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Brian Hopkins* (bhopkins@spc.edu), Department of Mathematics, Saint Peter's College, 2641 Kennedy Blvd., Jersey City, NJ 07306. *Survey of Bulgarian Solitaire.*

The operation used in “Bulgarian solitaire,” introduced in the early 1980s, induces a finite dynamical system on the set of partitions of a number. Although popularized by Martin Gardner as a game, the defining shift operation is a natural action on partitions, related to conjugation, and proofs in the field use tools such as Dyson’s rank and Bressoud & Zeilberger’s combinatorial proof of Euler’s pentagonal number theorem. This talk will survey twenty-five years of Bulgarian solitaire results, emphasizing recent work on “Garden of Eden” partitions that have no pre-images, and highlight some of the many remaining open problems. Many of the recent results are from joint work with Michael Jones and James Sellers. (Received December 26, 2006)