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Homework 24
Mathematics 2216.01
Due November 18, 2022

1. Compute the order of each non-zero equivalence class modulo 29. We have information about the order that should make the computation much simpler, though a computer program also makes the computation very easy.

2. Suppose that $f : X \to Y$, $A \subseteq X$, and $B \subseteq Y$.
   (a) Prove or give a counterexample: $f^{-1}(f(X \setminus A)) = X \setminus f^{-1}(f(A))$.
   (b) Prove or give a counterexample: $f(f^{-1}(Y \setminus B)) = Y \setminus f(f^{-1}(B))$.