

Erratum: Toward correlation self-testing of quantum theory in the adaptive Clauser-Horne-Shimony-Holt game [Phys. Rev. A **102**, 022203 (2020)]

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We spotted an error in Table II of our paper, where the formulas for $n = 5$ and 11 were written incorrectly (those for $n = 7$ and 9 remain unchanged). The corrected table is as follows:

n	Optimal CHSH value	Formulaic description of value
5	0.8354	$\frac{1}{2} + \frac{1}{4(1+\sec(\pi/n))^2} \{-1 + \sec(\pi/n)[2 \cos(\frac{3+n}{4n}\pi) + 6 \sin(\frac{1+n}{4n}\pi) - \sec(\pi/n) + 2]\}$
7	0.8462	$\frac{1}{2} + \frac{1}{4(1+\sec(\pi/n))^2} \{1 + \sec(\pi/n)[2 \sin(\frac{3+n}{4n}\pi) + 6 \cos(\frac{1+n}{4n}\pi) + \sec(\pi/n) - 2]\}$ *
9	0.8497	$\frac{1}{2} + \frac{1}{4(1+\sec(\pi/n))^2} \{1 + \sec(\pi/n)[2 \cos(\frac{3+n}{4n}\pi) + 6 \sin(\frac{1+n}{4n}\pi) + \sec(\pi/n) - 2]\}$ *
11	0.8505	$\frac{1}{2} + \frac{1}{4(1+\sec(\pi/n))^2} \{-1 + \sec(\pi/n)[2 \sin(\frac{3+n}{4n}\pi) + 6 \cos(\frac{1+n}{4n}\pi) - \sec(\pi/n) + 2]\}$

Note that the formulas without the asterisks still differ from those in Table A2 of Ref. [1] (Ref. [25] in our original paper) as mentioned in the published version. These changes also affect the plot in Fig. 2 of the original paper; the updated version is shown in Fig. 1.

In addition there was a typo in the statement of Theorem 1 where the bounds on $J_{\text{CHSH}}^i(P)$ should have been stated as $2\epsilon \leq J_{\text{CHSH}}^i(P) \leq 1 - 2\epsilon$. This error is only in this part of the theorem statement and does not carry forward to the rest [in particular, with the corrected bounds on $J_{\text{CHSH}}^i(P)$, Eq. (7) remains correct as written in the paper]. These changes affect neither the results nor any of the conclusions of our paper.

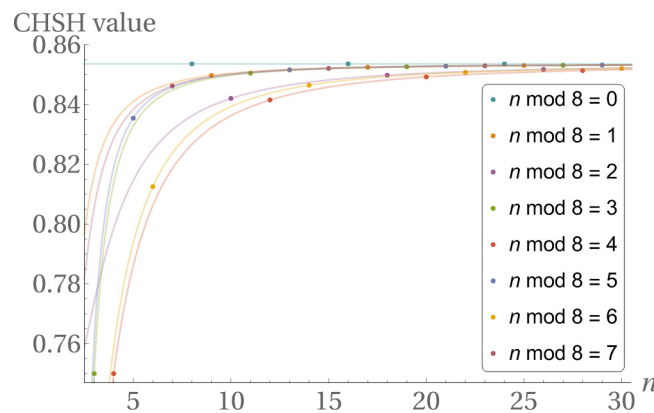


FIG. 1. Maximal CHSH value achievable in the maximal tensor product of self-dualized polygon systems. Along the horizontal axis we display the number of extremal vertices n , while on the vertical axis we display the respective optimal CHSH value. The points are the values obtained in our optimizations while the curves depict the respective formulas. The colors are used to group points that follow the same curve.

[1] P. Janotta, C. Gogolin, J. Barrett, and N. Brunner, Limits on nonlocal correlations from the structure of the local state space, *New J. Phys.* **13**, 063024 (2011).