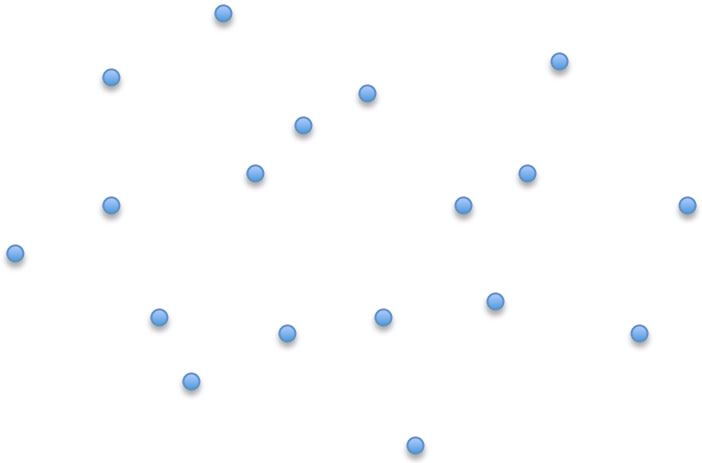
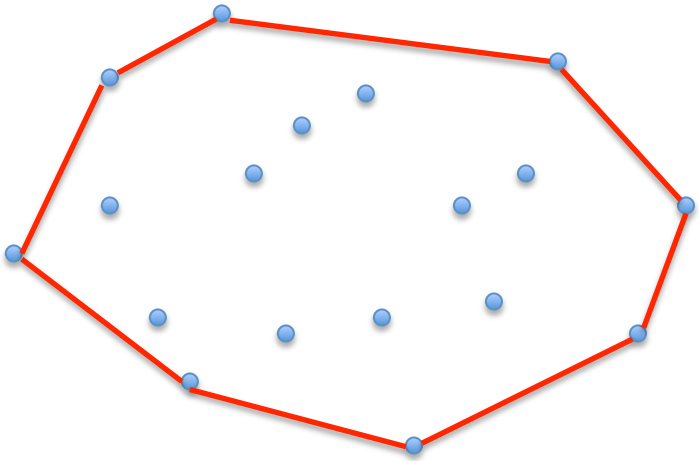
Set of points Q

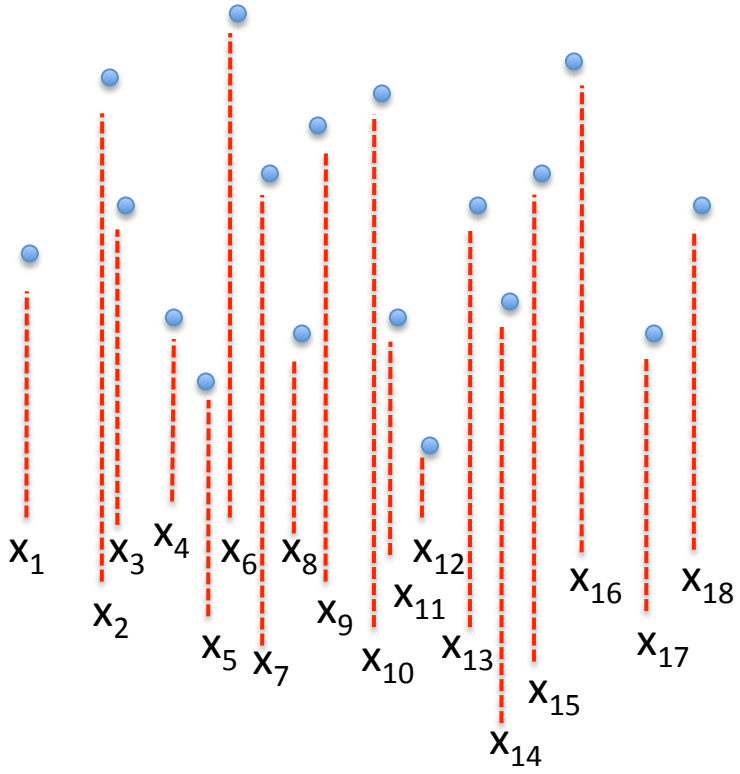


Convex hull (definition)



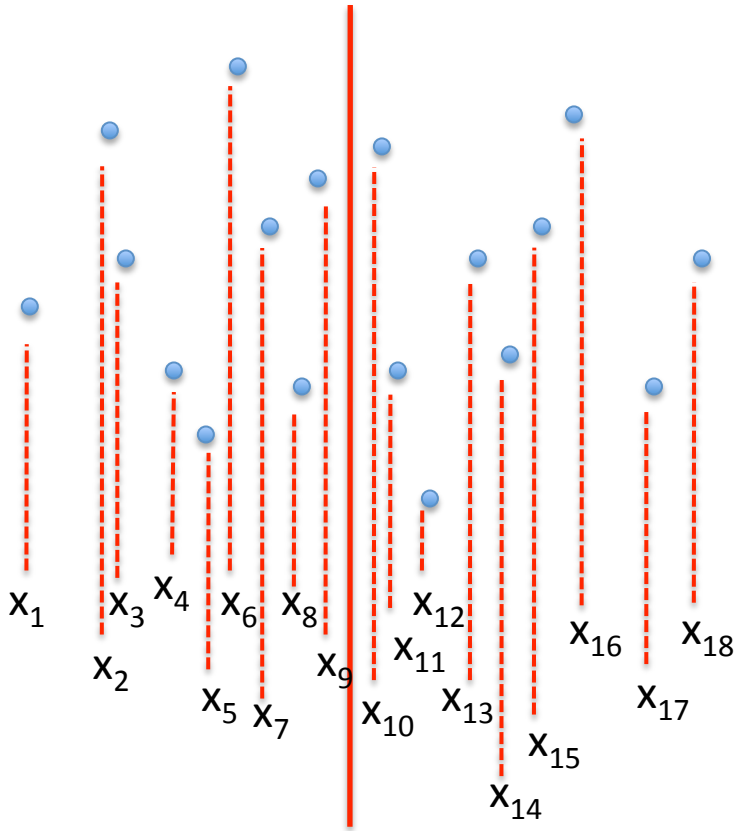
H is the smallest convex polygon that contains all the points of Q

1. decomposition

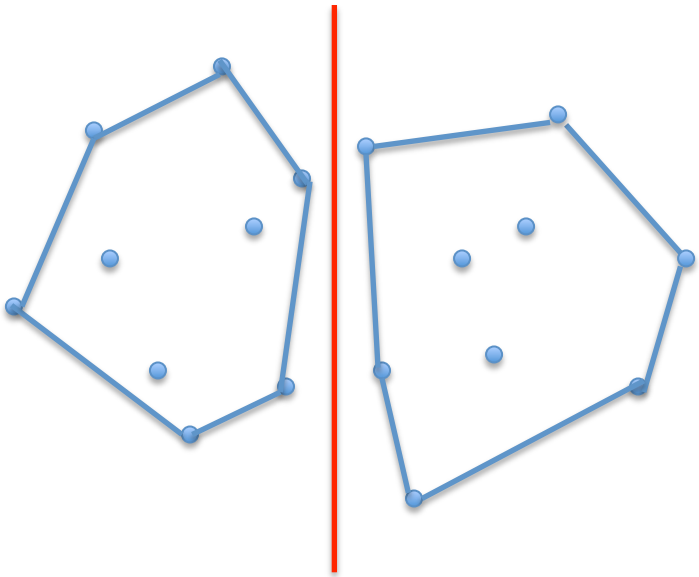


Sort the points by increasing abscissa

1. decomposition

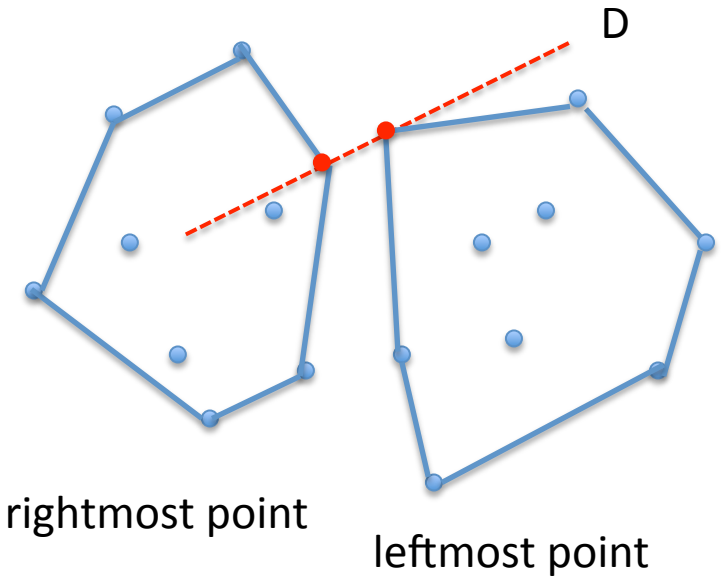


Split the points into two sets of equal size

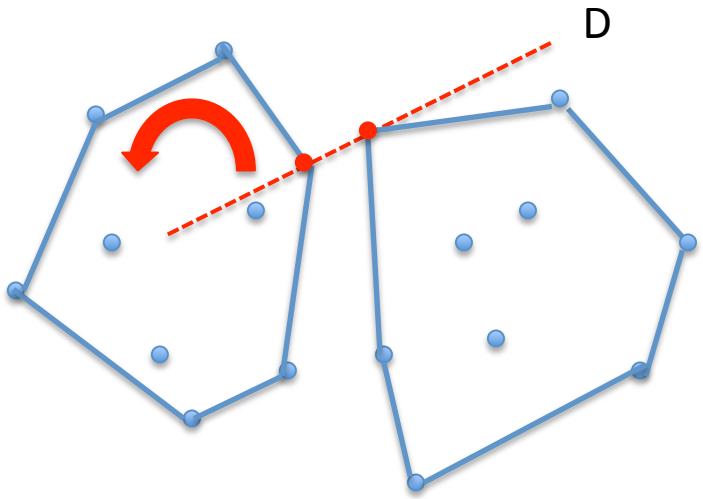


Compute the convex hulls on Qleft and Qright

3. Merge both solutions

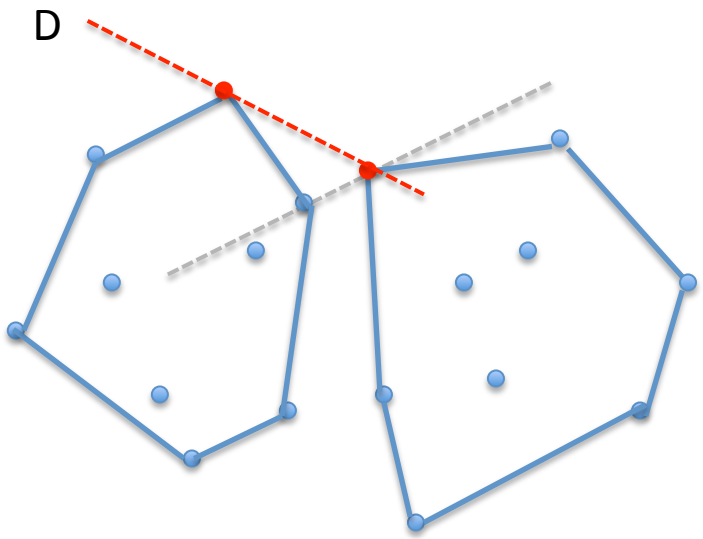


3. Merge both solutions



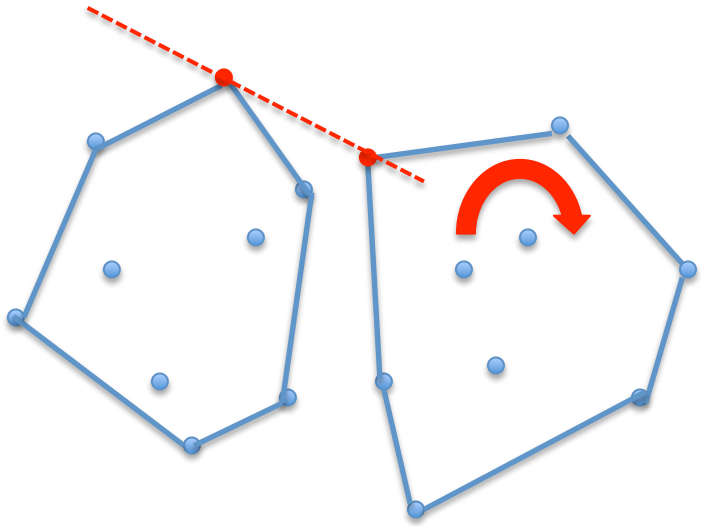
Determine the upper tangente

3. Merge both solutions



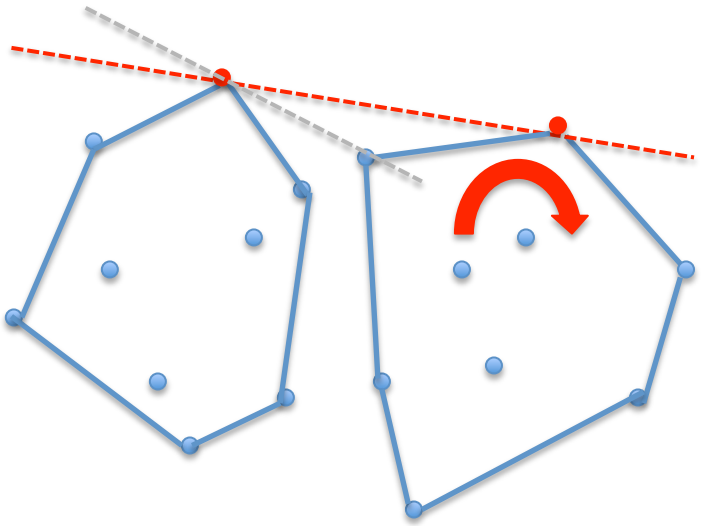
Determine the upper tangente

3. Merge both solutions



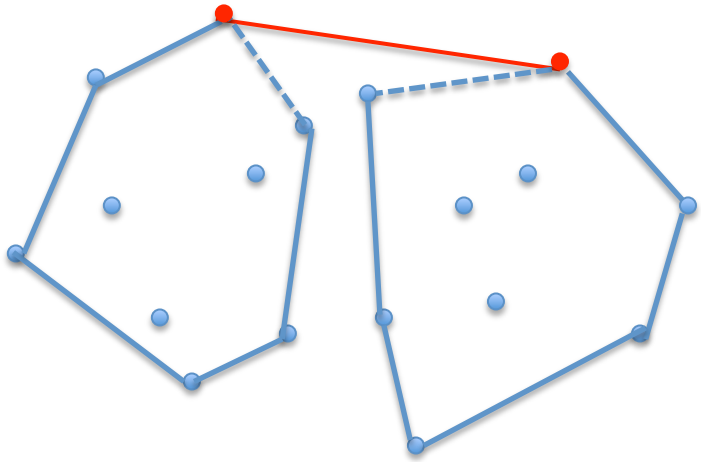
Determine the upper tangente

3. Merge both solutions



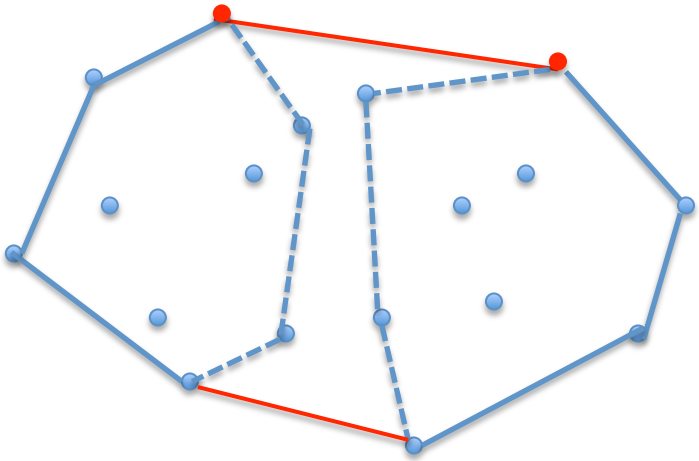
Determine the upper tangente

3. Merge both solutions



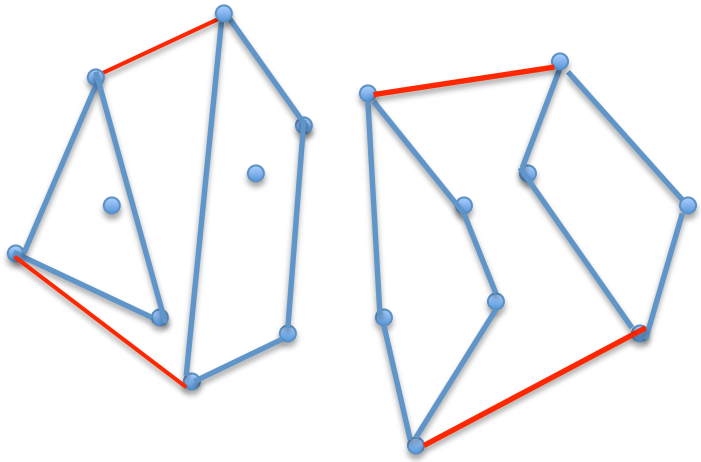
Determine the upper tangente

3. Merge both solutions



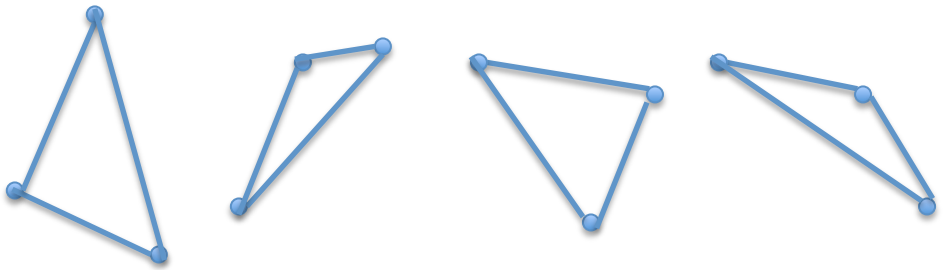
Determine the lower tangente

Recursive decomposition



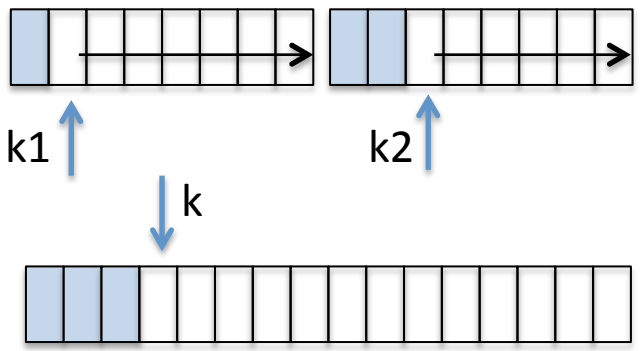
Basis of the induction

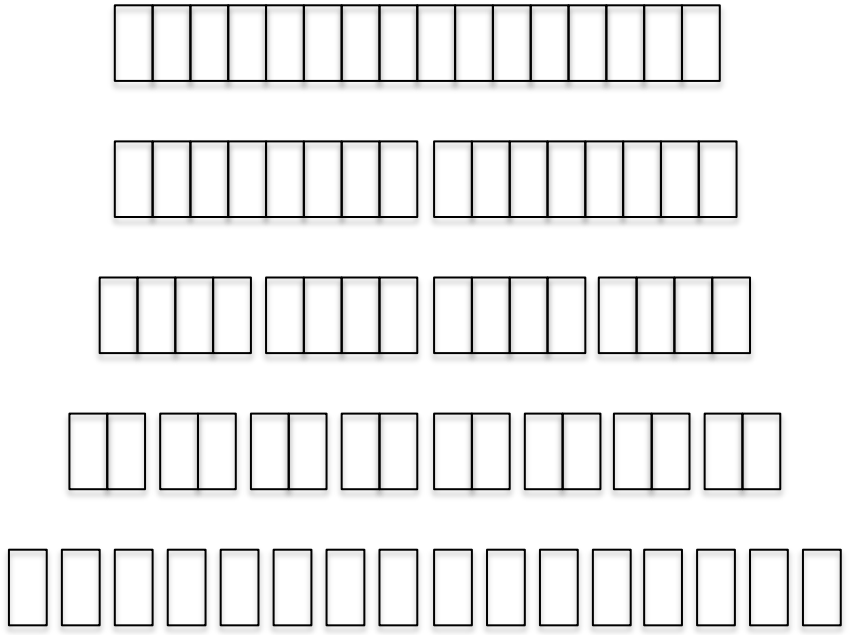
by « brute force » case analysis

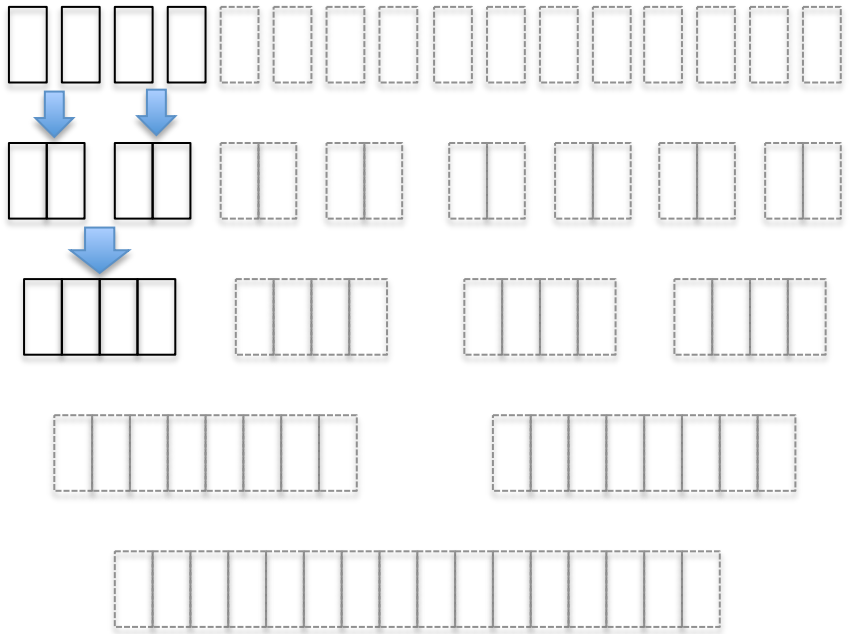


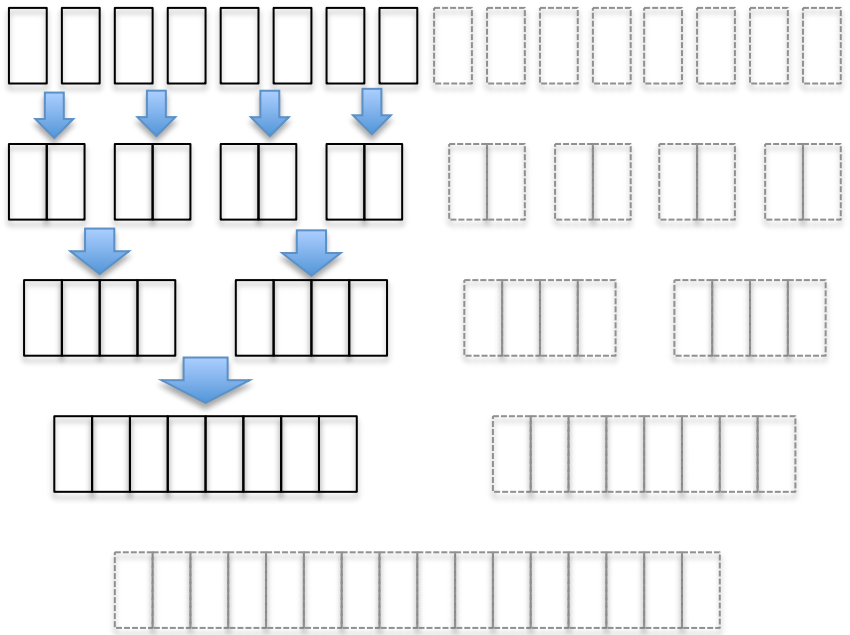
4 types of triangles

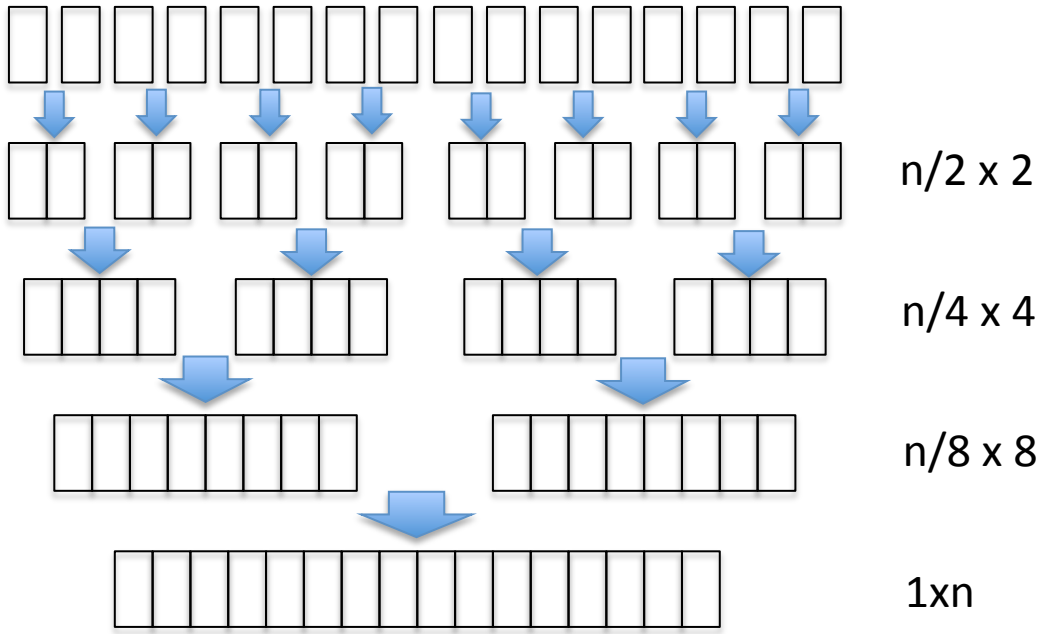
Calcul des enveloppes initiales : n=3 en $O(1)$

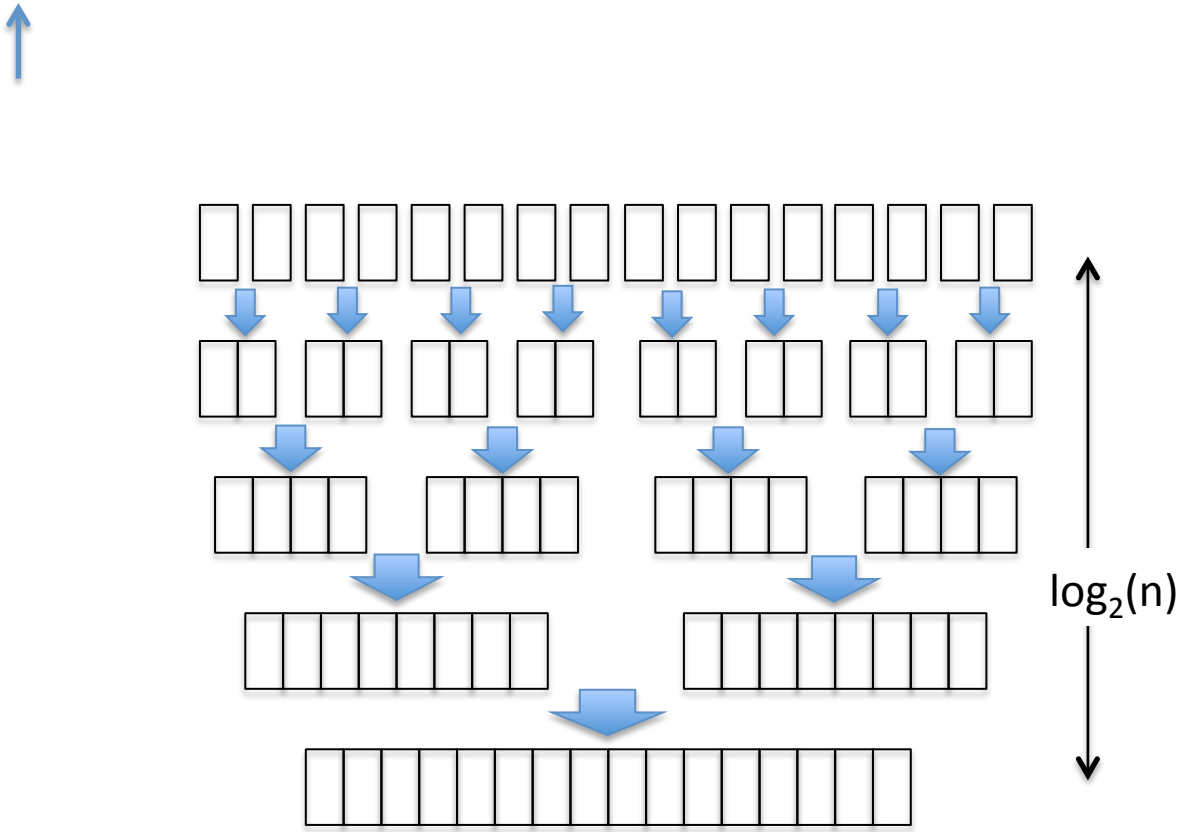

k1
k2
k








n/2 x 2
n/4 x 4
n/8 x 8
1xn


log2(n)