Problem Set 6

March 2, 2026

Problem 1. Let m, n be two integers satisfying $\gcd(m, n) = 1$. Suppose that $a \equiv b \pmod{m}$ and $a \equiv b \pmod{n}$. Show that $a \equiv b \pmod{mn}$.

Problem 2. Let p be a prime. Show that $(p-2)! \equiv 1 \pmod{p}$.