

General Mathematics and CPS II

Exercise 4

February 13, 2015

1. Write out the proof for Ivanov, p. 96, Lemma 5.
2. A standard deck of cards is dealt into 13 piles of 4 cards each. Show that you can always choose exactly one card from each of the 13 piles as to obtain exactly one card of each rank, i.e., each of 2, 3, 4, \dots , King, Ace.
3. Show that a finite graph is bipartite if and only if it does not contain a cycle of odd length.