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On the Chvatal-Gomory Closure of a Compact Convex Set

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In this paper, we show that the Chvatal-Gomory closure of a compact convex set is a rational polytope. This resolves an open question discussed in Schrijver [Schrijver 80'] and generalizes the same result for the case of rational polytopes [Schrijver 80'], rational ellipsoids [Dey-Vielma 10'] and strictly convex sets [Dadush-Dey-Vielma 10']. In particular, it shows that the CG closure of an irrational polytope is a rational polytope, which was the open question in [Schrijver 80'].

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