

**MATH 113: DISCRETE STRUCTURES
HOMEWORK DUE MONDAY WEEK 13**

Problem 1. Find two integers a, b such that $2a \equiv 2b \pmod{6}$, but $a \not\equiv b \pmod{6}$.

Problem 2. Prove that if $a, b, c, m \in \mathbb{Z}$, $c \neq 0$, and $ac \equiv bc \pmod{mc}$, then $a \equiv b \pmod{m}$.