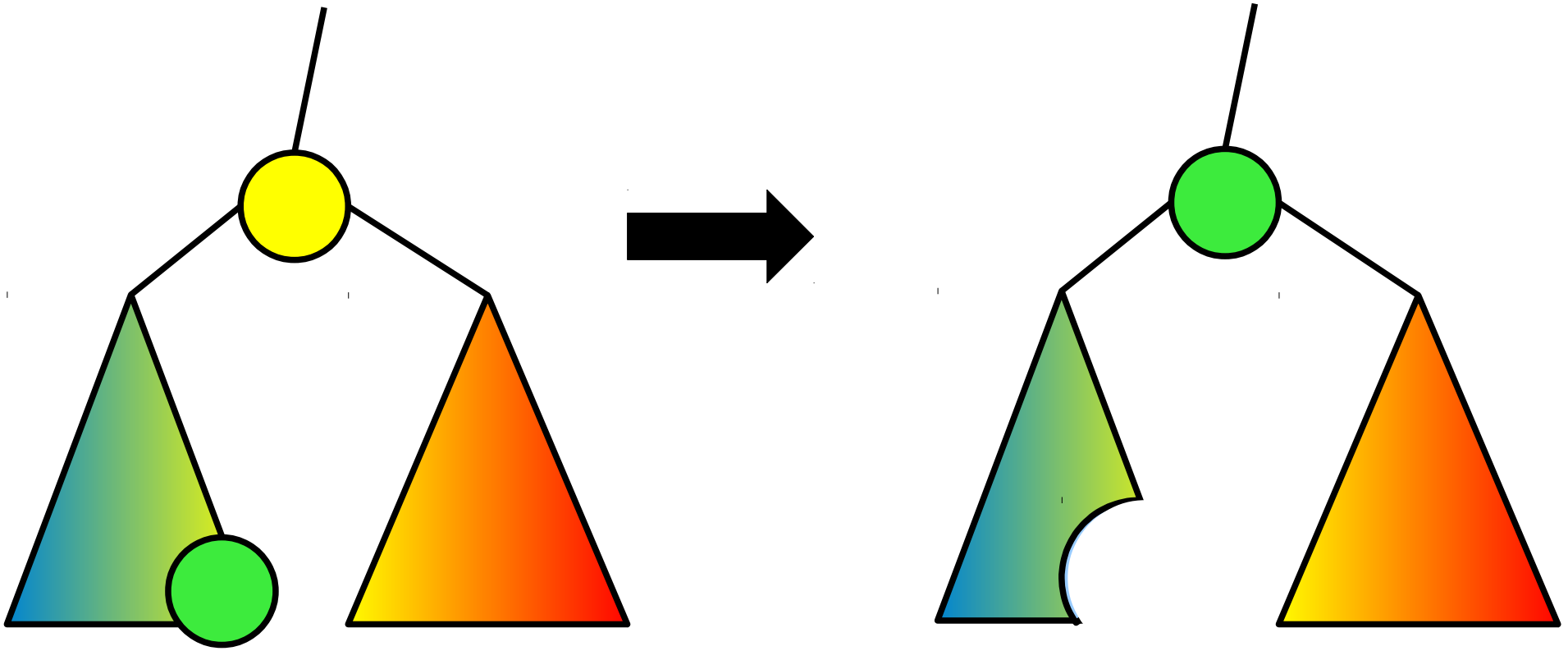
Supprimer

2) Supprimons effectivement



Supprimer

2) Supprimons effectivement



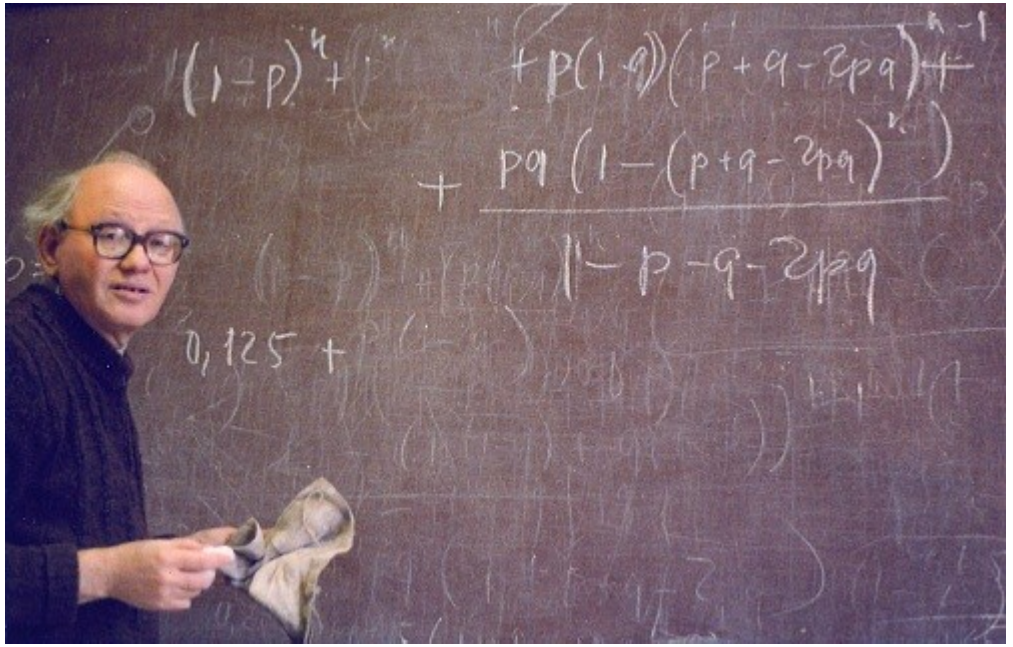
Complexités

	rechercher	ajouter	supprimer
Arbre binaire de recherche	O(h)	O(h)	O(h)

Souhait : On veut une hauteur h optimale

On veut un arbre équilibré

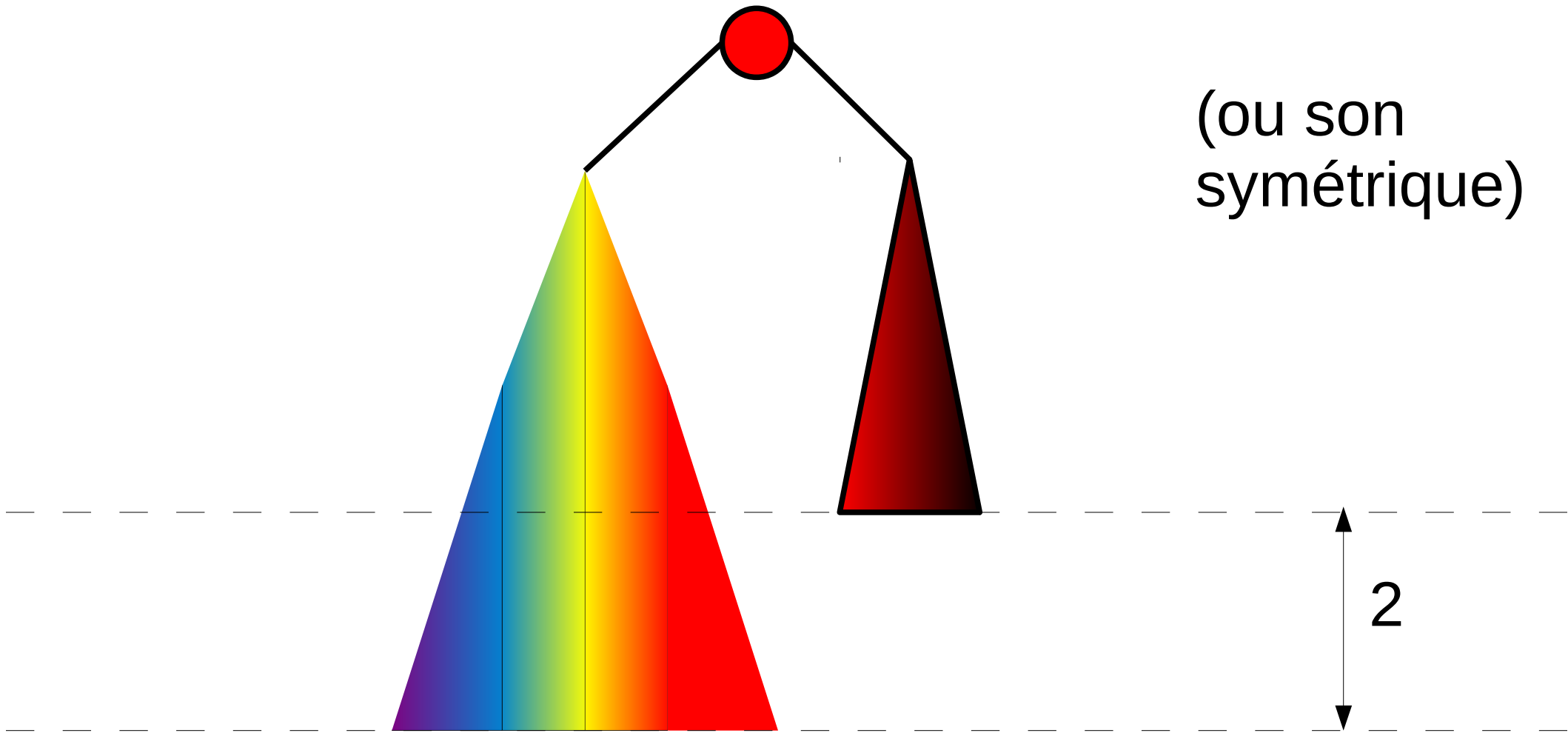
Arbres binaires de recherche de type AVL (Adelson-Velsky, Landis)



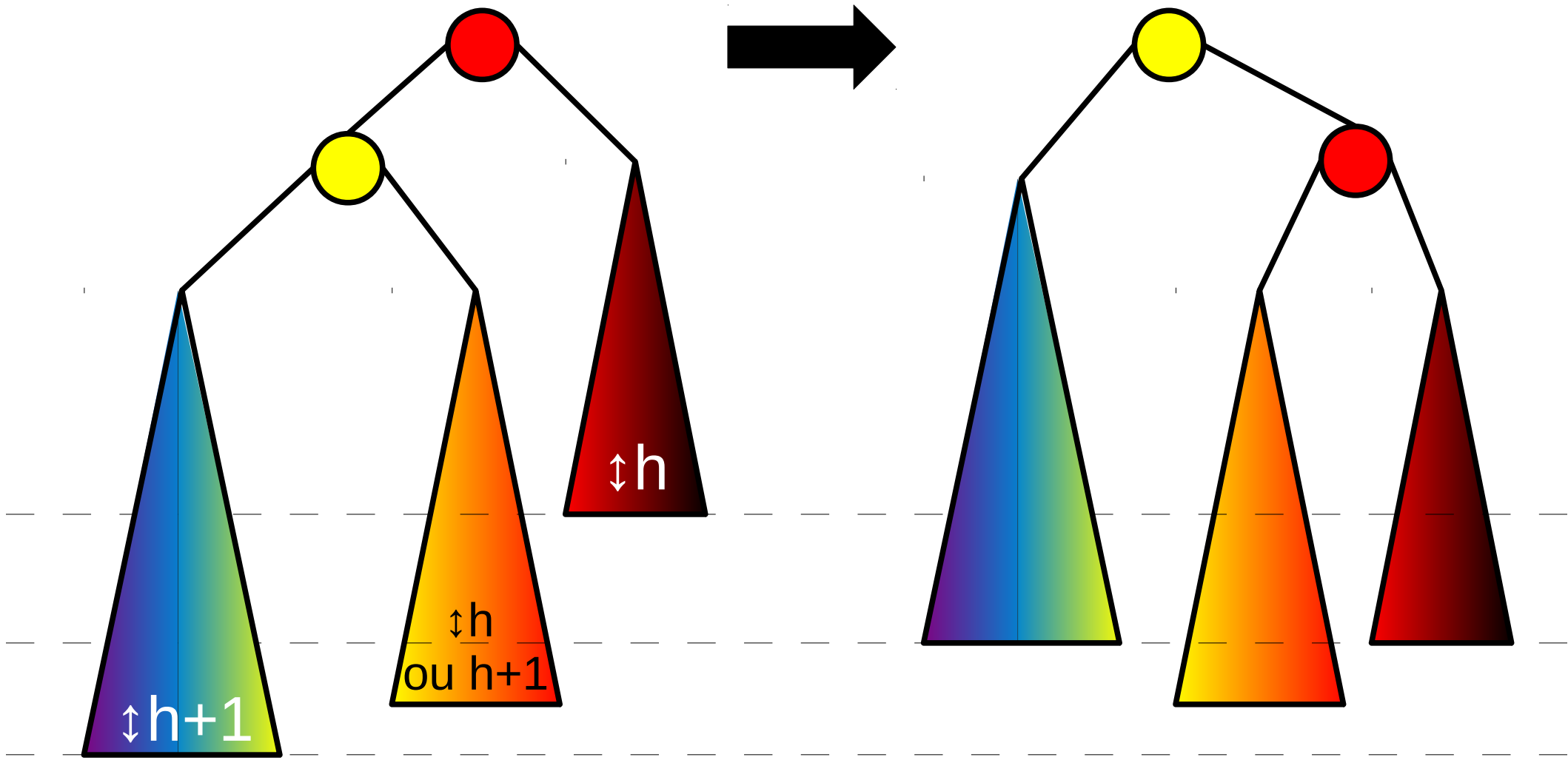
Адельсо́н-Ве́льский

Ландис

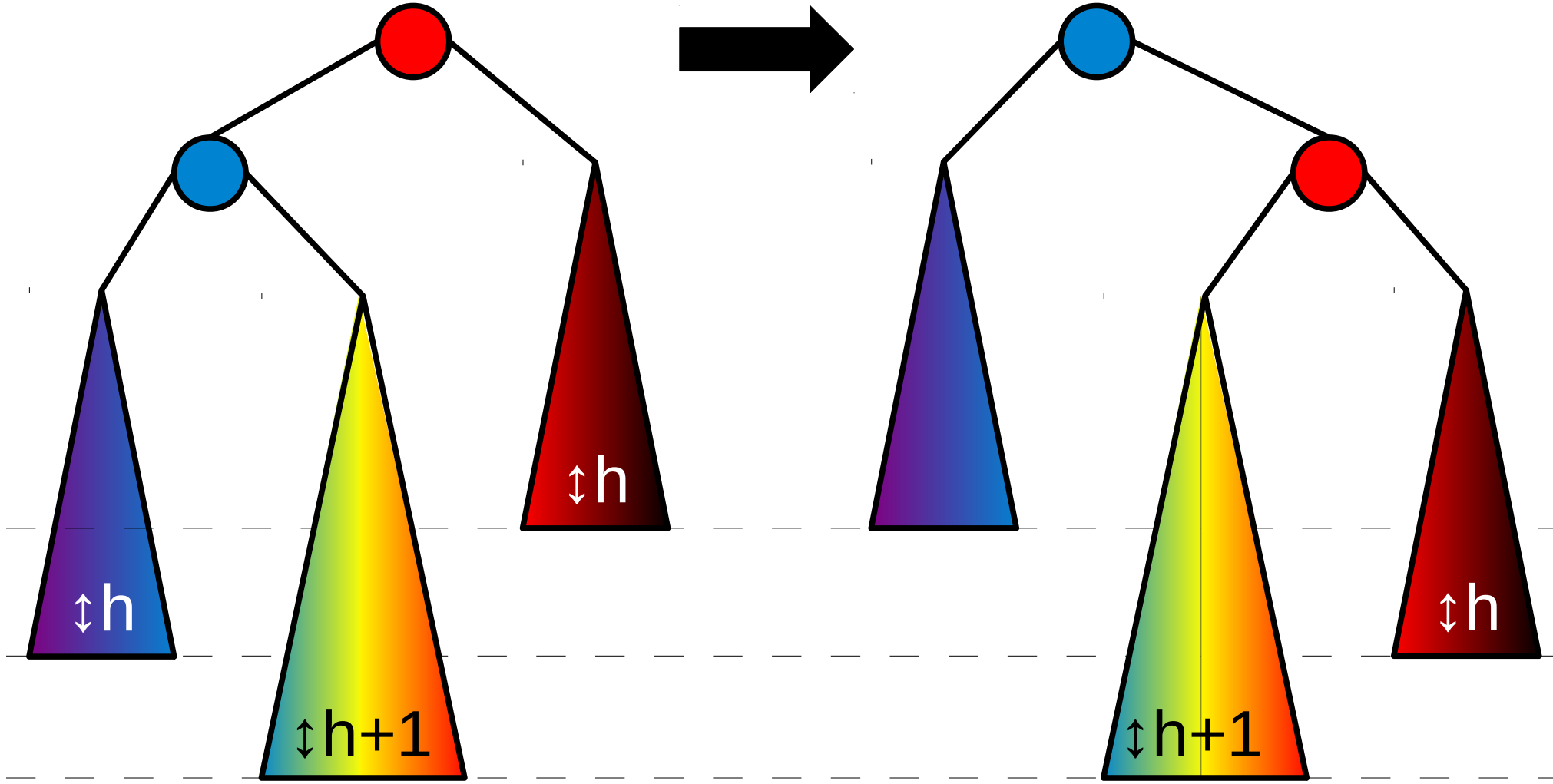
But : rééquilibrer



Rotation droite

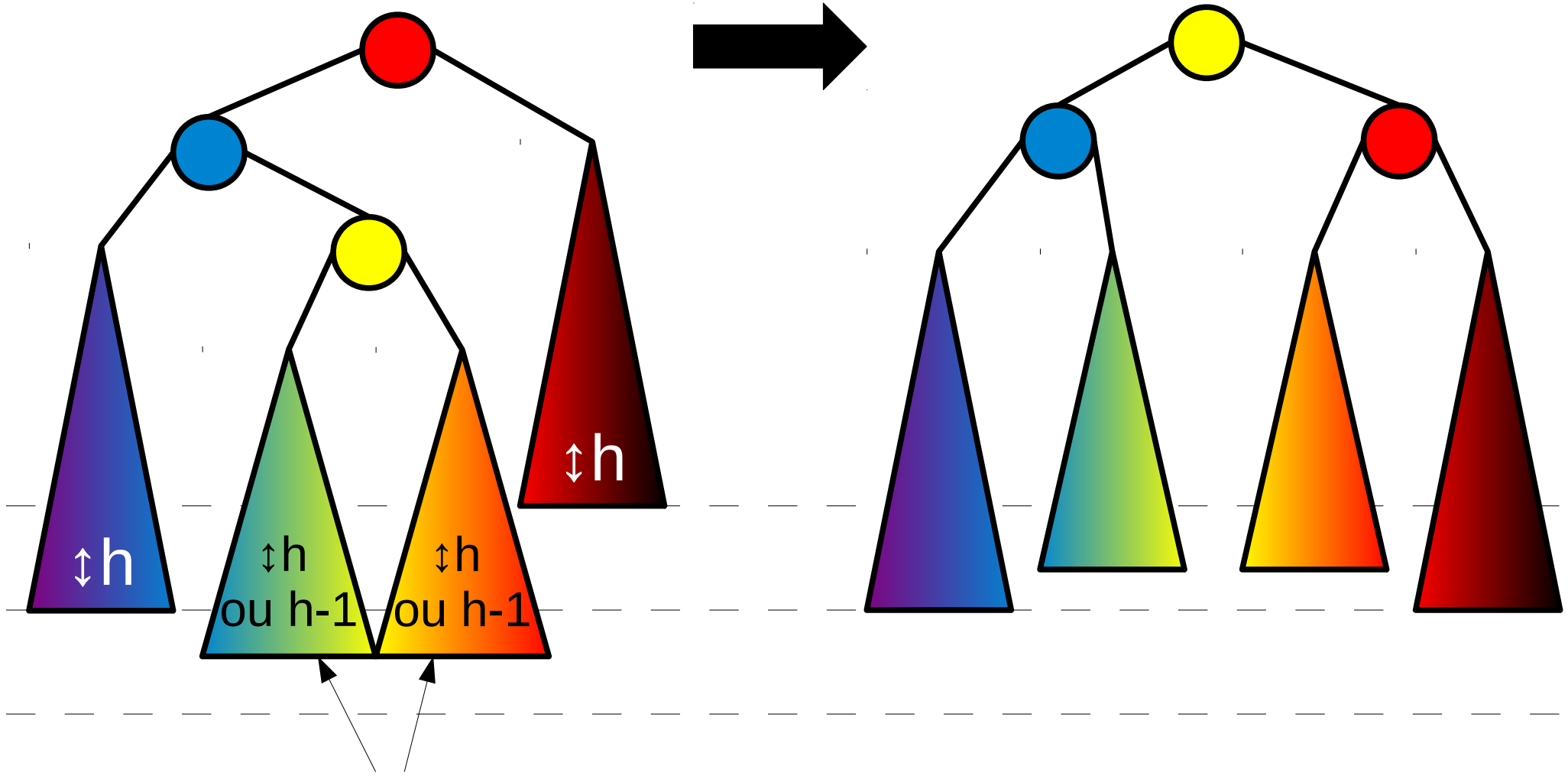


Essai d'une rotation droite !



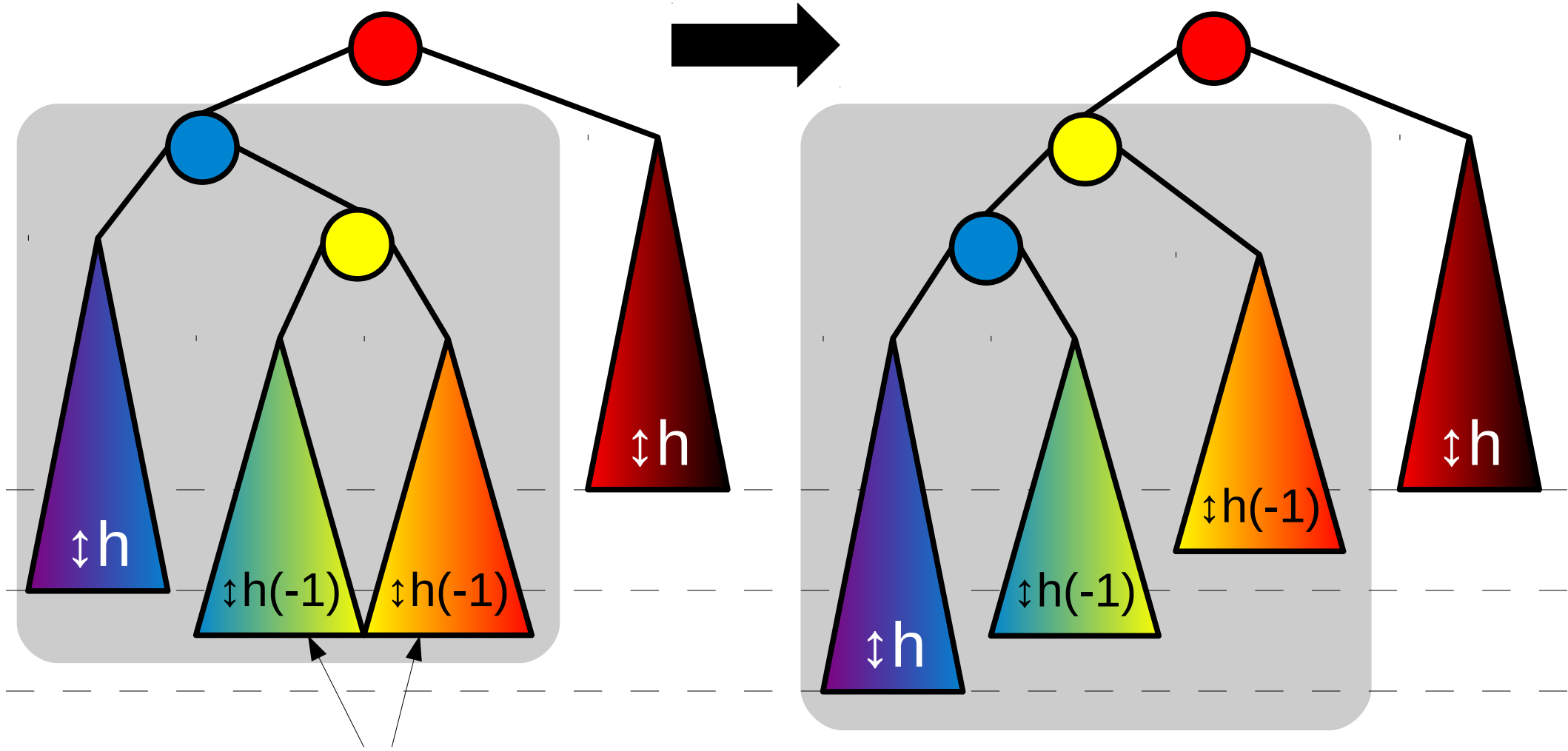
Raté ! On va détailler

Rotation gauche-droite



L'un des deux de hauteurs h

D'abord une rotation gauche



L'un des deux de hauteurs h

Puis une rotation droite