Russ Johnson Reading Assignment 15 March 13, 2013

Activity 25.7 shows us how we can use quotients of groups for induction proofs. We are proving Theorem 25.5 is true for U_{21} . The prime divisors of $|U_{21}| = 12$ are 2 and 3. From Corollary 24.5 we now that at least one element exists with order 2 or 3. We assume that there is an element that has order 2 and prove that there must also exists an element with order 3. We will do something similar to this when proving this for the general case.