Abstract: When calculating the Nielsen number of a self-map on the figure eight, there is one step that is not algorithmic. Certain words in the fundamental group must be placed in their orbits under the Reidemeister action. Given two words that appear in the Reidemeister trace, are they in the same orbit? J. Wagner has proven that an algorithm exists for a large class of maps that have remnant. We study extensions to certain maps that do not have remnant.