Computability

Plan of attack:

1. We want to talk about what is computable in the first place to know is certain cryptography is even possible
2. Introduce proposition -> predicate -> second order <> NP
3. these are just the theory - we need to define concrete types and operations that satisfy the theory
4. Go one level deeper to talk about
    a. Structures we care about (ex: N, functions)
    b. Arithmetics over those structures (ex: Q, PA, PR)
    c. Show how these arithmetics give us Turing Machines
    d. This relation helps us build R, RE, co-RE