

# Algorithm for Hidden surface removal

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LowerTangent( $H_A, H_B$ ):
    Let a be the rightmost point of  $H_A$ 
    Let b be the leftmost point of  $H_B$ 
    while ab is not lower tangent for  $H_A$  and  $H_B$  do
        while ab is not a lower tangent to  $H_A$  do
            |  $a = a - 1$  (move a clockwise)
        end
        while ab is not a lower tangent to  $H_B$  do
            |  $b = b + 1$  (move b counterclockwise)
        end
    end
    return tangent

ConvexHull( $P$ ):
1 |  $|P| \leq 3$ , then compute convexhull by bruteforce in  $O(1)$  and return
2 | Otherwise, partition the pointset  $P$  into two sets  $A$  and  $B$ , where  $A$ 
   | consists of half of the points with lowest x-coordinates and  $B$ 
   | consists of half of the points with highest x-coordinates
3 | Recursively compute  $H_A = \text{ConvexHull}(A)$  and  $H_B =$ 
   |  $\text{ConvexHull}(B)$ 
4 | Merge the two hulls into common convex hull,  $H$ , by computing the
   | upper and lower tangents of  $H_A$  and  $H_B$  and discarding all the
   | points lying between these two tangents
    return convexHull

Hidden-Surface-Removal( $L$ ):
1 |  $L^* := \text{dual of lines } L$ 
2 | Compute the LowerHull  $LH(L^*)$  from  $\text{ConvexHull}(L^*)$ 
3 | Traverse the chain from left to right, output the dual of vertices to
   | Result
    return Result
```