### Mid Term Test2 Topics CS220

# Sets and Tuples Definitions, operations

#### Sequences

recurrences

Definitions, geometric Series, arithmetic series

## Induction Linear induction

Strong Induction

**Structural Induction** 

### Loop invariants

### Counting

Product rule, sum rule
Permutations, combinations
Inclusion / exclusion
k to 1 rule, bijection rule
Pigeonhole principle
Permutations / Combinations
Complement rule
Inclusion / Exclusion