Algorithm 1

1. **Read** in clockwise order the vertices v_i and store them in a cyclical list $P = \{v_1, \dots, v_n\}$.
2. $L^0 \leftarrow \{v_1\}$; $m \leftarrow 1$.
3. **While** $n > 3$ **do** (*Begin MP1*)
    - 3.1. $v^{(1)} \leftarrow Last[L^{m-1}]$; $v^{(2)} \leftarrow Next[P, v^{(1)}]$.
    - 3.2. $L^m \leftarrow \{v^{(1)}, v^{(2)}\}$; $i \leftarrow 2$; $v^{(i+1)} \leftarrow Next[P, v^{(i)}]$.
    - 3.3. **While** $ang\{(v^{(i-1)}, v^{(i)}, v^{(i+1)}), (v^{(i)}, v^{(i+1)}, v^{(1)}), (v^{(i+1)}, v^{(1)}, v^{(2)})\} \leqslant 180°$ **and** $|L^m| < n$ **do**
        - 3.3.1. $L^m \leftarrow L^m \cup \{v^{(i+1)}\}$; $i \leftarrow i + 1$; $v^{(i+1)} \leftarrow Next[P, v^{(i)}]$.
    - 3.4. **If** $|L^m| \neq |P|$ **then**
        - 3.4.1. **Obtain** the list *LPVS* with the vertices $v_i \in P \setminus L^m$ which are notches.
        - 3.4.2. **While** $|LPVS| > 0$ **do**
            - •**Obtain** the smallest rectangle R with sides parallel to the axes containing all the vertices of L^m.
            - •*Backward* $\leftarrow$ *false*.
            - •**While** not *Backward* **and** $|LPVS| > 0$ **do**
                - **Repeat**
                    - $v \leftarrow First[LPVS]$.
                    - **If** $v \notin R$ **then** $LPVS \leftarrow LPVS\ \{v\}$
                - **Until** $v \in R$ **or** $|LPVS| = 0$.
                - **If** $|LPVS| > 0$ **then**
                    - **If** v is inside the polygon generated by L^m **then**
                        - **Obtain** the set *VTR* of vertices of L^m in the semiplane generated by $v^{(1)}v$ containing $Last[L^m]$.
                        - $L^m \leftarrow L^m\ VTR$; $Backward \leftarrow true$.
                    - $LPVS \leftarrow LPVS \setminus \{v\}$.(*End MP1*)
    - 3.5. **If** $Last[L^m] \neq v^{(2)}$ **then**
        - 3.5.1. **Write** L^m as a convex polygon of the partition.
        - 3.5.2. $P \leftarrow (P \setminus L^m) \cup \{First[L^m], Last[L^m]\}$; $n \leftarrow n - |L^m| + 2$;
    - 3.6. $m \leftarrow m + 1$.