Instructions. Write all answers clearly on one piece of paper, and put all group members' names on the top of the paper. If you talk, you must do so **very quietly**!

1. What does the Division Algorithm rely upon that we have to assume without proof?

2. State Euclid's lemma about primes and divisibility in general language.

3. What is the difference between the First and Second Principles of Mathematical Induction? (Sometimes the Second Principle is called "strong induction.")

4. What are two nice properties that an invertible function $\alpha : A \to B$ has?