Homework

due on Tuesday, September 11

Problem 1. Use Euler Theorem to find the remainder upon division of n by m, where

- a) $n = 29^{202}, m = 13;$
- b) $n = 99^{999999}, m = 23$
- c) $n = 29^{198}, m = 20$
- d) $n = 3^{1000000}, m = 14$

Problem 2. Prove that if n is relatively prime to 72 then $n^{12} \equiv 1 \pmod{72}$.

Read section 1.7, 1.9 of Lauritzen's book.