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Dana P. Rowland* (RowlandD@merrimack.edu), Merrimack College, Department of Mathematics, N5, 315 Turnpike St., North Andover, MA 01845, and **Andrea Politano**. *Knots in the canonical book representation of complete graphs.*

It remains an open question to determine the least possible number of knotted cycles one can obtain in an embedding of the complete graph K_n , when the number of vertices n is 8 or more. The canonical book representation of a complete graph is known to contain the least possible number of knotted 7-cycles, all of which are trefoils, and so this family of embeddings is a strong candidate for minimizing the total number of knotted cycles. We describe what other knot types must appear in the canonical book representation of a complete graph, and we count the total number of knotted cycles in the canonical book representation for complete graphs with up to 11 vertices. Our results provide an upper bound on the minimum number of knotted cycles that can be achieved in any embedding of a complete graph. (Received September 19, 2011)