1067-Z1-2090   **Jennifer Franko Vasquez*** (`frankoj2@scranton.edu`), 800 Linden St, University of Scranton, Mathematics Department, Scranton, PA 18510, and **Steven T. Dougherty** (`doughertys1@scranton.edu`), 800 Linden St, The University of Scranton, Mathematics Department, Scranton, PA 18510. *Permutations and Ladders.*

Permutations are at the heart of abstract algebra and group theory. In this work we shall describe connections between Japanese ladders and permutations and then further extend this to the braid group. In this setting, the Feynman plate trick will naturally emerge as the key to understanding certain aspects of this connection. The foundation of this work is a visual representation of the permutation group using Japanese ladders. The fundamental results of permutations are described using techniques which will illuminate these often difficult to visualize properties. (Received September 22, 2010)