

Homework 2

1. Modular arithmetic - you just need to find examples, you don't need to prove anything.
 1. Is it true that all odd squares are $\equiv 1 \pmod{8}$?
 2. what about even squares $\pmod{8}$?
2. Try out the vanity bitcoin address example at [asecurity](#) or the Ethereum [version](#)
3. What do you understand by
 1. $O(n)$
 2. $O(1)$
 3. $O(\log n)$

For a proof size, which of these would you want ?