

Problem of the week #2:

Given - Jan. 23, 2003; Due - Jan. 30, 2003 (in class).

a. Show that there are at most n^2 (different) minimum cuts in any n node graph.

(Hint: Consider the probability of failure of the randomized min-cut algorithm.)

b. An α -minimum cut is a cut with value at most α times the minimum cut value. Show that there are at most $n^{2\alpha}$ α -minimum cuts.

(Hint: Generalize the min-cut algorithm we studied to find a α -minimum cut.)