## Discussion 4

## February 22, 2019

## 1 RSA

- Public key: (N, e) where N = pq and e is relatively prime to (p 1)(q 1).
- Private key:  $d \equiv e^{-1} \mod (p-1)(q-1)$ .
- Encoder function:  $y = E_d(x) = x^d \mod n$ . y is public.
- Decoder function:  $D_e(y) = x^e \mod n$ . With private key e,  $x = D_e(y)$  recovers the original secret.