Russ Johnson
Reading Assignment 10
February 11, 2013

For Activity 22.2 we first noted that all of the rotations in a dihedral group could be represented using a single rotation and its powers. We then showed that all of the reflections in an n-gon could be represented with a single reflection and a rotation to some integer power. And so, we can represent all of the symmetries in a dihedral group with a single reflection and a rotation. In other words instead of having $D_n = \{I, R, R^2, \ldots, R^{n-1}, r, r_2, \ldots, r_n\}$ we have $D_n = \{I, R, R^2, \ldots, R^{n-1}, r, rR, rR^2, \ldots, rR^{n-1}\}$ for some dihedral group.