Russ Johnson Reading Assignment 17 April 3, 2013

In parts (f) and (g) of Activity 27.11 we show that group G has the same presentation as  $D_p$ . In doing so, we prove that the group  $D_p$  is isomorphic to G. In group G, a plays the role of r in  $D_p$  and  $b^i$  plays the role of R in  $D_p$ . We started the activity with an arbitrary non-Abelian group G with order p where p is an odd prime. We then proved that this group is isomorphic with  $D_p$ . In this way, we proved that  $G \cong D_p$ . Therefore, Theorem 27.5 is valid.