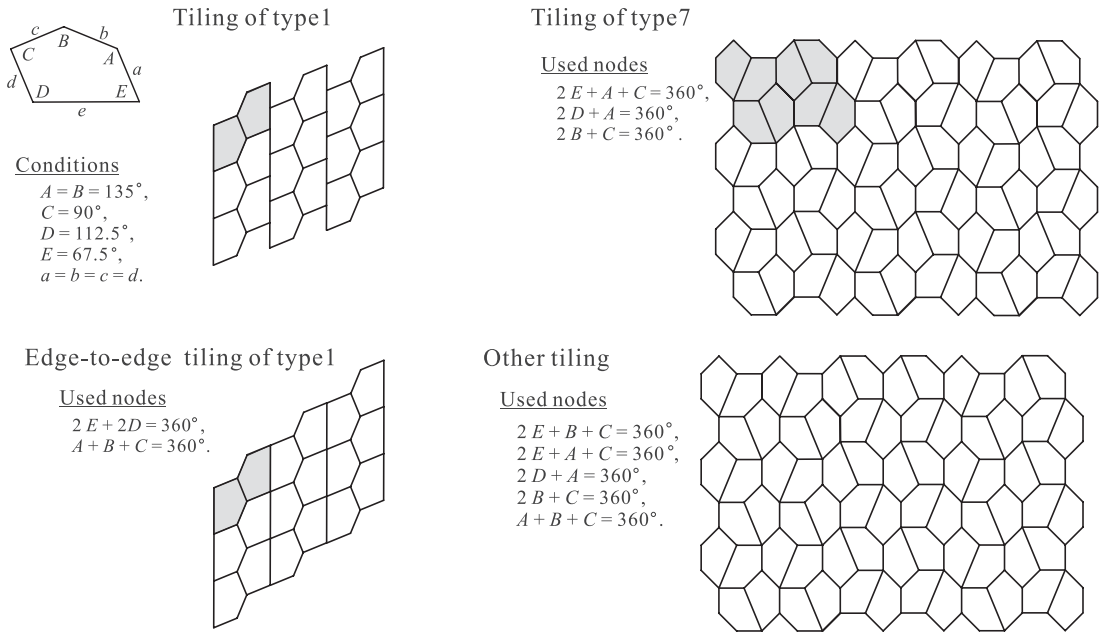

Fig. 3. Convex pentagonal tile that belongs to both type 1 and type 7, and the example of tilings that are generated by the tile. The pale gray pentagons in each tiling indicate the fundamental region.

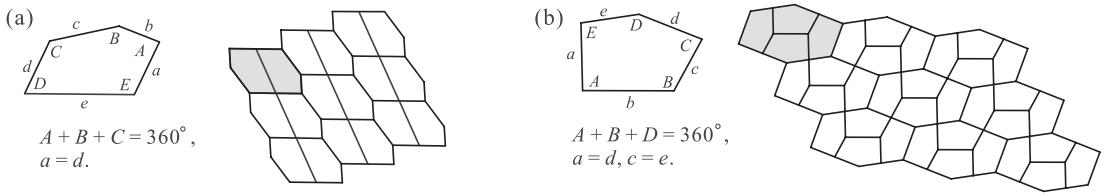

Fig. 4. Examples of edge-to-edge tilings by convex pentagonal tiles that belong to type 1 or type 2. The pale gray pentagons in each tiling indicate the fundamental region. (a) Convex pentagonal tiles that belong to type 1. (b) Convex pentagonal tiles that belong to type 2.

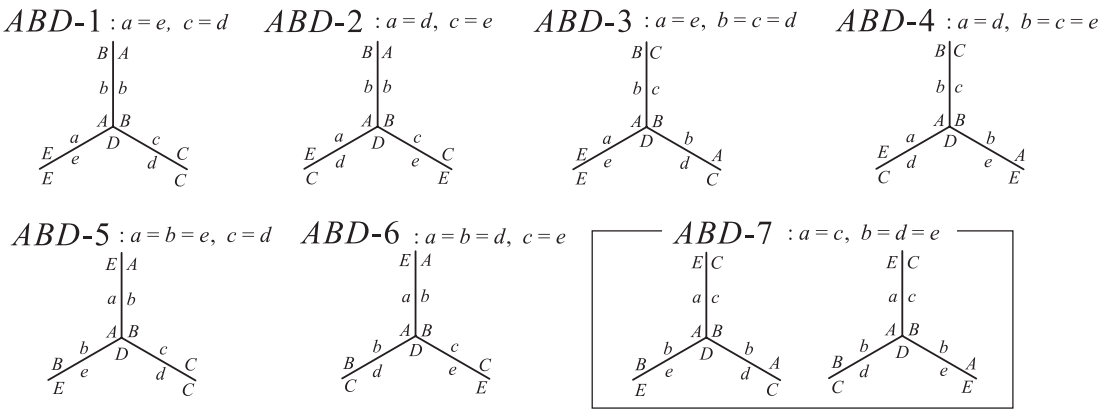

Fig. 5. Seven sub-cases of tentative 3-valent node of $\{A, B, D\}$.

If an EE convex pentagonal tile has three 3-valent nodes of size 1, it belongs to type 1. This can be seen as follows: If the three different vertices (vertex-labels) in the three label-sets of size 1 are consecutive (for example, $A = B = C = 120^\circ$), then the pentagonal tile clearly belongs to type 1. (There is no EE convex pentagonal tile with three label-sets of 3-valent nodes of size 1 such that three different vertices in the three label-sets with size 1 are not consecutive, e.g., $A = B = D = 120^\circ$, see Appendix A).

If an EE convex pentagonal tile has one or two label-sets