

# Chapter 9 Homework

# Homework - RSA

1. Test all odd numbers in the range from 233 to 241 for primality using the Miller-Rabin test with base 2
2. Encrypt the message  $M = 2$  using RSA with the following parameters
  - $n=56153$ ,  $e = 23$
3. Compute a private key  $(d, p, q)$  corresponding to the public key
  - Hint:  $p$  and  $q$  are in the above range
4. Decrypt the ciphertext obtained above using the CRT

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- Due date
  - 2017. Nov. 15, 23:59
  - Upload your answer into the Blackboard