

# Quiz 7

written by Alvin Wan . [alvinwan.com/cs70](http://alvinwan.com/cs70)

Wednesday, September 28, 2016

**This quiz does not count towards your grade.** It exists to simply gauge your understanding. Treat this as though it were a portion of your midterm or final exam.

## 1 RSA

1. **Prove or Disprove:** Given two different public keys,  $N_1$  and  $N_2$ ,  $d = \gcd(N_1, N_2)$  cannot be composite.
2. **Prove or Disprove** There are finitely many polynomials in  $\mathbb{Z}_p[x]$  mod  $p$  for some prime  $p$ . (If true, find an expression for the number of polynomials. If false, prove the opposite.)