1127-05-76 Charles Buehrle* (cbuehrle@ndm.edu), Notre Dame of Maryland University, Department of Mathematics, 4701 N. Charles St., Baltimore, PA 21210. Pancake Words. Preliminary report.
The pancake problem is concerned with sorting a permutation (a stack of pancakes of different diameter) using only prefix reversals (spatula flips). Although the problem description belies simplicity, an exact formula for the maximum number of flips needed to sort n pancakes has been elusive.

Here we present a different approach to the pancake problem, as a word problem on the symmetric group. Pancake flips are considered as generators for a presentation of the symmetric group. At present the full list of relations for this presentation are not known. Many relations are exposed, though, by looking at what would be the Coxeter matrix of the generators. (Received January 22, 2017)