1047-05-366   **David Offner*** (`offner@cmu.edu`), Department of Mathematical Sciences, Carnegie Mellon University, Pittsburgh, PA 15213. *Turán type problems and polychromatic colorings on the hypercube.*

For a fixed graph G, let $c(G)$ denote the proportion of edges which must be deleted to kill all copies of G in any n-dimensional hypercube Q_n. This problem has been studied extensively for choices of G including even cycles and hypercubes of fixed dimension.

Let $p(G)$ denote the largest number of colors with which the edges of any Q_n can be colored so that every copy of G contains every color. For many choices of G, the best bounds on $c(G)$ come from $p(G)$, since $c(G) \leq 1/p(G)$. We discuss techniques for finding bounds on $p(G)$, what is known, and some open problems. (Received February 02, 2009)