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Berit Nilsen Givens* (bngivens@csupomona.edu), Department of Mathematics, 3801 W. Temple Ave., Pomona, CA 91768. *The Probability that Two Elements of a Semigroup Commute*. Preliminary report.

In 1973, Gustafson showed that the probability that two elements of a finite non-abelian group commute is bounded above by $5/8$. Here we show, by means of an example, that no such bound exists when considering the same question for semigroups. In fact, given any probability p and any $\varepsilon > 0$, there is a semigroup whose commuting probability is within ε of p . (Received September 19, 2007)