

I suggest that for monday you finish the HW, and that you try these 3 questions. On monday, you will have online a full practice final... Read the corrections of the midterms, HWs and make sure to prepare questions for me during the week!

Problem 1. *Solve the congruence $x^2 + x + 7 \equiv 0 \pmod{27}$.*

Problem 2. *If p is an odd prime, how many solutions are there to $x^{p-1} \equiv 2 \pmod{p}$?*

Problem 3. *Prove that if $a^3 \equiv 1$ modulo a prime p , then $1 + a + a^2 \equiv 0$ modulo p , and $(1 + a)^6 \equiv 1$ modulo p .*

More problems are on the way...