1067-06-542 **Michelle Knox*** (michelle.knox@mwsu.edu), Department of Mathematics, Midwestern State University, Wichita Falls, TX 76308. *Questions of Divisibility in a Group of Density Continuous Functions.*

Let $A(\mathbb{R})$ denote the group (under composition) of order-preserving permutations of $\mathbb{R}$, i.e., the set of increasing bijections $f : \mathbb{R} \to \mathbb{R}$. Let $\mathbb{R}_d$ denote the real numbers with the density toplogy, and let $\mathcal{H}$ denote the subgroup of $A(\mathbb{R})$ of increasing density continuous bijections $f : \mathbb{R}_d \to \mathbb{R}_d$. It is known that $A(\mathbb{R})$ is divisible, that is, for every $n \in \mathbb{N}$ and $g \in A(\mathbb{R})$ there exists $h \in A(\mathbb{R})$ such that $h^n = g$. We begin our investigation of when $\mathcal{H}$ is divisible by considering the simpler case of piecewise linear functions. (Received September 08, 2010)