Recall that we proved Cauchy’s Theorem by considering $p$-tuples of elements of $G$ whose product equals the identity. We considered an equivalence relation on the set of $p$-tuples, and we showed that there was at least one string of the form $(x, x, x, \ldots x)$ for $x \neq e$, and that completed our proof. However, this Theorem can also be proved using quotient groups.

On the Wikipedia page about Cauchy’s Theorem (group theory), read Proof 1 carefully. (Note that Proof 2 is essentially the argument described above.) As an additional problem this week, rewrite Proof 1 in your own words. It’s okay if the exposition is similar, but the point is to make sure that you understand it fully.