Quiz 7

Problem 1
List all elements of $\mathbb{Z}_{10}^*$ and compute $\phi(10)$.

Problem 2
Let n, e, d be any family of RSA keys. Thus, n is an RSA modulus; e is an encryption exponent; and d is a decryption exponent corresponding to e. Let E denote RSA encryption using public key n, e, and let D denote RSA decryption using private key n, d.

- Prove: For every plaintext $x \in \mathbb{Z}_n$, $D(E(x)) = x$.