Bilkent University
Department of Mathematics

PROBLEM OF THE MONTH

Term: March 2018

Graph Air (GA) is running two way flights between some cities of a country so that it is possible to travel between any two cities using GA flights. For given cities A and B let $f(A, B)$ be the minimal number of flights necessary for travelling from A to B. The parameter of a company is $max f(A, B)$, where the maximum is taken over all possible pairs (A, B). It turned out that after adding one more flight to GA the parameter of GA became 33. Find the maximal possible value of the GA parameter before adding this flight.