



NUMBER THEORY I  
SPRING 2012

ASSIGNMENT 7.1  
DUE MARCH 6

**Exercise 1.** Let  $n$  be a positive integer. Prove that if  $a \equiv b \pmod{n}$ , then  $\gcd(a, n) = \gcd(b, n)$ .

**Exercise 2.** Textbook exercise 5.2.3

**Exercise 3.** Textbook exercise 5.2.9

**Exercise 4.** Textbook exercise 7.3.5

**Exercise 5.** Textbook exercise 7.3.7