MATH 113: DISCRETE STRUCTURES
HOMEWORK DUE FRIDAY WEEK 11

Problem 1. Let r be the remainder when you divide b by a. Assume that $c \mid a$ and $c \mid b$. Prove that $c \mid r$.

Problem 2. Prove that for every integer a and positive integer n,
$$(a - 1) \mid (a^n - 1).$$

(The proof can be quite short.)