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Hempstead, NY 11549. *Class Preserving Dissections of Convex Polygons*. Preliminary report.

Given a convex quadrilateral Q having a certain property \mathcal{P} , we are interested in finding a dissection of Q into a finite number of smaller convex quadrilaterals, each of which has property \mathcal{P} as well. In particular, we prove that every cyclic (orthodiagonal, circumscribed) quadrilateral can be dissected into cyclic (orthodiagonal, respectively circumscribed) quadrilaterals. The problem becomes much more interesting if we restrict ourselves to a particular type of partition we call *grid dissection*. Joint work with Adam Vojdany. (Received September 16, 2008)