



RAINBOW NUMBERS FOR SOME GRAPHS

IZOLDA GORGOL

A subgraph of an edge-coloured graph is *rainbow* if all of its edges have different colours. For a graph H and a positive integer n , the *anti-Ramsey number* $f(n, H)$ is the maximum number of colours in an edge-colouring of K_n with no rainbow copy of H . The *rainbow number* $rb(n, H)$ is the minimum number of colours such that any edge-colouring of K_n with $rb(n, H)$ number of colours contains a rainbow copy of H . Certainly $rb(n, H) = f(n, H) + 1$. Anti-Ramsey numbers were introduced by Erdős *at al.* [1] and studied in numerous papers. We present known results on anti-Ramsey numbers and add some new ones.

References

- [1] P. Erdős, A. Simonovitz, and V. Sós, *Anti-Ramsey theorems*, Infinite and finite sets (A. Hajnal, R. Rado, and V.Sós, eds.), Colloq. Math. Soc. J. Bolyai, North-Holland, 1973, pp. 633–643.