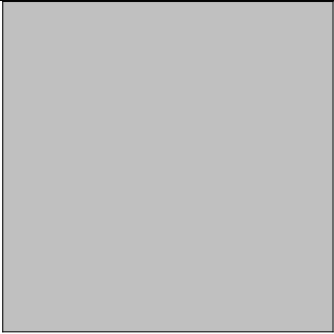
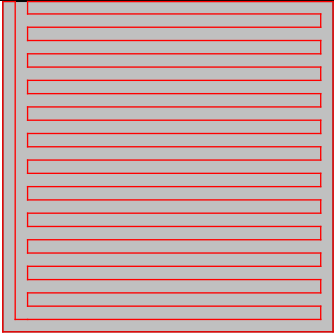
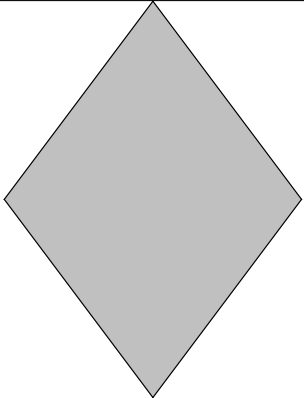
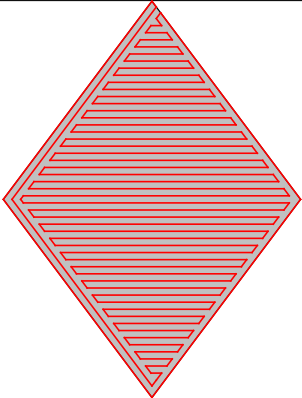
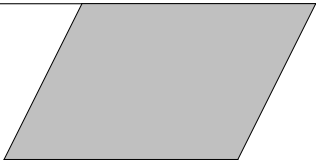
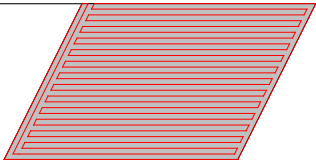
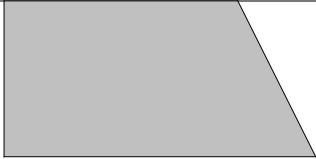
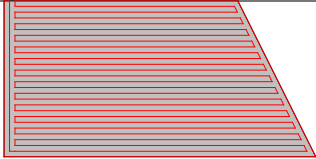

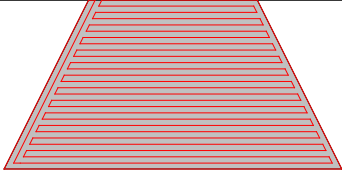
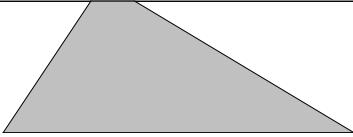
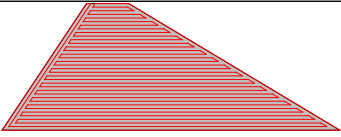
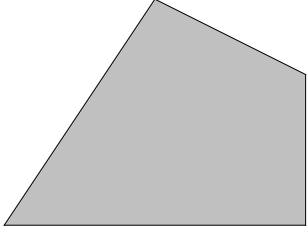
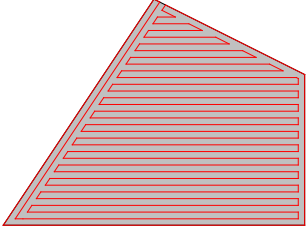
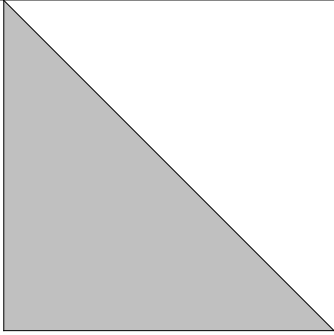
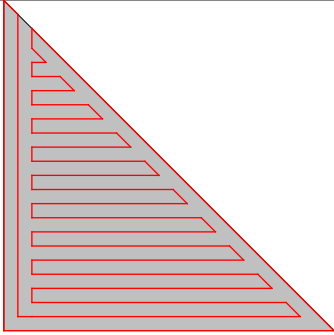
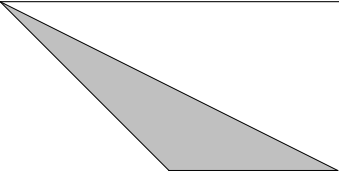
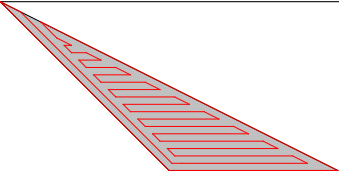
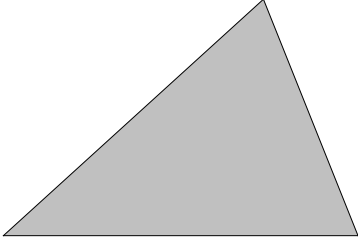
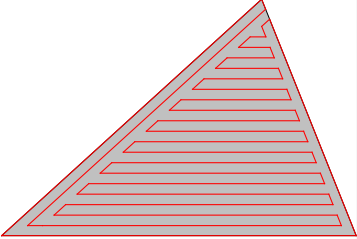
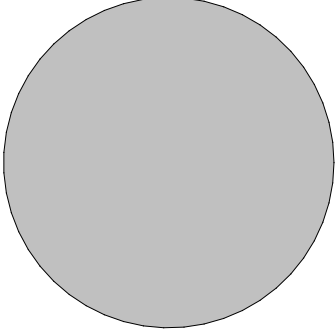
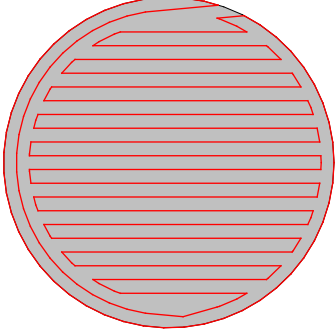
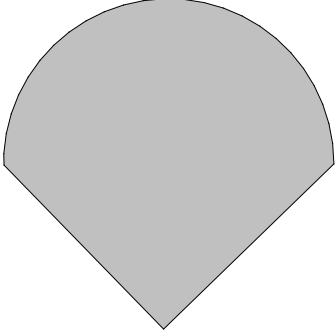
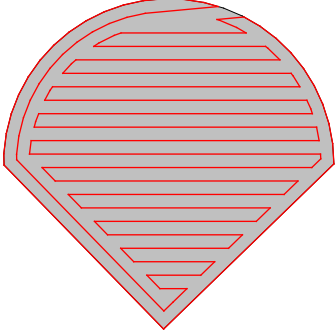
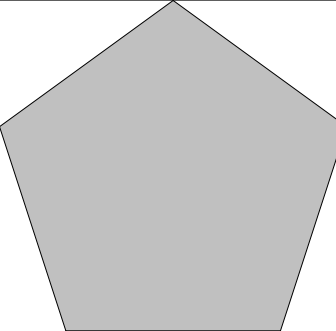
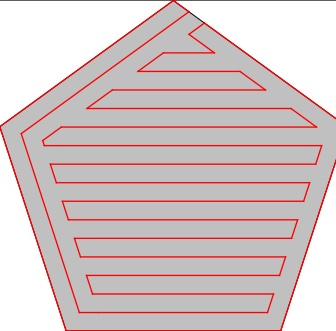
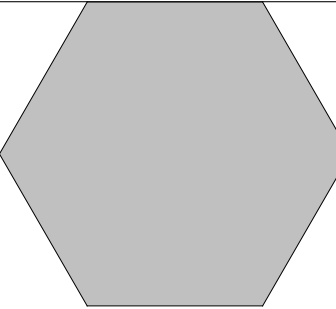
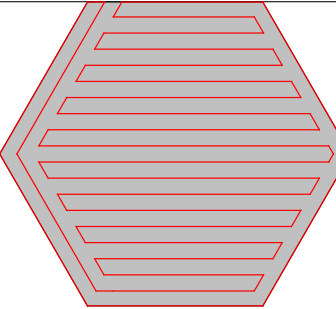
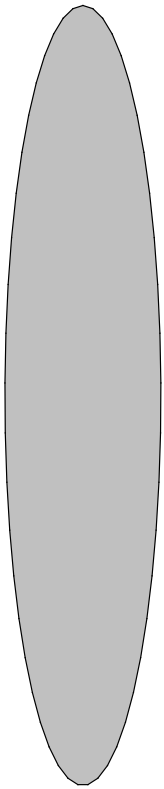
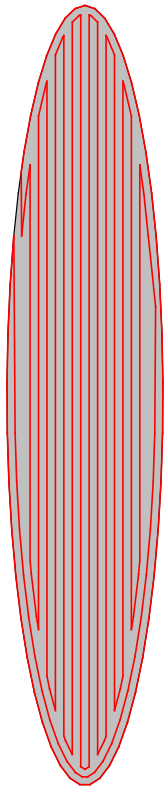
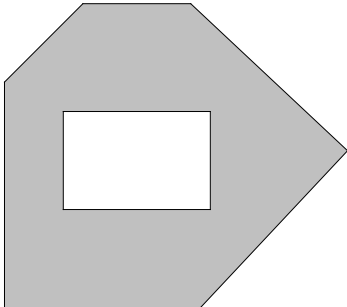
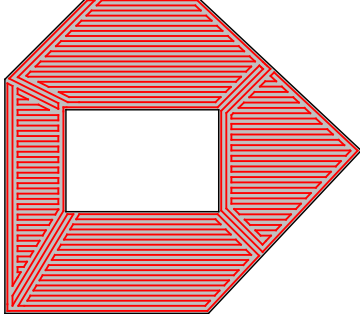
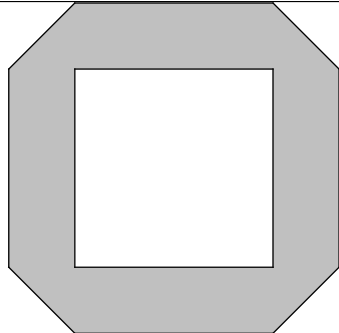
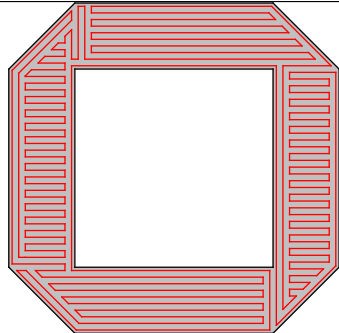
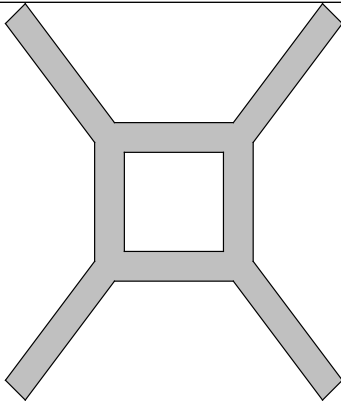
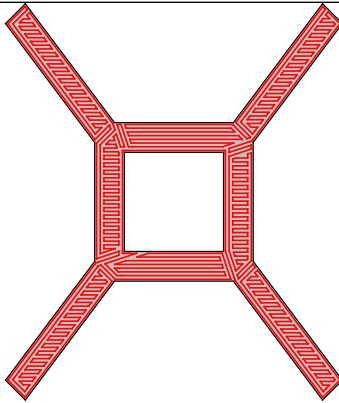
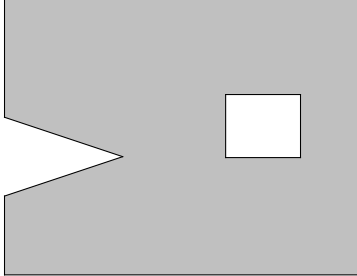
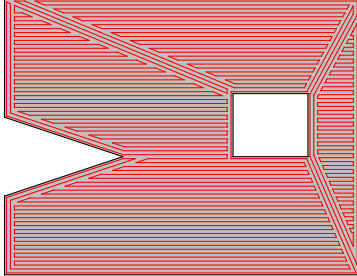


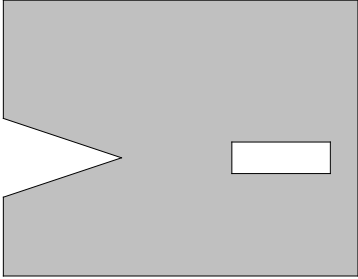
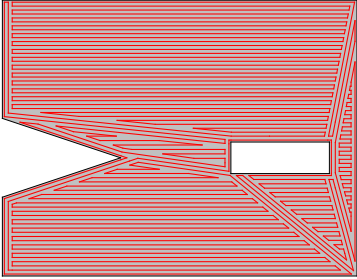
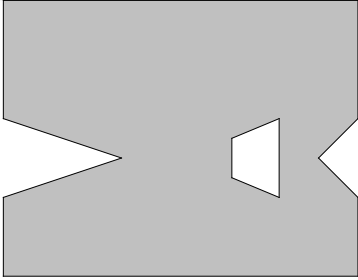
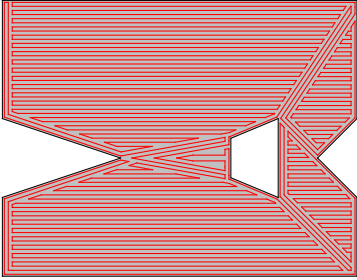

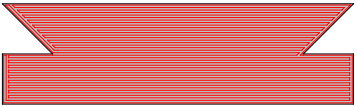
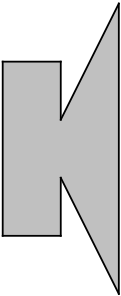
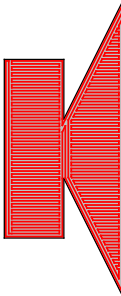
CONVEX POLYGONS		
	Polygon	Possible polygon infill
1		
2		
3		
4		
5		
		<ul style="list-style-type: none"> <li>• Generation of zig-zag pattern with different orientations</li> <li>• Extension from zig-zag to contour, ensuring that there are not self-intersections</li> <li>• Generation of contour pattern</li> <li>• Union of contour and zig-zag, obtaining a closed and continuous path</li> </ul>

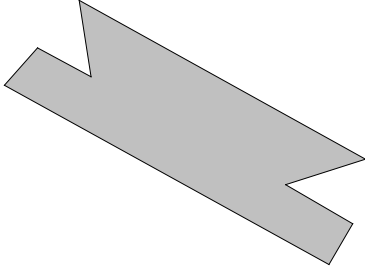
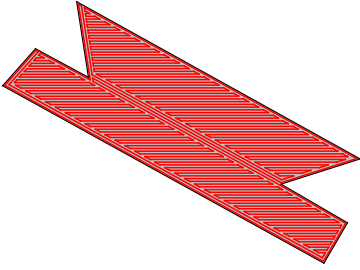
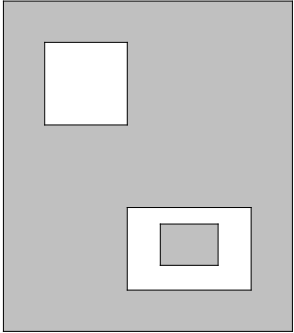
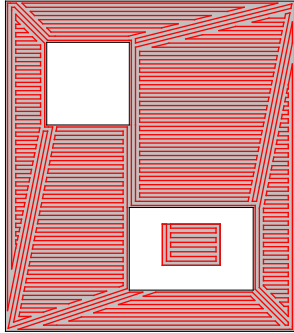
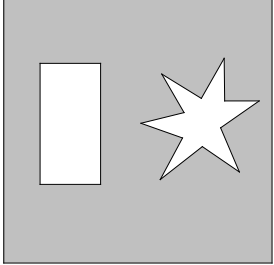
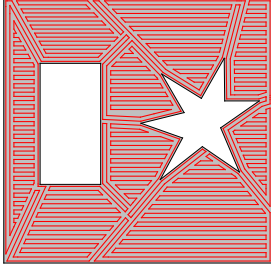
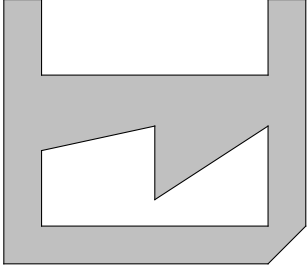
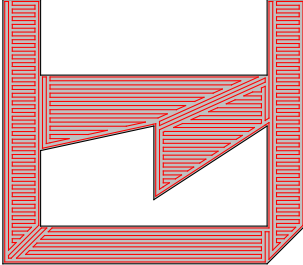
	Polygon	Possible polygon infill	Relevance
6			<ul style="list-style-type: none"> <li>• Generation of zig-zag pattern with different orientations</li> <li>• Extension from zig-zag to contour, ensuring that there are not self-intersections</li> <li>• Generation of contour pattern</li> <li>• Union of contour and zig-zag, obtaining a closed and continuous path</li> </ul>
7			
8			
9			
10			

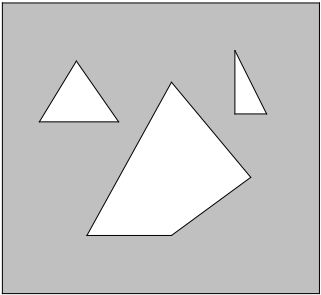
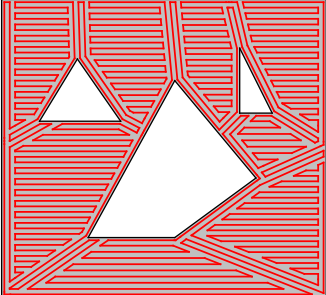
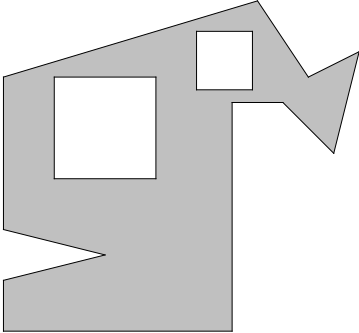
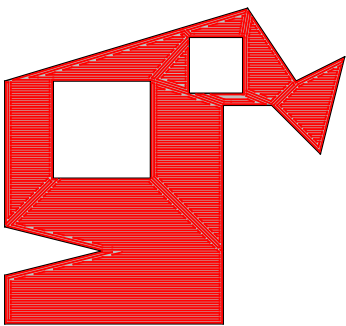
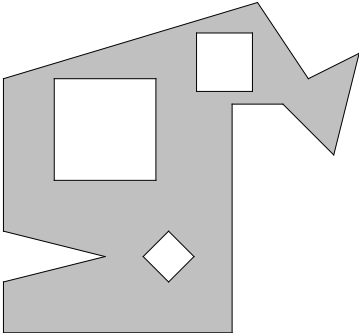
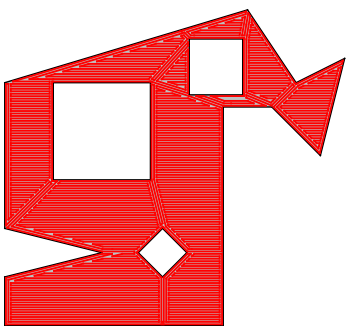
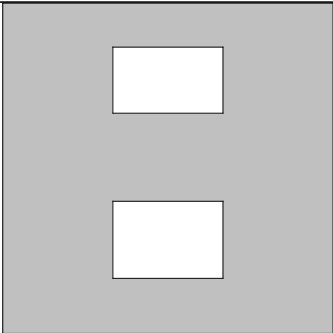
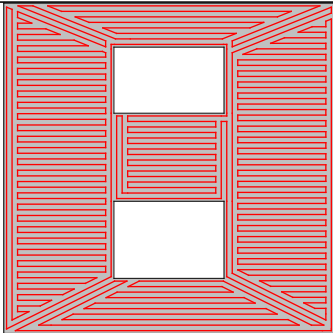
	Polygon	Possible polygon infill	Relevance
11			<ul style="list-style-type: none"> <li>• Generation of zig-zag pattern with different orientations</li> <li>• Extension from zig-zag to contour, ensuring that there are not self-intersections</li> <li>• Generation of contour pattern</li> <li>• Union of contour and zig-zag, obtaining a closed and continuous path</li> </ul>
12			
13			
14			

	Polygon	Possible polygon infill	Relevance
15			<ul style="list-style-type: none"> <li>• Generation of zig-zag pattern with different orientations</li> <li>• Extension from zig-zag to contour, ensuring that there are not self-intersections</li> <li>• Generation of contour pattern</li> <li>• Union of contour and zig-zag, obtaining a closed and continuous path</li> </ul>

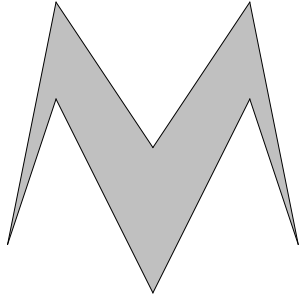
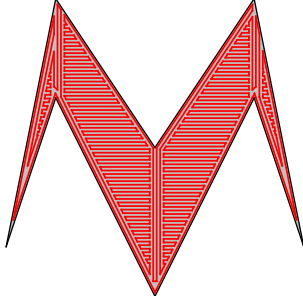
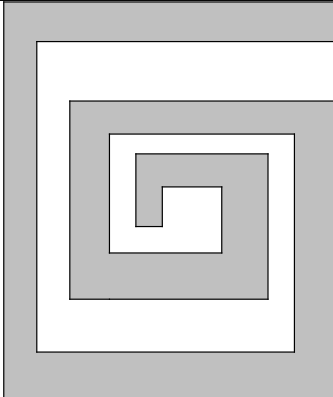
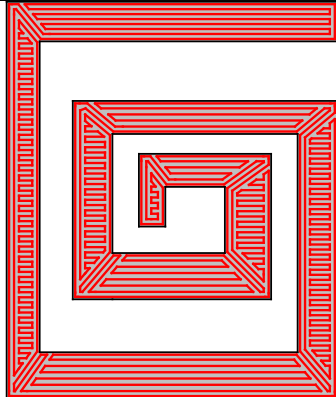
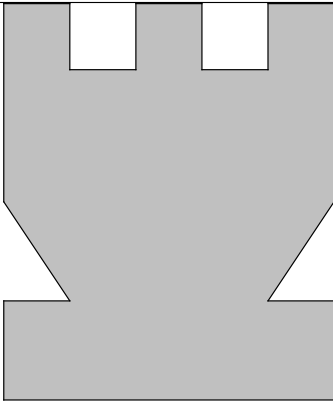
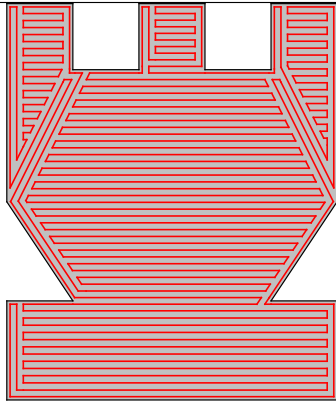
NON-CONVEX POLYGONS			
	Polygon	Example of generated infill	Relevance
1			Notch-line decomposition routine described by Ding et al.
2			Notch-vertex decomposition routine described by Ding et al.
3			Notch-notch decomposition routine described by Ding et al.
4			Extension lines intersect two different polygons. (See sec. 3.2)

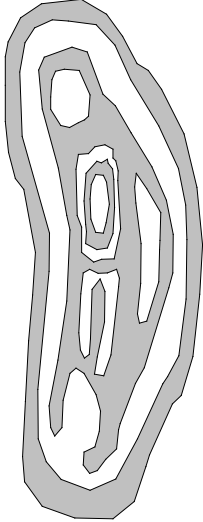
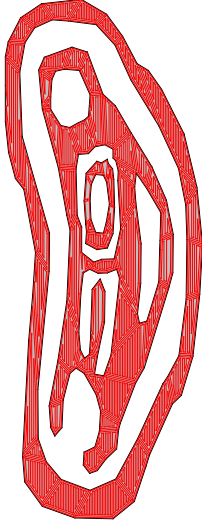
	Polygon	Possible polygon infill	Relevance
5			First limitation of polygon decomposition. There are no vertices nor notches between points A and B of extension lines. (See sec. 3.2)
6			Second limitation of polygon decomposition. There is a notch between points A and B of extension lines (see Sec. 3.2)
7			The edge shared by two adjacent subpolygons has different length in each of them. Two vertices have to be added to one of the subpolygons to simplify the union of their infills (see Sec. 3.2.)
8			The edge shared by two adjacent subpolygons has different length in each of them. Two vertices have to be added to one of the subpolygons to simplify the union of their infills (see Sec. 3.2.)

	Polygon	Possible polygon infill	Relevance
9			The edge shared by two adjacent subpolygons has different length in each of them. Two vertices have to be added to one of the subpolygons to simplify the union of their infills (see Sec. 3.2.)
10			It requires handling of nested polygons (see Sec. 3.1.). In addition, allowing the union with the closest vertex/notch to the reference notch results in one less convex polygon (see Sec. 3.2.)
11			A subpolygon is joined with two different subpolygons along the same partition line (occurs twice)
12			Path union variation 1 (see Sec. 3.4.)

	Polygon	Possible polygon infill	Relevance
13			Combination of multiple different holes into a single hole
14			The order in which the subpolygons are generated conditions the way they are joined. Requires handling of the union order to guarantee a single continuous infill path (see Sec. 3.4.)
15			Allowing the union with the closest vertex/notch to the reference notch results in one less convex polygon (see Sec. 3.2.). In addition, it requires handling of the union order to guarantee a single continuous infill path (see Sec. 3.4.)
16			Extension line intersects other lines with the same slope



	Polygon	Possible polygon infill	Relevance
17			Concave polygon with no holes
18			Concave polygon with no holes
19			Concave polygon with no holes

	Polygon	Possible polygon infill	Relevance
20			<ul style="list-style-type: none"> <li>• Path union variation 2 (see Sec. 3.4.)</li> <li>• Concave polygon with several holes with rough curved shapes</li> </ul>