

Graph Theory — make up assignment

March 23rd, 2012

21-484, Spring 2012

- Write your name and Andrew user ID on top of every page (including this one)
- Cite theorems that you use
- Please provide explanations for all your claims
- Do not use pencils
- Do not pin or fold the pages
- Do not use the pages' back side

The cube Q_k is the following graph. The vertex set is the set of all sequences of zeros and ones of length k . There is an edge between two such sequences \mathbf{x} and \mathbf{y} if and only if they differ in exactly one coordinate. Prove: $\kappa(Q_k) = \lambda(Q_k) = k$.