Nutcracker: Problem set -2

Maths

Prove that there are no primes p and q such that

$$p^2 - 1 = 10^q - 10^3$$

(Something that you can try proving!: the result is also true for $p^2 - 1 = 10^q - 10^{3p}$)

Solutions should be mailed to bharathm@iitk.ac.in before 8 PM tomorrow(1st sep). If you have written it by hand, get it scanned. (scanning can be done in CC or in hall 1 xerox shop). Don't forget to write your hall name and pool name along with your name.