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Functions that are piecewise defined are a common sight in mathematics while convexity is a property especially desired in optimization. Suppose now a piecewise-defined function is convex on each of its defining components - when can we conclude that the entire function is convex? Our main result provides sufficient conditions for a piecewise-defined function  $f$  to be convex. We also provide a sufficient condition for checking the convexity of a piecewise linear-quadratic function, which play an important role in computer-aided convex analysis. Finally, we propose a finite algorithm running in linear worst-case time complexity to determine whether a bivariate piecewise linear-quadratic function is convex. (Received February 06, 2018)