

# Homework 2

## Homework Maths 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 ?