1. Let $p$ and $q$ be distinct primes and let $n$ be a positive integer. Calculate

(a) $\phi(pq)$
(b) $\phi(p^n)$
(c) $\phi(473)$.
(d) $\phi(10, 201)$.

2. Find a bijection between $\mathbb{N}$ and $\mathbb{Z}$.

3. Find a bijection between $\mathbb{E}$, the set of even natural numbers, and $\mathbb{Z}$. 