## Problem N.4 - Inverses of $\mathbb{Z}_m$ Allison Davis March 22, 2019

Let  $n \in \mathbb{Z}_m$ . Multiply n by each number in  $\mathbb{Z}_m$  modular m. If  $n * i \pmod{m} = 1$  for some  $i \in \mathbb{Z}_m$ , then i is the multiplicative inverse of n.