

Corrigendum to *Discrete Systolic Inequalities and Decompositions of Triangulated Surfaces* [*Discr. Comp. Geom.* 53:587–620, 2015]

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February 21, 2022

At the very end of the statement of Theorems 5.2, 5.3, and 7.1, “ $n^{7/6-\varepsilon}$ ” should be “ $n^{13/12-\varepsilon}$ ”. This makes the statements numerically weaker, but does not change the result substantially — what matters here is that the exponent be strictly larger than one.

The error stems from Proposition 5.1. In its statement, “ $12g - 9$ ” should be “ $24g - 15$ ”. Indeed, near the end of its proof, in the middle of p. 608, the following part is wrong:

On the other hand, let H_2 be the graph (see Fig. 5c) obtained from H by removing internal vertices together with their incident edges and dissolving all degree-two vertices not in B . Since the chords are non-crossing and connect distinct sides of D , the pairs of sides connected by at least one chord form a subset of a triangulation of the polygon having one vertex per side of D .

To describe H_2 , it therefore suffices to describe a triangulation of this polygon with at most $12g - 6$ edges, which makes $2^{O(g)} = 2^{O(n)}$ possibilities, and to describe, for each of the $12g - 9$ edges of the triangulation, the number of parallel chords connecting the corresponding pair of sides.

Let us call the initial polygon the *primal polygon*, and the polygon introduced at the end of the first paragraph the *dual polygon*. Each of them is a $(12g - 6)$ -gon. Then a chord joining adjacent sides of the primal polygon correspond to a side of the dual polygon, not to an inner edge of the triangulation. In other words, in the end of the second paragraph, we not only need to describe, for each of the $12g - 9$ (internal) edges of the triangulation, the number of parallel chords connecting the corresponding pair of sides of the primal polygon; but we also need to do this for each side of the dual polygon. So, in the rest of the proof, $12g - 9$ should be replaced with $(12g - 9) + (12g - 6) = 24g - 15$.

The rest of the proofs remain valid, with computations modified so as to take this new bound into account. In particular, the $7/6$ in the proof of Theorem 5.2 should be $13/12$.

Acknowledgment. Many thanks to Niloufar Fuladi for noticing this error!