



MODERN ALGEBRA 1
SPRING 2010

HOMEWORK 13.1
DUE APRIL 30

Exercise 1. Find (with proof!) the period and repeating part of the decimal expansion of $1/239$.

Exercise 2. For what natural numbers a does the decimal expansion of $1/a$ have period exactly 4? [*Hint:* $10^4 - 1 = 9999 = 3^2 \cdot 11 \cdot 101$.]